entirely human fantasy as an explanation for what was going on then, not to mention during the two preceding decades and the years that followed.

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LITERATURE REVIEW

Early Studies on Psychometry

In 1921, Walter Morton Prince (1921), research officer of the American Society for Psychical Research, went to Mexico to look into the claim by physician Gustav Pagenstecher that one of Pagenstecher's clients excelled in psychometry. In a test for psychometry the subject is handed an object and asked for impressions about events or persons who have been in contact with it. J.B. Rhine (1953) called psychometry clairvoyant "free association" in connection with an object (p. 102).

Pagenstecher's client, Sra. de Zierold, suffered from insomnia, and Pagenstecher used hypnosis to treat her. It was in this state that her ability emerged. In one of the experiments (Prince, 1921) she was handed a sealed letter that elicited the impression that the writer was tall, 35–40 years old, had a scar over his right eyebrow, and was about to be shipwrecked. This was all true and the facts were unknown to the three researchers who were present: Prince, Pagenstecher, and L.S. Viramontes, secretary of a medical society in Mexico that had set up a commission to investigate Pagenstecher's claims (pp. 216–240). In other words they could not have supplied sensory cues.

I began my studies in parapsychology at Oxford under Professor H.H. Price (Price, 1940) because his concept of place memory brought psychometry and other forms of ESP under the same roof. The first account I saw of actual cases came from *Det Ockulta Problemet* by John Björkhem (1951; Roll, 1952). Björkhem was a psychiatrist in Sweden who said he had hypnotized and tested 3,000 subjects for psi, including psychometry. I tried (Roll, 1975) to repeat his findings with my fellow students but they showed no talent for psychometry or for any other type of ESP (pp. 248–249, 251–271). Björkhem (1943) reported a curious psychometry-type episode during an experiment in hypnosis. After he had induced a negative hallucination such that the subject became blind to a member of the group, the hallucination spread to the man's hat so that the hat too became invisible. Björkhem said he repeated the finding with subjects who were ignorant of the effect and where there were no obvious links between the objects and their owners (pp. 281ff). The distinction between a person and the person's possession seems to have disappeared for these subjects.

Psychometry-type procedures have been used for centuries to heal or harm people. In the *New Testament*, we are told that Paul practiced healing using pieces of clothing. "And God wrought special miracles by the hands of Paul: so that from his body were brought unto the sick handkerchiefs or aprons, and the diseases departed from them, and the evil spirits went out of them" (The Holy Bible, 1970, Acts 19: 11–12). The practice is common in tribal societies. Sir George Fraser (1922), the founder of social anthropology, called the procedure "contagious magic." It is the belief "that things which had once been in contact with each other continue to act on each other at a distance after the physical contact has been severed ... the magician infers ... that whatever he does to a material object will affect equally the person with whom the object was once in contact, whether it formed part of his body or not" (p. 52, Vol. I).

The term psychometry came into use following the publication of J.R. Buchanan's (1893) book, Manual of Psychometry: The Dawn of a New Civilization. Buchanan had a vision of psychometry as an opening to new knowledge in medicine, anthropology, literary research, and other explorations of the past. His work had little effect on these fields and was ignored by psychic researchers perhaps because he did not concern himself with the issue of whether sensory cues or rational inference might contribute to the findings. The first time psychic researchers paid serious attention to psychometry was in connection with their research into survival after death. The most celebrated and productive medium may have been Leonore Piper (Pleasants, 1964). Piper discovered she had mediumistic abilities when she consulted a psychic healer to clear up a tumor and then herself went into trance. She began having sittings at home with relatives and friends. In 1885 William James visited Piper expecting to show his mother-in-law how Piper produced her "marvelous facts." After several sessions he was convinced her abilities were real. He said, "If you wish to upset the law that all crows are black ... it is enough if you prove that one crow is white. My white crow is Mrs. Piper." In 1887 James introduced Piper to Richard Hodgson, executive secretary of the American Society for Psychical Research. Hodgson (Plesants, 1964) had exposed several fraudulent mediums and expected to do the same with Piper, but when he visited her she came up with "much intimate knowledge of deceased friends and relatives of mine." He then made appointments for some fifty sitters who were unknown to Mrs. Piper and got similar results. He hired detectives to see if she had help from confederates, but found no indication of fraud. Allowing for chance coincidence and sensory cues from the sitters, Hodgson concluded that "a large residuum of knowledge displayed in the trance state could not be accounted for except on the hypothesis of supernormal power."

Piper was also studied in England by Sir Oliver Lodge (1889–1890), a pioneer in the development of wireless telegraphy; by Eleanor Sidgwick (1915), Principal of Newnham College, Cambridge; and by other members of the

Society for Psychical Research. Sidgwick (1915) wrote a 657-page compendium on the psychology of Piper's trance phenomena.

Like other trance mediums, Piper seemed to reach the departed with the aid of objects that had belonged to them and also with the aid of "spirit controls," supposed spirit entities whose task it was to choose the communicators and direct the communication. The control may have been a personification of Piper's psychic abilities. She had no conscious awareness of what transpired during a session or memory of it afterwards.

At the time, the main form of ESP was thought to be telepathy, mind-to-mind ESP, either between the living or between the living and the dead. Piper's insistence on using a physical object to connect with the deceased puzzled the experimenters and they questioned her, or rather her controls, about it.

In a session with W.R. Newbold, a philosophy professor at the University of Pennsylvania, Piper said, "Objects carry with them a light as distinct to us as the sunlight is to you. The instant you hand us an object, that instant we get an impression of its owner, whether the present or the past owner and often both" (Sidgwick, 1915, 624f).

Newbold asked, "Does an article carry with it elements so to speak of its former surroundings which you can perceive, or must such influences be drawn from its owner exclusively?"

Piper: "It does bring with it a decided picture of a place."

Newbold: "Can this be got from a place or must it be through a person?"

Piper: "Oh without the intervention of a person because it has light enough to give us the impression of its former surroundings" (p. 626).

In a session with Hodgson, Piper said, "Articles worn by a person when in the body contain a certain form of magnetic power. . . . It attracts (us) in nearly the same way a magnet attracts a needle. It carries with it its own sphere. It has light of its own. . . . It has a slight etherial covering as it were."

Hodgson: "Is that etherial on the article, has that been shed, so to speak, by the etherial covering of the spirit when in the body?"

Piper: "Yes, it has" (p. 629).

Hodgson was not satisfied. "How does an object suggest its previous surroundings?"

Piper: "It would be by thought."

Hodgson: "If a human being were present instead of the object it would be easy to understand. But an object doesn't think."

Piper: "No. Yet the object has been found and handled by some person still in the body. . . . If an object has been handled at all it receives what we call influence for convenience, yet apart from seeing the handler of it we see a light also which portrays to us a picture."

Hodgson: "But the object itself hasn't a picture."

Piper: "No, not at all."

Hodgson: "The picture comes from its connection with the owner?"

Piper: "Yes."

Hodgson: "The owner has a mental picture?"

Piper: "Yes, yet we distinctly see the light which to us is connected with the object."

Hodgson: "Are the pictures in that light?" Piper: "No, but it connects us with it."

Hodgson: "It comes from persons who have handled it?"

Piper: "Yes, for instance, we get a clear or otherwise picture from the person to whom it belongs."

Hodgson: "Good."

Piper: "Well, what does this explain?"

Hodgson: "Well, some persons maintain that objects themselves have a kind of memory, they seem to suppose that inanimate objects carry with them mental pictures like those of developed human beings."

Piper: "Scientifically not. No, not at all" (p. 627).

These exchanges show two perspectives on the object, first that Piper obtained her information from the object itself, and second that the real source was the mind of the deceased owner of the object, the view that Hodgson preferred. Piper's theory is reflected in a sitting with a Mr. and Mrs. Howard, when she asked them not to hand her an object belonging to a certain person "because if you do, it will call him back and I don't want to disturb him" (p. 622). She also told Newbold that the former owner of an object is attracted to it. Newbold asked, "Why does it attract him more in the presence of the medium?"

Piper: "It does not—it—"

Newbold: "You mean it is then only that we know he is attracted?"

Piper: "Certainly—only this" (p. 624).

Piper seemed to say that the minds of the departed, or at least their memories, are interwoven with their objects.

Although psychometry was used extensively in the tests with Piper (Hodgson, 1892) and with other mediums (e.g., Saltmarsh, 1929) there were no attempts at a theory for psychometry. This is not surprising since telepathy was the only form of ESP that was generally recognized. It would have seemed strange to suppose that an inanimate object could contain and transmit information. Nevertheless two leaders of the Society for Psychical Research looked favorably on this possibility. F.W.H. Myers (1903) said, "objects which have been in contact with organisms preserve their trace; and it sometimes seems as though even inorganic nature could still be made, so to say, luminescent with the age-old history of its past." Lodge (1909) remarked that "it appears as if we left traces of ourselves, not only on our bodies but on many other things with which we have been . . . associated, and that these traces can thereafter be detected by a sufficiently sensitive person."

William James (1909) may have been the first to outline a theory of psychometry and to relate it to other psychological functions. In his study of Piper, James proposed that memories may exist not only in human brains but in other physical objects as well. After death, a person's memories may persist in the objects with which the person was connected when living. A medium may

then learn about a deceased individual by means of objects the person had handled when living.

James indicated that the information is not restricted to the experiential record of the person whose object is used but may concern other individuals with whom the person has been in contact. Psychometry would not be limited to apprehending the "memories" in objects but would also provide a channel for ESP in general.

Two major studies of psychometry came out in the early 1920s: Pagenstecher's (1922) and Prince's (1921) research with de Zierold (see also Roll, 1978) and the tests of "metagnomic" subjects in France by Eugene Osty (1923), a physician and later director of the Institut Métapsychique International. Unlike their colleagues at the SPR, Pagenstecher and Osty did not use psychometry to reach the departed. Their main reason for exploring psychometry was that it threw light on psychic awareness. In addition it was easier to control for sensory cues when objects rather than the owners of the objects were present at an experiment.

Osty's book, Supernormal Faulties in Man, discusses the remarkable results he obtained from several sensitives. As is to be expected he talked about their successes only. But as Alan Gauld (1982) noted, "It would take an immense mass of erroneous material to outweigh Osty's more remarkable cases, and a great deal of misrecording and misverification to undermine them" (p. 134).

G.N.M. Tyrrell (1947) referred to Osty's work when he said, "It would seem that there must be more belonging to a physical object than appeals to the senses and more, even, than lies within the scope of physical research. At the present moment I have no idea of what this 'more' consists of. But the subject has been greatly neglected and there is a wide scope for experiment." Tyrrell was a president of the SPR and the author of the classic *Apparitions* (Tyrrell, 1953) and other works.

Pagenstecher's (1922) studies suffer less from selective reporting than do Osty's but there were other problems. Pagenstecher, Prince, and Viramontes usually knew the correct response and might inadvertently have cued Sra. de Zierold. In view of the detailed information she often produced and in view of the spontaneous and direct manner of her delivery it seems unlikely that she made a practice of responding to cues from the experimenters. A more serious objection to some of the tests is that she might have picked up sensory information from the objects themselves. Pagenstecher and Prince emphasize that she did not examine the object either by sight or touch. Once her fingers came in contact with the object, she did not move them for the duration of the test. Even so, some non-psychic hits might have been scored, for instance, regarding the origin of the pumice stones, which were among the objects used.

In several instances, however, the particular circumstances described by Sra. de Zierold, and later found to have been associated with the object, could not have been inferred, even had she examined it. This was true for the Ramon experiment (Prince, 1921, pp. 216–240).

A study by Pagenstecher and Viramontes (Pagenstecher, 1922, pp. 56-58) approaches present-day experimental standards. Four similar pumice stones were subjected to different treatments for a period of 15 days. One stone was placed in a solution of asafetida and gentian. Asafetida is a malodorous plant extract used as an antispasmodic, and gentian is a bitter-tasting extract used for digestion. Another stone was placed in a wall clock, a third in a refrigerated sugar solution, and the fourth in burning sulphur. During the tests, Viramontes selected the stones in random order and handed them to Sra. de Zierold without Pagenstecher seeing which one she received at a particular time. The stone that had been in the refrigerated sugar solution gave rise to a sweet taste and a sensation of cold in the tips of her fingers. The stone from the clock evoked "the tick-tock of a watch. There seems to be a church in the vicinity as I hear the sound of bells," Sra. De Zierold said. The stone that had been in burning sulphur caused a smell of sulphur and heat at the tips of her fingers, and the asafetida and gentian stone produced a disagreeable odor and a bitter taste (p. 58). The stones that had been refrigerated or placed in the clock could hardly have retained any physical trace of these events. But it seems doubtful that all traces of smell had been removed from the stones treated with sulphur and the plant extracts.

An object is not always necessary. Talking about his experiments with Mme. Morel, Osty (1923) said, "As soon as mental evocation of the personality has been obtained, the object that called it up may be taken away from the percipient and destroyed. The percipient, nevertheless, continues to describe the states of life in the distant person just as if he were present, or at any rate as if the object were still being held" (p. 131). He also said that the events may have taken place before or after the object was touched by the target person and that the same object used in successive experiments may evoke events in the life of the person as they unfold.

With respect to the state of consciousness of the psychics, Piper (Sidgwick, 1915) and Elliott (Saltmarsh, 1929) worked in self-induced trance and de Zierold was hypnotized (Prince, 1921). As for the metagnosts of Osty (1923), some diverted their attention for a moment, while others worked in hypnotic or self-induced states of dissociation (p. 120).

Psychometry and psychometry-like tests have been conducted using contemporary procedures, but only one, by West and Fisk (1953), is within my time frame. D.J. West was assistant director of the Cambridge University Institute of Criminology, and research officer of the SPR. G.W. Fisk was editor of the SPR *Journal* and had been active in research for many years. The background of the study was their observation that West seemed to jinx the ESP of his subjects while Fisk had no problem getting results. In order to explore this difference, they designed an experiment where Fisk mailed sealed packs of cards to 20 subjects together with record sheets for their guesses. The packs were returned unopened to Fisk with the filled-in record sheets. Unknown to the subjects, West had randomized half the packs, wrapped them, and sent them to Fisk, who put on the final wrapping and mailed them. The combined result was

statistically significant, but this was due entirely to the scores on Fisk's cards. With the exception of one person, who got high results on both, the twenty subjects did not respond to the packs West had handled. It seemed that they responded to the cards West had handled in the same way they might have responded to West himself.

In 1953, 2 years after I began my studies at Oxford, Eileen Garrett, President of the Parapsychology Foundation in New York and a well-known medium, hosted a conference at the University of Utrecht in Holland. The occasion was in honor of W.H.C. Tenhaeff, who had been appointed to a new chair in parapsychology. Holland is near England, and Mrs. Garrett invited me to attend and give a paper (Roll, 1953). This was my first parapsychology conference and I had the added pleasure of meeting Tenhaeff (1953), the principal explorer of psychometry at the time, and hearing him discuss his research with Gerard Croiset and other psychics. Aside from his own studies, Tenhaeff (1953) told of reports he had received from others. The clerk of a district court wrote him that the president of the court had asked Croiset to help locate a missing portfolio with documents about a bankruptcy case. Croiset went to the record office and immediately announced that the documents were to be found two flights up, on the left side, and at the rear. He also pointed out the room where the documents had been. He then went to the attic, two floors up on the left rear where the portfolio was found. The president of the court was present at the investigation. In this case, the "object" was a building rather than a personal belonging. The object can also be a person as in the typical psychic reading. But presence in the same room may allow for sensory cues from client to psychic and are usually rejected as evidence for ESP.

Tenhaeff (1954–1955) reported a case where sensory cues seemed unlikely. A sensitive saw six glasses of beer behind a male inquirer. Suddenly the beer turned into rum. The pair of images caused the psychic to ask the man if he had anything to do with a restaurant, which he denied. It later turned out that the man was born in the Frisian town of Sexbierum (six-beer-rum). Tenhaeff notes that as in dreams allegorical and symbolic representations often appear in psychic impressions. Saltmarsh (1929) found that Elliott's impressions resembled vivid dreaming. He distinguished between two factors, "an external source" and the "subliminal memory" of the medium that reflects this source. Osty (1923) found that neither he nor his subjects were able to judge the accuracy of their impressions when they emerged. He said, "There is one only mode of estimating their value—to write down the tenor of the words spoken and compare them with facts" (p. 213). This makes sense if the images that are evoked are the subject's own.

Psychics may also be good at remembering their own past. James (1889–1890) found that Piper's memory in trance for previous sessions was extraordinarily good while her waking memory was nothing special (p. 655). Lodge (1899–1890) said that her memory showed extraordinary tenacity and exactness though it was not infallible (p. 450). Osty (1923) found that "good metagnomic subjects whose faculty is exercised in the waking state have exceptional memories" (p. 78). One of his subjects said that he had an

impeccable memory of what he had read and of his psychic sessions, the words returned to him as printed letters and gave him the sensation of reading. He told Osty, "You have written down my words, one by one; tomorrow I will bring you a copy of them from memory, and you can compare the two.' He did as he said. The two corresponded exactly word for word" (p. 78).

If psychometry is a form of memory, you might expect that the characteristics of familiar forms of memory might also be found in psychometry. This seems to be the case.

Frequent or long-lasting contact between the target person and the object may increase the likelihood of success. Hodgson (1892) said, "Any object, if it has been handled or worn much and almost exclusively by specific persons, seems to serve equally well (as locks of hair)" (p. 21).

Piper (speaking as one of her controls) said, "Remember one thing of vast importance is the producing of objects ... and we may add that all such should be those handled as little as possible by other hands than those to whom the object belonged" (Sidgwick, 1915, p. 638). In a test with Newbold she said, "... it often causes confusion when the object has been handled often and by a great number if persons" (p. 624). Similarly, Mrs. Warren Elliott, a medium studied by SPR researcher H.F. Saltmarsh (1929) objected to any article "which had often been washed or handled by a great number of people" (p. 109). Osty's (1923) subjects preferred "some actual organic part of the distant person—hair, nail parings, a tooth, blood, or a fragment from an amputation; or again by a piece of underclothing, of a coat, a jewel, or any other object which has been habitually touched much by one person and little by another. Others prefer a written paper, provided it has not been much handled since it was first written" (p.129).

It seems that events from the life of the person who has been in contact with the object more frequently or for longer periods of time than others are more likely to be apprehended. The same is seen in familiar forms of memory.

Pagenstecher's subject, Sra. de Zierold, often described emotionally charged events, such as wartime injury and death. In the Ramon case, the central event was the ordeal of a man about to be shipwrecked. Björkhem (1951) said that his subjects most often received impressions about events that were emotionally significant to the person whose object was used (p. 57). Ordinary recall is also often about emotionally significant events. Next to emotional events, Björkhem (1951) said that his subjects tended to describe recent events (p. 57). Pagenstecher (1922), on the other hand, found that objects that had not been exposed to traumatic events elicited images of the manufacture of the objects, that is, of primary events. In ordinary memory, recent or primary events tend to be recalled more often than others.

Psychometry has been attributed to a memory-like process where you recall events in the history of objects other than your own brain. The stimuli to which the psychic responds are not the familiar physical properties of the object, as in sense perception, but memory-like elements associated with the object.

The process may be easier to understand if the definition of "person" is extended to include objects in the environment. There would then be two types of memory, recall of events in the life of the psychic and recall of events in the lives of persons with whom the psychic is connected. A material object can be a bridge because it is visible and tangible and also extends into the past and thereby forms a link to people in whose life it has figured. Once this bridge has been established, the psychic may follow the activities of a person including others whose lives intersect with the person's.

The late David Bohm (1980) raised the possibility that a physical object as such (i.e., apart from the memories of people in whose lives it has figured) may hold something like a memory record. Bohm was a theoretical physicist at the University of London. He thought that some physical phenomena can best be understood if we suppose that they result from a multidimensional base that is not directly observable by the senses, nor by the extension of the senses made possible in the physics laboratory. He called this base the "implicate" order as distinguished from the "explicate" or "manifest" order of the physical universe. Bohm said, "... this [implicate] order has room in it for something like memory, in the sense that previous moments generally leave a trace ... that continues in later moments, though this trace may change and transform almost without limit. From this trace (e.g., in the rocks) it is in principle possible for us to unfold an image of past moments, similar in certain ways, to what actually happened" (pp. 207-208). Bohm regarded memory as a special case of this process. In psychometry, too, "previous moments leave a trace that continues in later moments," which may enable a person to unfold an image of the past.

Psychometry may also be understood without giving up conventional ideas of memory and mind. According to science and common experience, mind, including memory, is embedded in the body, and the body is embedded in the environment. From this it follows that the mind is also embedded in the environment. Since the environment is composed of animate and inanimate objects, the mind must be imbedded in these objects. This means that objects have mental as well as material properties, and this leads to the expectation that both types of properties can be explored and understood.

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Note

¹ The term psychometry is also used for the theories and techniques of psychological measurement.

ARTICLES OF INTEREST

"Dream Drug or Demon Brew?" by Lisa Melton. *New Scientist*, 182, 42–43. June 26, 2004.

Ayahuasca is a brew composed of two different Latin American plants. One contains the powerful hallucinogen N, N-dimethyltryptamine (DMT). The other