Kinetic Effects at the Ostensible Location of an Out-of-Body Projection During Perceptual Testing[1]

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ABSTRACT: In this experiment a selected subject was requested to go out-of-body and localize himself in a shielded chamber containing strain-gauge sensors and placed in front of the viewing window of an optical image device which displayed visual targets. The subject was given the overt task of identifying randomly selected targets displayed in the optical image device. Unintentional mechanical effects on the strain-gauge sensors were registered on a Beckman polygraph during the time when the subject was trying to identify the targets. The experiment consisted of 197 trials (resulting in 114 hits, 83 misses) extending over 20 sessions. Blind measurements were made of the strain-gauge activation levels on the polygraph recordings. These data were sampled so that four two-second intervals were measured immediately preceding and four such intervals immediately following target generation for each trial.

As predicted, the average strain-gauge activation level for the period immediately following target generation—that is, when the subject was reportedly "looking" at the target—was significantly higher for trials which were hits than for trials which were misses ($t = 2.16$, 19 df; $p < .05$, two-tailed). The average activation levels over all eight sampling periods showed a significantly higher degree of activation on occasions when hitting occurred ($t = 3.64$, 19 df; $p < .002$, two-tailed). The results are interpreted as conforming to the extrasomatic hypothesis of the out-of-body experience.

INTRODUCTION

Psi has been conceptualized as having two basic capabilities: cognitive information gain and kinetic action. In the heyday of his work at Duke University, J. B. Rhine (1947) hypothesized that the two aspects of psi always go together; in other words, that there is an ESP component during PK action and a PK action during ESP.

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The first of these propositions was relatively easy to demonstrate with the implementation of appropriate tests (Osis, 1953). The second, however, has gone untested and is often explained away using acausal theories of psi. Nevertheless, the possibility of kinetic action during ESP is suggested by accounts of spontaneous out-of-body experiences (OBEs), where target persons have reported bodily sensations (e.g., warmth, being touched, etc.) and the displacement of physical objects during unexpected out-of-body "visits" from friends (Landau, 1963).

The fundamental nature of OB processes are, for the most part, unknown and therefore subject to wide variations in theoretical interpretations (Hart, 1954; Palmer, 1978; Tart, 1968, 1977). The two main contrasting hypotheses are the following:

1. The *extrasomatic hypothesis*, which states that during a true OBE—as in Hart's "full-fledged" and Tart's "classical" or "discrete" OBEs—consciousness, or a major part of the human personality, is externalized and exists apart from the physical body.
2. The *intrasomatic hypothesis*, which states that nothing leaves the body during an OBE; the personality remains a normal, psychophysiological unit in a more or less altered state. Verifiable perceptions during OBEs are attributed to "ordinary" ESP.

We think that both hypotheses describe some aspects of the OBE, but, taken separately, are too rigid to accommodate all the information that is available. Extensive observations both during laboratory work and our exploratory "fly-in" tests with approximately 200 OB practitioners have provided clues which indicate different concepts. The OBE appears to be an ever-changing *process* rather than an all-or-none phenomenon. In the same individual the OB process might even oscillate somewhere between the two extremes of full externalization, as assumed by the extrasomatic hypothesis, and full internalization, as assumed by the intrasomatic hypothesis. The OB experient may at times leave no trace of externalization, while at other times offering some indices of having "been out." Examples of the latter would be perceptual and/or kinetic interactions with the environment, or being perceived as an apparition by one or more observers. Total externalization might occur at death, as suggested by studies of near-death experiences (Osis and Haraldsson, 1977), while completely intrasomatic experiences would accompany altered states—for example, as in the case of hypnotically-induced OB states or states brought about by suggestion and the demand characteristics of the experiment.

Therefore, we assumed a more flexible working hypothesis in which the OB projection is conceptualized as a unit that is ever-changing in the degree of its perceiving-acting capacity, that can move about and, to varied extents, localize itself in a physical environment. Such a unit would use its ESP for "seeing" and its PK for "action." The primary difference between the externalized mode of the OB state and ordinary psi processes would then be the matter of localization. During an extrasomatic OBE, psi might function at a point in space remote from the physical body, a place where the OB projection feels itself to be. The base of normal psi action is, on the other hand, believed to be at the body; we assume the same for intrasomatic OBEs or Tart's (1977) pseudo-OBEs. If we go on this assumption, uniting the OB externalization hypothesis with that of ESP and PK activation, certain consequences are predictable: specifically, that during the successful identification of visual targets while an individual is reportedly in the extrasomatic OB state, there will be registrable kinetic effects at the location where the experient feels his consciousness to be. In other words, the registrable PK effects at the ostensible location of the OB projection will be greater when the subject is more "out," and consequently hits on visual targets, than at those times when he supposedly is less externalized and scores a miss on the perceptual task. This working hypothesis is in concordance with the introspective reports of our subjects, who seem to achieve more hits during those times when they report being more fully externalized. Of course, it is not a criterion exclusive of customary ESP, but appears to be useful for accommodating past and (hopefully) future results of OB psi.

Method

Apparatus and Setting

The apparatus consists of the following units, which will be described below: An optical image device, an electronic scoring device, a shielded chamber, and an eight-channel polygraph. Their relative locations are shown in Figure 1. The subject lies down in a 40-decibel sound-attenuating room (A); the optical image device and shielded chamber are placed six doors away from the subject in Room B. The experimenters monitor the polygraph, scoring device, and control button of the optical image device from Room C. Rooms A and C are connected by an intercom, which is always on one-way communication in the direction determined by a control switch operated by K.O. Room A also contains an input panel that is connected to the polygraph in Room C.

Optical image device. The optical image device is an apparatus for the display of stimulus pictures which appear in a viewing window in random order. The target pictures consist of three aspects: color of the background (green, blue, red, or black), quad-

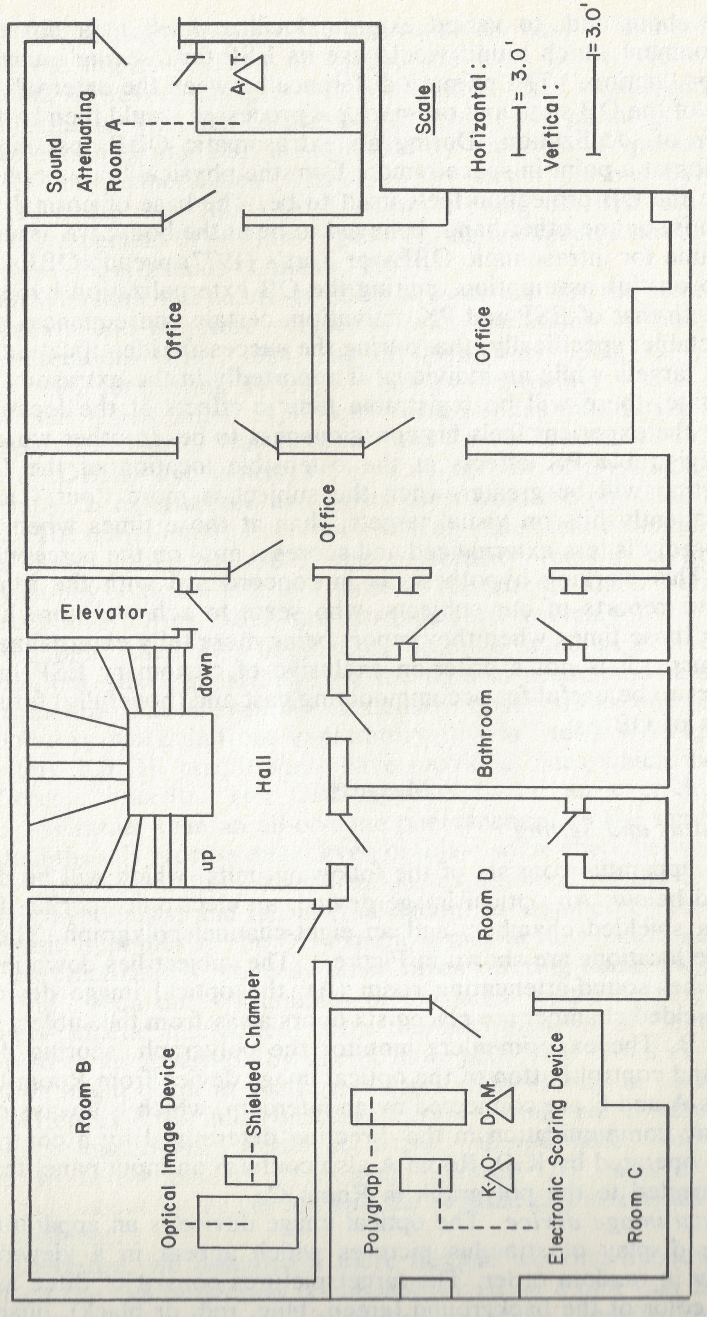

Fig. 1. The setting of the experiment: ASPR third floor.

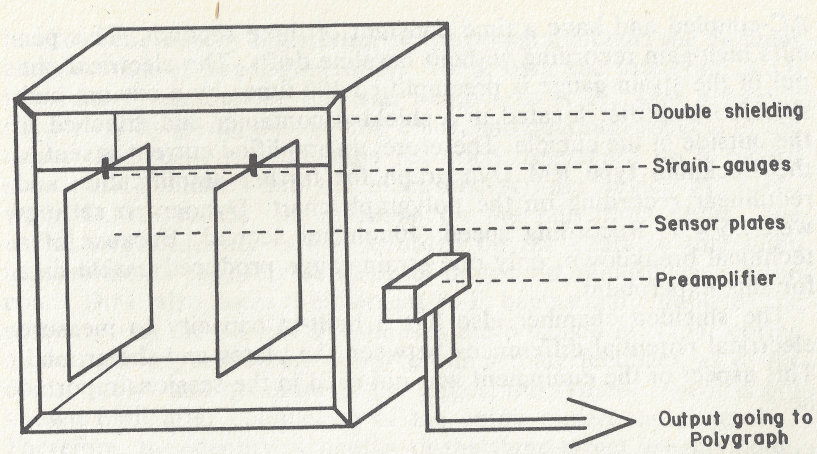

Fig. 2. Side view of the interior of the shielded chamber.

rant of the background (upper left, lower left, lower right, or upper right), and line drawings of five different images. The final composite picture is not located in its complete form in any part of the apparatus, but appears as an optical illusion, visible only from a location directly in front of the viewing window. The activation of a random number generator by a push-button in the polygraph room generates a new composite target picture in the optical image device and, at the same time, controls a marker pen on the polygraph that indicates the exact moment and duration of target generation. The electronic scoring device scores and retains in its memory the color and quadrant aspects of the target; the line drawing aspect is scored manually after the session. A "hit" is defined as the correct identification of any of the three target aspects.[3]

Shielded chamber. The shielded chamber is an 18″ cube enclosed in one layer of steel sheeting to provide electromagnetic shielding, and a second layer of electrically shielding material (see Figure 2). Both shields are grounded. The chamber is suspended from the ceiling by elastic rubber strips which reduce environmental vibration. Within the chamber, suspended from an acrylic strip, are two 9″ × 8″ metal sensor plates placed 8″ apart. Extremely sensitive strain-gauges (Baldwin-Lima-Hamilton Electronics type SPB3–35–500) are connected to the sensor plates in such a way that very small movements or vibrations of the sensors will generate electrical impulses in the strain-gauges. These strain-gauges are

[3] Because the perceptual results are not of primary concern in this paper, the reader is referred to a more detailed description of the optical image device and randomization procedure in a report available at a nominal cost from the senior author.

AC-coupled and have a time constant of three seconds. This permits high-gain recording without baseline drifts. The electrical output of the strain-gauge is preamplified 100 times by a custom built shielded amplifier located in a shielded container and attached to the outside of the cubicle. Therefore, an amplified current is sent to the Beckman type RM Dynograph for further amplification and rectilinear recording on the polygraph chart. Dynograph settings were .5/×.1. Recording speed: 10mm per second. Because of a technical breakdown, only one strain-gauge produced usable data for this experiment.

The shielded chamber also has a built-in capacity to measure electrical potential differences between the plates and the ground. This aspect of the equipment was not used in the sessions reported here.

Subject

Alex Tanous (A.T.), who lives in Maine, is available for testing when he comes to New York. We selected him for this study on the basis of pretest results and have worked on and off with him on OB and ESP studies since 1973. He shows enthusiasm for laboratory experiments.

Procedure

The shielded chamber is suspended from the rubber strips at least one hour before the experimental session begins. This is done to ensure kinetic quiescence of the sensors. At the same time, the optical image device is also made ready. The door to Room B is then closed, as are those of the rooms directly above Room B.

A.T. comes to K.O.'s office for a warming-up period. Over a cup of coffee, A.T. and K.O. usually engage in conversation relating to various aspects of our work. This seems to help A.T. get into the mood for the experiment. He then goes to the sound-attenuating room (A) and lies down in the dark. He takes a few minutes to engage in either relaxation or meditation practices and is then ready to "go" to the shielded chamber.

A.T. says that when in the OB state he experiences divided consciousness: Alex 1, his in-body, normal self, and Alex 2, his projected self in the shielded chamber. Alex 1 is silent during those times when Alex 2 is said to be performing tasks, e.g., "looking" at the targets. Alex 1 is, however, able to communicate his responses to the experimenters over the intercom without interrupting the ostensible projection of Alex 2.

K.O. first activates the target generator at the optical image device by pushing a control button; this button also activates a marker pen, thereby registering on the polygraph chart the moment and duration of target generation. Then, over the intercom, K.O. immediately announces the trial number to A.T., who responds right away by giving the symbol, color, and quadrant aspects of the target. His responses are tape recorded, registered on a record sheet, and punched into the electronic scoring device by K.O., while D.M. records the response on the polygraph chart. The actual target identity is not recorded on the chart so that blind measurements can later be made of deflection amplitudes. On the chart, D.M. also notes the moment A.T. begins and completes the response. As the subject's responses are punched into the scoring device, the experimenters are given immediate feedback as to the correct color and quadrant of the target; the symbol aspect is not known until after completion of the entire experimental session. Therefore, the identity of neither of the three target aspects (symbol, color, quadrant) is known to the experimenters until *after* the subject gives his response. Furthermore, the target display does not occur until *after* the polygraph recordings used in the analyses have been obtained. Ten trials are completed in this way for each session. After the session, optical image device scores are obtained and communicated to A.T. He is not, however, informed of the kinetic effects during these trials.

In order to minimize the likelihood of A.T. intentionally trying to affect the sensor plates, we attempted to create the impression that only the perceptual results were important during the formal experiment, and that the kinetic effects would be attended to only during the subsequent, exploratory part of the session during which A.T. engages in OB actions in the shielded chamber.

After the completion of the 20 sessions, the deflections that occurred on the strain-gauge channel of the polygraph record were blindly measured—that is, measured in such a way that the person did not know which of the optical image device trials resulted in hits and which in misses. Each deflection above the assumed noise level (5mm), obtained during inspection of pretest data, was measured in millimeters for eight consecutive sampling periods. Each period represented two seconds of actual recording time. Four periods of 20mm each were sampled immediately prior to target generation and four after. The periods after target generation were of three types: the first period represents the time when A.T. was reportedly "looking" at the target; the second period when, according to A.T., he was "assimilating" the information; and the final two periods when he was giving a verbal response. If, however, the response occurred in less than four seconds, but more than two seconds, the second of the response periods was eliminated; this occurred in 96 trials. If he completed his response in

less than two seconds—which happened in 11 trials—both periods were eliminated. This method was used in order to have a clear record of the strain-gauge activation during response.

Results

We obtained 197 usable trials resulting in 114 hits and 83 misses of the target pictures displayed by the optical image device; these trials were distributed over the 20 sessions. Figure 3 represents the mean strain-gauge activation levels per sampling period. These means were obtained by individually averaging the deflection amplitudes over those trials resulting in hits (solid lines) and those in misses (broken lines) of the optical image device targets.

As predicted, the mean strain-gauge activation level for the period immediately following target generation (when the subject reportedly was "looking" at the target pictures) during trials when he scored hits was significantly higher than during trials when he scored misses ($t = 2.16$, 19 df; $p < .05$, two-tailed).

We also found that over all eight of the periods sampled, the mean activation level for hits was significantly greater than for misses ($t = 3.64$, 19 df; $p < .002$, two-tailed). Tests for the differences in activation levels between hits and misses for those periods prior to target generation yielded significance ($t = 2.92$, 19

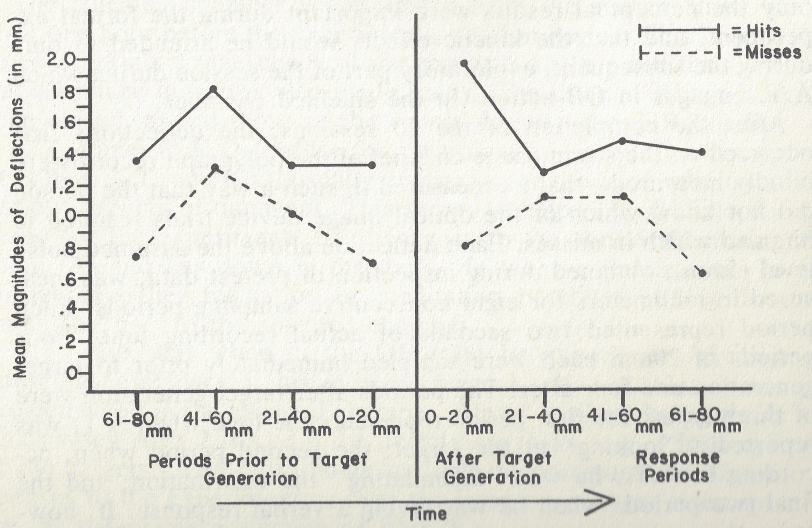

Fig. 3. Mean strain-gauge activation levels per sampling period during perceptual testing.

df; $p < .009$, two-tailed), as did those periods after target generation ($t = 2.57$, 19 df; $p < .02$, two-tailed). It appears that some kind of kinetic action was spread over at least eight seconds before and eight seconds after target generation. This general spread of activation is a post-hoc finding.

There were no appreciable differences between the strain-gauge activation levels of the four periods before and the four periods after target generation for either hits or misses.

The results support our original hypothesis that ostensibly *unintentional* kinetic effects can occur as by-products of narrowly localized OB vision.

Discussion

This is the first experimental attempt to couple an overt perceptual task, which requires highly localized viewing, with the registration of unintentional mechanical effects at the location where an OB projection was said to be stationed. Because of the unprecedented nature of this experiment, our interpretations must be very tentative.

The strain-gauge results appear to be relevant to the OB paradigm because they seem to be unintentional—a mere by-product of the localization of the OB projection at the sensor plates. During the experiment, we took pains never to indicate interest in or give feedback to the subject concerning any kinetic effects produced during perceptual trials. As far as we could ascertain in regular post-session interviews, the subject did regard the optical image device portion of the experiment as exclusively devoted to perceptual tasks. Therefore, it is our opinion that the results can most likely be attributed to the subject's OB presence in the shielded chamber.

J. B. Rhine (1947) hypothesized that psi should be holistically regarded as a composite of ESP and PK action. He also suggested that a PK effect, however minute, exists at the surface of stimuli. Our results indicate effects which are somewhat different than those that would follow from Rhine's hypothesis. The strain-gauges are not located within the optical image device, but within the shielded chamber, to which the subject said a part of his self had projected. We did indeed find a significant difference in the strain-gauge activation levels of hit and of miss trials during the time when the target was supposedly being perceived—that is, within two seconds of target generation. This finding appears to be in the direction of Rhine's hypothesis. However, strain-gauge differential effects were spread over a 16-second period, which is extended

beyond the subject's habitual rapid-fire responses to the stimuli in this and in other ESP experiments. Especially difficult to attribute to the hypothesis of unified ESP and PK action are the activation level differences between hits and misses for the 8-second period prior to target generation.

These prolonged strain-gauge activation periods conform more to our working hypothesis, which assumes that the extent of externalization during an OBE is a fluctuating process. The subject's introspective reports concerning those trials during which he felt himself to be more externalized also corresponded with a better rate of hitting (Osis and Perskari, 1975). We tentatively assume that at times of greater externalization more hits are achieved. According to this tentative assumption, the strain-gauge activation level rises not only because the subject scores a hit, but also because increased externalization facilitates both kinetic and perceptual effects. This conjecture is, of course, still highly speculative. We present it in the hope that it will stimulate further experimentation on OB processes.

OB experiments are like those of research on personality theory: they do not conclusively prove or falsify the overarching concepts of the theory, but may either support or weaken it. We think that the results of this experiment are of some relevance for OB theories; they are in close conformity with our working hypothesis of the extrasomatic localization of OB projections, as stated above.

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