

From a phenomenological standpoint, UFOs are perceived as being material, and they leave at times undeniable physical traces. The material aspect of UFOs constitutes, therefore, a fundamental characteristic of the phenomenon which must be integrated into any research about UFOs, ufological or otherwise. Having this key principle in mind, the following review of the literature about the materiality of UFOs is proposed. It is not presented, however, as a complete review of the literature, as many texts in ufology are quite difficult to find. Nevertheless, it is substantial enough to identify with a fair degree of reliability the main ideas about the materiality of UFOs in the literature.

Materiality of UFOs and its context

Modern ufology, since its “official” beginning in 1947, has been mostly absorbed with finding material proofs to substantiate the reality of the UFO phenomenon. Very early on, it was hypothesized that UFOs were spaceships coming from another planet in the popular literature (a.k.a. Extra-Terrestrial Hypothesis (ETH)). However, as early as 1948, many “human” characteristics to the UFO phenomenon were identified (such as culturally determined nature of sightings), raising serious doubts about the validity of the ETH (Steiger 1976: 202-214). This review is following the steps of those researchers, like Allen Hynek (Ridpath 1975), who found the ETH disappointing and decided to explore other hypotheses about the materiality of UFOs that can take into account their fundamentally elusive character. This review of the literature emphasizes as much as possible texts based on empirical research, whether they be case study analyses, quasi-experimental research, or laboratory-based investigations.

Through this review of the literature, three major themes about the materiality of UFOs were identified. The first one is about the clear link between UFO sightings and electromagnetic energy. The second theme, although not about UFOs per se, was brought by UFO researchers who noted that psi effects and electromagnetism tend to be linked in similar ways as the UFOs and electromagnetism link. The last one is essentially a logical continuation of the second theme. It was observed that psychokinetic (PK) effects, such as poltergeist phenomena, tend to share a lot of similarities with the UFO experience. Among those similarities, stands the controversial issue of materialization and dematerialization of manufactured objects born out of the psi abilities of the human mind.

Materiality of UFOs – The electromagnetic dimension

The notion that UFOs are related to electromagnetic balls of plasma goes back to the mid-1960s. Philip Klass, well-known for his rejection of the ETH, showed that there is evidence that UFOs could be sightings linked to balls of plasma (Klass 1966a; 1966b). Two years later, other ufologists who were less acrimoniously opposed to the ETH found that not only these natural, but poorly understood, magnetized balls of light could be mistaken for UFOs, but there are some patterns emerging linking UFO sightings, geological faults and geomagnetic

fluctuations. In 1968, the American John Keel (1968) and the French Ferdinand Lagarde (1968) noted independently that UFO sightings tend to be over represented in areas where there are known geological faults and where there are geomagnetic anomalies. This finding was in fact confirming Charles Fort (1923) older findings, who noted that there was a strong correlation between balls of light and earthquakes, which are known to occur more frequently where there are geological faults. Lagarde eventually wrote a book on the topic a few years later (Lagarde 1973). This picture became more complex during the 1970s, as not only geomagnetism appeared to be involved in producing UFO sightings, but also solar activity cycles appear to play a critical role. It was found, in particular, that there was a significant correlation between UFO sightings and high levels of solar activity (Poher & Vallée 1975). This was confirmed a few years later by the Swedish researcher Foshufvud (1980) using an extensive data set provided by Allan Hynek. Another interesting study done during the 1970s was performed by Jacques Vallée. He proceeded to do a computerized content analysis of a large number of UFO sighting reports and found that in almost all cases such event started by the perception of a light (in Fuller 1980: 405). This finding was adding credibility to the notion that balls of light and UFOs are linked, as it was consistent with the phenomenology of UFO sightings.

By the early 1980s, Paul Devereux (1982) published an important research, based on extensive empirical work done in the United Kingdom. He was able to establish through in-depth cases studies the full connection between balls of light (which he calls earthlights) and the phenomenology of UFO sightings. In parallel, Michael Persinger from the mid-1970s to the end of the 1980s published a number of research findings in scientific journals (mostly in *Perceptual and Motor Skills*) and a book (Persinger & Lafrenière 1977) linking the psychological and neurological dimensions of UFOs sightings with unusual occurrences in geomagnetic activities. His research was later summarized in two comprehensive publications (Persinger 1990; 2000). During the 1990s and early 2000, other researches using the case study approach were able to further confirm the link between UFO sightings, electromagnetism (including human generated electromagnetism), and modified human perceptions (Budden 1995, 1998; Partain 2001). It is also noteworthy to mention that the Hessdalen Project in Norway was established in 1998 to study scientifically these balls of light, and it was able to collect interesting and quasi-experimental data on the “behaviour” and appearances of these balls of light. Finally, it is interesting to note that the British government commissioned an official report on UFOs, and its main conclusion is that UFOs are made of balls of electromagnetic plasma (United Kingdom 2000).

There seems to be little doubt that a number of previously unexplainable UFO sightings became explainable through these researches on balls of light. It is also important to underline that these findings are not only embedded in existing knowledge in physics, but they are also consistent with the fundamental elusiveness of the phenomenon. These findings, however important that they may be, are mostly useful for interpreting UFO sightings seen from afar, particularly the Night Light (NL), Day Disc (DD) and Radar Record (RR) of the famous Hynek’s typology. Persinger and Budden’s researches on the impact of electromagnetism on human perception could probably account for some Close Encounters (CE), especially in cases where there are round or burned marks on the soil (CE2), and mechanical malfunctions of electrical equipment (CE1). However, these are not sufficient to explain the stranger cases where large manufactured objects are perceived by more than one witnesses, and the even stranger cases

where witness enters in contact with non-human entities (CE3).

Materiality of UFOs – The electromagnetic dimension and psi effects

Michael Persinger was actually aware of such criticism, and his research was part of a large effort to study extensively how electromagnetism can affect human perception, and not only in the case of UFO sightings but also in the context of other paranormal events. Persinger was also interested to understand if geomagnetism plays a role in enabling psi effects. He found that, indeed, when the human brain is exposed to high levels of electromagnetism, the normal processes of the human mind are disturbed, and it can have a number of effects such as hallucinations, altered state of consciousness, falling unconscious, visionary experience, and maybe enhancing psi abilities. (Persinger 1975, 1979, 1987; Persinger & Cameron 1986; Persinger & Koren 2001; Roll & Persinger 2001; Schaut & Persinger 1985). His research was corroborated by a number of other researches in parapsychology who also established that the human mind can be influenced by electromagnetism and lead to psi effects, as well as the human mind can affect electromagnetic systems. (Brovetto & Maxia 2008; Braud & Dennis 1989; Etzold 2005; Hecht & Dussault 1987; Pelegrin 1988; Roll 2003; Shneiderman 1987). Devereux (1982) also noted that earthlights appear at times “responding” to the mental intents of UFO witnesses. Others like Budden and Partain, cited above, noted the same patterns in their own research.

What this corpus shows is that ufological and parapsychological events appear to share common characteristics when the witnesses are exposed to electromagnetic forces. Among these common characteristics is the fact that electromagnetic forces can induce altered states of consciousness (ASC) among the witnesses, fact well documented by Jenny Randles (1983) in her research on the UFO experience (what she termed the “Oz Factor”). Similarly, ASC has been clearly identified as an important enabler to produce psi effects in parapsychology (Heath 2003: 109-124). These additional findings can explain a number of CE cases where hallucination and dreamlike perceptions could have played a role in CE1 and CE3 cases, while still being able to account for the elusiveness of the phenomenon. But there are still many high strangeness sightings that do not seem to fit the electromagnetic explanation, as there were no natural or human-made sources that could be identified. As well, there are still a number of cases where there are physical marks of manufactured objects on the ground (CE2), and other sightings where there were multiple witnesses who had the same “hallucination.”

Materiality of UFOs – The psychokinetic dimension

The idea that UFOs could be the product of psi effects, particularly as an outcome of PK effects, is not a new idea. In fact, the notion that the human mind could create manufactured objects, as well as non-human entities, can be found in the Tibetan research of Alexandra David-Neel (1973), and originally published in 1929. In 1969, an article linking poltergeist and UFO is published about a Canadian UFO case (Greystone 1969). The link between UFOs and PK, however, appears more strongly in the literature during the 1970s. In 1975, John Keel published the Mothman Prophecies based on his investigation of a UFO wave in West Virginia. He noted that poltergeists effects, and other paranormal events, were occurring at the same. However, he

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ascribed the ultimate source of the phenomenon to non-human entities. A few years later Brunstein (1979) proposed a similar analysis in book still cited today. In 1976, Owen and Sparrow published their famous Philip Experiment, where a ghost and poltergeist effects were created from developing a fictional character. Although it was not about creating “aliens”, their work reinforced the notion that apparitions of non-human entities are likely to be the product of the human mind. François Favre (1978) established that there are a number of common characteristics between various types of apparition (e.g., UFOs, ghosts, ghost ships, fairies, etc.) that can be explained from a parapsychological perspective. His conclusions are similar to the ones of Jacques Vallée (1969) in *Passport to Magonia*, with the notable difference that he was able to provide evidence that such apparitions can be explained without hypothesizing the existence of non-human entities.

The idea that UFOs could be the direct result of PK effects emerged in parallel in the English and French literature. In 1977, Scott Rogo publishes (Rogo 2006) a book where he identifies a number of similarities between the poltergeist phenomenon and the UFO experience. Using well-documented cases, Rogo found that materialization and dematerialization, teleportation, encounter with alleged non-human entities, objects moving in a zigzag motion, on a square angle, and through a slow left-and-right motion like a falling feather were common to both poltergeists and UFOs. As well, he underlined other researches about Marian apparitions where balls of light interacting with the crowd. Also in 1977, Pierre Viéroudy (1977) published a book in France where he provides the results of his own empirical experiences where he was able to create a mini UFO wave through “exciting” his and other ufologists’ unconscious mind. He directly linked his experiment with the production of unconscious psi effects, hypothesized from a parapsychological standpoint. However, he did not make a direct connection with poltergeist phenomena. Some of these ideas were also confirmed to some extent through the cases studied by Budden (1995). Heath in her seminal book on PK (2003) provides an overview of the state of the research on this topic. Although she never established the connection with the UFO experience, there are many similarities between the PK and the UFO experience, some of them already mentioned above. It is also interesting to note that some folklorists established a connection between the “Men in Black” syndrome in ufology and parapsychological creation of non-human entities (Rojcewicz 1987).

The PK effect could explain most, if not all, the cases where there are multiple witnesses having the same perception and experience, and where there are marks on the ground of manufactured objects, while accounting for the elusiveness of the phenomenon. However, this part of the literature is still controversial. The main reason for such controversy can be explained by the lack of research on PK materialization. Although there is an older corpus of research on materialization (Geley 1924; Osty & Osty 1932; Schrenck Notzing 1923), this line of research has not been pursued recently. From an institutional standpoint, many parapsychologists do not feel comfortable engaging in such a radical topic. As well, most parapsychologists, for the same reason, do not research UFO sightings either. On the other hand, the non-ETH ufological community is relatively small, and very few feel comfortable to engage on issues that are perceived as belonging to parapsychology. In other words, it appears that UFOs as PK materialization is a topic that is through the crack.

Discussion

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This review of the literature has identified three main complementary thrusts in the research about the materiality of UFOs. As stated above, these researches have not been pursued actively since the year 2000. One of the key reasons for this lack of research is certainly the lack of quality data. UFO investigations are conducted essentially by ETH ufologists, who will not look into the broader context in which a sighting is made, because of their basic ontological assumption. The electromagnetic contexts, both from natural and artificial sources, as well as the neurological, psychological and sociological broader conditions are also ignored by these ufologists. (With the exception of a few elements used to show that the witness was psychologically sane and had no history of or motives to telling lies). Hence, the necessary data to investigate the few known clues about UFOs (i.e., electromagnetism and psi effects) are not collected. This has for direct consequences that almost all ufological data are essentially useless to the advancement of knowledge about the UFO phenomenon. The most promising avenues are simply ignored. It is to wonder if ETH ufology is not suffering from wilful blindness.

The research about the psi-electromagnetic paradigm is not only suffering from a lack of valid data, however, but also there are some serious ontological issue that remain unresolved. The main problem is that it is difficult to separate what is caused by electromagnetism from what is caused by psi effects. For instance, natural balls of light and the balls of light produced by Viéroudy are phenomenologically identical. As well, in the famous Barney and Betty Hill story (Fuller 1966), it starts with a light in the sky, and it ends with an orange ball of light, with a dreamlike encounter with a manufactured object and non-human entities in the middle. One could think that was a ball of light that induced hallucinations. Yet, if one takes into account that Betty and Barney had to some extent the same hallucination and that Barney “knew” that the object was set to capture them, all of this with some strange physical evidence, it becomes impossible to distinguish the cause and the effect between electromagnetism and psi effect. Electromagnetic fields can induce hallucination and psi effects, while the human mind can modify electromagnetic systems through PK. The relationship appears to be fully circular. Yet, it is quite possible to have a natural ball of light construed as a UFO without having any psi effect. Similarly, it is also possible to have macro-PK effect (such as in the case of poltergeist phenomenon) without having electromagnetism involved. It is obviously clear that more research is needed to understand how electromagnetism and psi effects relate to each other in the context of events construed as paranormal.

What do all this mean? First, it is possible to state that there is a substantive body of literature to support psi/electromagnetic hypothesis, and although it does not provide a positivist type of proof about the material nature of UFOs, it can account for the elusiveness of the phenomenon while addressing the issue of materiality in the context of what is known in physics, neurology, psychology, and parapsychology. In other words, its external validity remains to be better established, but its internal validity is relatively solid. A second observation can be made also about the potential for expanding this approach to other phenomena. There are similarities in the deeper dynamics between UFOs, poltergeists, Men in Black, tulpas, Marian and mythological apparitions as discussed above, but there are also several similarities between poltergeists and hauntings (Rogo 2005; Houran & Lange 2001). What seems to distinguish these events is not in the phenomena themselves, but in the psycho-social dynamics in which they emerge. This finding constitutes an important opportunity for future research on all these phenomena, not only UFOs.

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