

HISTORICAL PERSPECTIVE

Musings on Materializations: Eric J. Dingwall on “The Plasma Theory”

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Submitted October 27, 2018; Accepted December 14, 2018; Published March 30, 2019

DOI: <https://doi.org/10.31275/2019.1381>
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Abstract—The psychical research literature has many examples of séance room materialization phenomena. This article consists of a reprint of, and a commentary about, Eric J. Dingwall’s paper “The Plasma Theory,” published in the *Journal of the American Society for Psychical Research* in 1921. Dingwall discussed some of the previously published ideas on the topic, and emphasized those related to mediums Eva C. and Kathleen Goligher. The purpose of the current article is not to provide evidence for the phenomena, but to present relevant contextual information about the article, additional bibliography, and theoretical concepts, some of which are forgotten today.

Introduction

One of the phenomena of physical mediumship is materializations, or appearances of ephemeral bodies (or parts of), and other forms, or things, in the séance room. This includes the production of ectoplasm, a subtle matter assuming various shapes and appearances—such as mists, plaster, and textile-like products—that may change into things such as hands, faces, and whole bodies. The topic flourished in previous eras and is largely ignored today by parapsychologists, particularly in terms of research. This is in part due to its association with fraud (e.g., Nahm 2014, 2016, Puharich 1960/2008, Schrenck-Notzing 1924, Wallace 1906), and the lack of mediums who produce the phenomenon, or who are willing to be investigated under controlled conditions. Nonetheless, some current students of materialization believe there is evidence for the occurrence of the phenomenon (e.g., Braude 2007, Pilkington 2006). The purpose of the present article is to remind readers of the spiritualist and psychical research materialization literature via a reprint and discussion of a paper on the topic

by Eric J. Dingwall (1921) in which aspects of the subject were reviewed.

Even though materializations are not widely investigated today (for exceptions see Braude 2014, 2016), the material discussed in the present paper is still relevant for various reasons. First, like any other topic, modern research into materializations would benefit from familiarity with this literature, particularly in terms of providing knowledge about methodology, theory, and previous findings. Second, this literature has much to teach us about the development of psychical research, as seen in overviews of past developments in the field (Inglis 1984, Robertson 2016), and thus deserves attention. Third, the topic is still relevant to current concerns, as seen in discussions of it in both popular (Parsons 2017, Tymn 2018) and scholarly (e.g., Brain 2013, Delgado 2011) forums, which includes studies of specific materialization mediums of yesteryear (e.g., Haraldsson & Gissurason 2015, Weaver 2015).

Materialization Phenomena

Variety of Materializations

Most of the Nineteenth-Century descriptions of séance materializations, a topic barely mentioned by Dingwall in the article reprinted in this paper, referred to the appearance of whole bodies, or parts of them, a trend referred to by a commentator as the ‘materialization mania’ (Wilson 1879; for overviews see Moses’ (1884–1886) multipart paper, as well as Holms 1925/1927, Montandon 1946, and Sargent 1876). This was, and still is, a problematic literature sometimes involving mediums accused of fraud, and that did not always present clear descriptions about the control conditions under which the mediums sat.

Many accounts were about mediums such as Catherine E. Woods (Adshead 1879), Florence Cook (Crookes 1874a), William Eglinton (Farmer 1886), Francis Ward Monck (Oxley 1876), the Eddy Brothers (Olcott 1875), and Kate Fox (Owen 1871), among many others (e.g., Brackett 1886, Wolfe 1874).

A classic case of full-body materialization was Katie King, which appeared in the presence of medium Florence Cook (Figure 1). In one instance, as narrated by William Crookes:

Katie never appeared to greater perfection, and for nearly two hours she walked about the room, conversing familiarly with those present. On several occasions she took my arm when walking, and the impression conveyed to my mind that it was a living woman by my side, instead of a visitor from the other world, was so strong that the temptation to repeat a recent cel-



Figure 1. Materialized form of Katie King (first two photos) and Medium Florence Cook.

eberrated experiment became almost irresistible . . . I asked her permission to clasp her in my arms . . . Permission was graciously given, and I accordingly did—well, as any gentleman would do under the circumstances.

(Crookes, 1874b:158)

Many were the reports of appearances of limbs and faces. Hands were common, as seen with Eusapia Palladino. On one occasion the medium's hands were tied with a cord that was sealed with wax and held by the controller. The writer stated he saw "two luminous hands as if coming down from the roof . . . [which] loosened the knots that held Eusapia's wrists" (Otero Acevedo 1895:Volume 2:244; this and other translations are mine). In another séance Blech (1897) reported a hand appeared "continued by an arm," (p. 3), as well as a "small and warm hand" (p. 5).

In addition to full-body appearances, and the appearance of faces and limbs, there were reports of less precise forms as well that may be considered manifestations of what was latter called ectoplasm, which is the topic of Dingwall's article. Perhaps the most common form of Nineteenth-Century ectoplasm was that of clouds or nebulous formations, such as those observed with Monck (e.g., Oxley 1876). In D. D. Home's séances there were reports of a "small white cloud without any well-defined shape" and of a "luminous cloud-like body" (Adare 1869:28, 35). On one occasion, according to Crookes, a hand was seen "ending at the wrist in a cloud" (Crookes 1889:114).

Also common was the so-called spirit drapery, which looked like textile formations. In a séance with Florence Cook, materialized drapery was seen passing through a curtain, suggesting to an observer that this "was a clear



Figure 2. Students of ectoplasm Juliette Alexandre-Bisson, Albert von Schrenck-Notzing, Gustave Geley, and William J. Crawford (left to right).

case of something which looked like solid matter passing through solid matter” (W. H. Harrison 1872:35). With medium Kate Fox it was reported that “an illuminated substance like gauze rose from the floor behind us, moved about the room and finally came in front of us” (Owen 1871:387–388).

Other reports mentioned “a slender attachment as of gossamer” and a “gossamer filament” (Colley 1877:557), “something white” on the floor (Lamb et al. 1875:10), a “dingy, white-looking substance” (Farmer 1886:178), and a “a small white patch, about the size of a lady’s handkerchief” (Rhodes 1876:23). Interestingly in these reports, and in others (e.g., Oxley 1876), the forms observed were connected to or developed into human bodies.

There were also many discussions of materializations during the first decades of the Twentieth Century, as seen in the writings of Gambier Bolton (1914/1919), Paul Gibier (1901), Enrico Imoda (1912), Enrico Morselli (1908), and Charles Richet (1905). Of particular importance was the work of French sculptress Juliette Alexandre-Bisson (1921), German physician Baron Albert von Schrenck-Notzing (1920a), French physician Gustave Geley (1918, 1919/1920, 1924/1927), and New Zealand-born mechanical engineer William J. Crawford (1921) (Figure 2). Their descriptions of ectoplasm provided much information about this mysterious substance. A rarely cited example is the following, which took place with medium Eva C. (Figure 3), who may have been the first medium to produce amorphous masses of ectoplasm that sometimes took various shapes:

Mme B. came into the cabinet at Eva’s invitation; as soon as she entered, a mass of substance lashed into her face; she came out completely covered, her fingers grabbing the substance; she had trouble getting it off. On the chest of the medium then appeared a round ball. From this ball, emanated



Figure 3. Ectoplasm with Eva C.

three rays of matter; one resting on the right arm, the other resting on the chest, the third was placed on the left arm . . . A pile of substance suddenly fell on the head of Mme B. who sat in front of the medium; the substance covered her, spreading on her back. When she raised her head, everything had vanished and seemed to have been absorbed into the medium.

(Alexandre-Bisson 1921:17)

Schrenck-Notzing provided many descriptions of ectoplasm. With Polish medium Stanislaw P., he observed a long mass coming from her mouth suspended in the air (Figure 4). "It comprised along its whole length two strips, which coalesce or are woven together . . . The surface appears rough, formed, and somewhat resembling a wool product" (Schrenck-Notzing 1920a:254). In another example with medium Willy Schneider, a photo of ectoplasm taken in 1919 was described as a "large mass of white substance covers the right shoulder and upper arm, like a white napkin, and is fastened at the neck" (Figure 5) (Schrenck-Notzing 1920a:336).

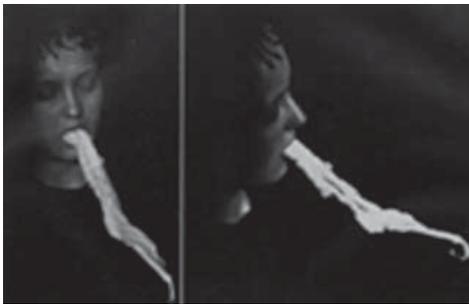


Figure 4. Ectoplasm with Stanislaw P.



Figure 5. Ectoplasm with Willy Schneider.



Figure 6. Artistic representation of connection between materialized form and medium William Eglinton.

Vital Forces, Ideoplasty, and Materializations

The subject of Dingwall's article is part of a larger topic in the history of psychical research. Coming from ancient times, and from the mesmeric and spiritualist movements, psychical research inherited a tradition of belief in vital and nervous forces believed to be able to produce various forms of psychic phenomena, including those of physical mediumship (materializations, movement of objects, raps, and luminous effects) (Amadou 1953). Discussions of these forces include those of De Gasparin (1854), Rogers (1853), and later theorists (e.g., Anonymous 1875, Butlerow 1874, Cox 1872, Morselli 1908). The idea was summarized by psychical researcher Hereward Carrington (1921), who, in addition to kinetic effects, discussed this principle as “a form of matter which is also externalised, and which at times can be sufficiently condensed or solidified to enable it to be seen, felt, and photographed” (p. 273) (Figure 6). I have presented overviews of such unorthodox concepts of force in several papers (e.g., Alvarado 2006, 2016b, Alvarado & Nahm 2011).

The idea that materialization depends on the vital force of the medium, what one writer called the “stuff for form-building” (Colley 1877:566), was frequently discussed during the Nineteenth Century by students of the subject (e.g., Aksakof 1898, Harrison 1876), and in messages presumed by some to come from spirits of the dead (e.g., Crowell 1874:Volume 1:417–418, Richmond 1877). As stated by an Anonymous (1875) writer, most probably William Harrison, editor of the *Spiritualist Newspaper*:

The law of the conservation of energy points out that power cannot be gained in one direction without being lost in another, consequently the power which moves a visible or invisible spirit hand must come from somewhere, and on the hypothesis laid down in this sketch the power comes from the medium . . . The spirits also draw more or less vitality from some of the sitters.
(Anonymous 1875:135)

Physicist Oliver Lodge (1894) speculated on the existence of temporary prolongations coming out of Eusapia Palladino's body. These prolongations were generally, but not always, invisible. It was "as if a portion of vital or directing energy had been detached, and were producing distant movements without any apparent connexion with the medium" (Lodge 1894:334–335). Also based on Palladino's phenomena, somewhat later Enrico Morselli proposed that an "unknown bio-psychic force . . . , projected from the medium outside her physical person, . . . , although ordinarily invisible and intangible, is able to take on different forms" (Morselli 1908:Volume 1:449).

Following on the idea that materializations depend on the medium's vital force, Gustave Geley stated: "Everything goes to prove that the ectoplasm is, in a word, the medium herself, partially exteriorized" (Geley 1919/1920:63). Similarly, a later student of the subject wrote that in materialization the "material parts of the medium's organism, at first dematerialized, are exteriorized and recondensed" (Kharis 1921:216).

The well-known materialization researcher Albert von Schrenck-Notzing wrote that "telekinetic . . . and teleplastic phenomena are only different degrees of the same animistic process" (Schrenck-Notzing 1920b:188). Furthermore, there were discussions assuming that visible materializations were the last stages of the exteriorization of the force (e.g., de Rochas 1897). As stated by Charles Richet:

The projection of a force from the body, therefore a first phase of invisibility, a second phase during which it appears as a vapor, or a fluidic thread, and it starts being visible, a third phase during which it is tangible, visible, sometimes very clear, but most often shapeless. We will see . . . that this form may take on semblances almost as real as a living being (fourth phase).
(Richet no date circa 1933:218–219)

The idea of exteriorization of forces from the medium's body to form materializations was generally believed to be directed by spirits of the dead, and later by the medium's mind, such that their will was imprinted on the materialized product, a topic that extended to phenomena such as spirit and psychic photography (Bozzano 1929). In this literature the word ideoplasty was used to refer to the process by which the ideas of an agent shaped

the materialized forms, but many discussed this idea without using the term. For example, Aksakof, who accepted the spirit explanation for many phenomena, stated that materialization was an example of “a phenomenon of creation . . . matter is but the objectivation, the representation of the will” (Aksakof 1890/1895:626). These were, he affirmed, but “temporary forms, created through an effort of memory and will” (p. 627). Others who endorsed the idea, but did not use the term ideoplasty, and assumed the mind of the medium was at play, were de Rochas (1897:25), Morselli (1908:Volume 1:441–442), and Visani-Scozzi (1901:141), who were discussing the medium Eusapia Palladino. Later examples, involving individuals who used the term, were de Fontenay (1914), Ochorowicz (1909:70; see also Hess 2018), and Schrenck-Notzing (1914b:141–144, 1920a:33–34, 305).

Although not mentioned by Dingwall in the article reprinted below, Geley’s theoretical ideas were very influential in his time. Based on the idea of a basic universal substance as the substrate of living things, Geley (1918, 1919/1920) considered ectoplasm and organic formations ideoplastic creations. Seeing materialization as a biological process, Geley compared the incomplete and grotesque character of ectoplasmic formations to those found in animal and human forms. “Like normal physiology, the so-called supernormal has its complete and aborted forms, its monstrosities, and its dermoid cysts. The parallelism is complete” (Geley 1919/1920:62). He also compared ectoplasmic development to the histolysis of insects: “The same phenomenon takes place, as has already been said, in the closed chrysalis of the insect as in the dark cabinet at the séance” (Geley 1919/1920:64).

Furthermore, Geley believed that, in addition to materializations, normal physiology and embryology suggested the existence of a superior and organizing dynamic force behind biological processes, which consisted of ideoplastic processes accomplished by this dynamism. In his view, the formation of a fetus and birth, and materializations, shared a similar directing process. The importance of this for Geley was that he believed that instead of seeing matter as the creator of reality, including biological process, the creator was instead an idea. Geley admitted that the nature of this directing principle was a mystery, but emphasized the importance of seeing directing ideas rule over the physiological, essentially an argument against materialism.

Eric J. Dingwall

Eric J. Dingwall (1890–1986) (Figure 7), the author of the paper reprinted here, was a well-known researcher and critic of psychical research. In his youth Dingwall was part of the staff of Cambridge University Library. He was once the Research Officer of the Society for Psychical Research

(Anonymous 1923:31), and briefly a member of the staff of the American Society for Psychical Research as Director of the Department of Physical Phenomena (Anonymous 1921:319). In addition, Dingwall obtained a DSc in 1932 from London University. He was a member of the Magic Circle, and a student of customs, among them sexual ones (e.g., Dingwall 1931) (on Dingwall see Gauld 1987 and Willin 2017).



Figure 7. Eric J. Dingwall.

Dingwall wrote many papers about physical mediumship. These included reports of séances with mediums such as Willy Schneider, Margery, Eva C., and Janus Fronczek (Dingwall 1922a, 1926a, Dingwall et al. 1922, Wooley & Dingwall 1926), and book reviews (e.g., Dingwall 1922b, 1924, 1926b,c). Commenting about physical mediumship, he wrote:

Distrusting my own observations, I distrust those of others, and I have already seen enough to provide ample grounds for that distrust. Observations in this field, in order to be of value, must be checked and counter-checked by independent witnesses of irreproachable antecedents, and if possible registered by mechanical recording instruments. (Dingwall 1926b:389)

Furthermore, Dingwall (1926b) deplored the lack of critical analysis many had about physical mediumship, as seen in a tendency to believe too much from reports. In his view, verification of phenomena and replication via further observations were more difficult in psychical research than in other fields.

In addition, Dingwall was well-known as a critic of other topics. In a paper about a fraudulent physical medium he stated that he believed that psychical research societies had the duty "to warn persons of the frequency of fraud and of the absolute necessity of requiring scientific conditions before psychic phenomena are accepted as supernatural" (Dingwall 1922c:50).

One of his contributions to exposing mediumistic fraud was the reprint of a Nineteenth-Century work exposing the topic (Price & Dingwall 1922). Later critical contributions included "The Haunting of Borley Rectory" (Dingwall, Goldney, & Hall 1956), *Four Modern Ghosts* (Dingwall & Hall 1958), *The Critic's Dilemma's* (Dingwall 1966), and other publications (e.g., Dingwall 1937, 1973). In one of his essays he expressed his disapproval of parapsychologists, who he considered lacked a true scientific spirit and were mainly concerned with supporting their personal beliefs (Dingwall 1971/1985).

Dingwall's interest in the unusual was also expressed in two books: *Some Human Oddities* (Dingwall 1947) and *Very Peculiar People* (Dingwall 1950). Two of the essays in the first book were about D. D. Home and Joseph of Copertino, while Emmanuel Swedenborg and Eusapia Palladino were covered in the second one. Furthermore, he wrote a short book about psychic phenomena and belief in the ancient world (Dingwall 1930), and edited a remarkable collection of essays about psychic phenomena in the mesmeric movement that to this day remains a valuable reference work (Dingwall 1967–1968).

Materials by and about Dingwall are available at the University of London (Anonymous no date).

Dingwall's Article "The Plasma Theory"

Dingwall's article reprinted here was published in the *Journal of the American Society for Psychical Research* (Dingwall 1921). It made sense for this review to appear in 1921 because the topic was a popular one at the time. Around 1921 there were many publications about materializations, as seen in such books as *Les Phénomènes dits de Materialisation* (Alexandre-Bisson 1921), *The Psychic Structures at the Goligher Circle* (Crawford 1921), *Phenomena of Materialisation* (Schrenck-Notzing (1920a), and *Teleplasma und Telekinese* (Schwab 1923), among others (de Faria 1921, Fournier d'Albe 1922, King 1920, Schrenck-Notzing 1920b). There were also long sections on the topic in the books of Geley (1919/1920) and Richet (1922), not to mention many articles that appeared in psychic journals such as *Psychische Studien* (Grunewald 1922) and the *Proceedings of the Society for Psychical Research* (Dingwall et al. 1922), among others (e.g., Geley 1921, Taylor 1922).¹

The article was meant to be a review of ideas and observations about ectoplasm. Its author qualified his discussion in a footnote stating that he was "in no way committed either to a belief in the plasma or in the theories which have been built upon its alleged existence" (Dingwall 1921:207).

Reprint of "The Plasma Theory"

In this paper I propose saying something about the theory which hypothecates the existence of a mediumistic power for producing "plasma" which in turn acts as the basis for the so-called physical phenomena of spiritualism. The power, or ectoplasy, as Myers called it, borrowing from Ochorowicz, consists, to use his definition, in the faculty "of forming, outside some special organism, a collection or reservoir of vital force or of vitalized matter, which may or may not be visible, may or may not be tangible but which operates in like fashion as the visible and tangible body from whence it is drawn."²

This hypothesis has recently received a great impetus through the experiments conducted with the mediums, "Eva C", Kathleen Goligher, Stanislaw P., Willy S., and a few others. Before the earlier experiments with "Eva C." which were conducted by Mme. Alexandre-Bisson, the word "plasma" was not often used. Mme. [Alexandre-Bisson] herself still calls it, "*la substance*," and Baron von Schrenck-Notzing³ styles it ideoplasma or teleplasma whilst others prefer the name ectoplasma.⁴ Whatever name we may choose for the substance the meaning of the word is clear. It is that substance which, it is said, extrudes itself from the bodies of certain persons, and which has various properties which we must consider in the course of the following pages:

Firstly, then, what is the nature and general appearance of the plasma? In order to answer this question intelligently it must be understood that there are apparently many different kinds of "plasma". I do not know whether the plasma of today has any relation to the "third force," which, according to Proclus, souls have inherent in their being and which possesses the power of moving objects, but at any rate the modern substance is credited with such powers to an unusually high degree. In the early days of the spiritualistic movement little was heard of any substance which was comparable to what we now mean by the plasma.⁵ The *perisprit* in the sense that Kardec used the term was certainly something similar. According to the French authority this *perisprit* was a kind of semi-material, fluidic envelope which served as a link between soul and body. Its subtle matter was not rigid and compact like an ordinary physical body, but flexible and expansible, lending itself to all sorts of strange metamorphoses according to the will which exerted pressure upon it. On certain occasions this *perisprit* was conceived as becoming visible, tangible, and solid, thus acting in every way as ordinary matter is expected to do. In addition to the influence the *perisprit* was supposed to exert upon physical matter, a sort of universal fluid was hypothecated which was used in conjunction with the *perisprit* for producing physical phenomena. No phenomenon, it was said, could be produced through the *perisprit* alone. The mediumistic "fluid" had to be combined with the universal "fluid" in order to produce the results. The "spirits" drew the vital fluid from the medium and the phenomena were produced after the vital fluid was suitably mingled with the universal fluid, which presumably belonged rather to the spiritual than to the material world. A medium was necessary for production of phenomena in order (a) to supply the vital fluid and (b) to assist the spirits by an attitude of mind favorable to a withdrawal of the fluid from the body. Occasionally phenomena could be produced against the will of the medium but generally speaking the co-operation of the medium was desirable and even necessary.⁶

We know of few instances prior to the beginning of the twentieth century of this *perisprit* or mediumistic emanation being observed. Its existence was affirmed by occultists but any sort of proof which would satisfy even the least cautious observer seemed to be lacking. It may be thought that the luminous clouds and nebulous hands observed by Sir William Crookes during his sittings with D. D. Home and also noticed around Stainton Moses may have been of a teleplastic nature.⁷ It is probable that if the plasma has any existence in fact, these appearances may have been the commencement of an activity, which, if continued in a certain way, might have eventually become the material *substance* which is now usually implied when the term plasma is employed. It is this partially solid and (occasionally wholly solid) material which has received the name of *plasma*, a term which in some quarters has

been somewhat extended to embrace a rather wider field than the actual material itself.

We must now proceed to examine a few examples of mediums who are capable of producing the plasma, and then we shall be able to get some idea as to its character and general appearance. The first sensitive whom I shall notice and whose phenomena seem associated with the production of the plasma is M. "Meurice", a medium with whom Maxwell and Richet had several sittings. His chief form of mediumistic activity lay in telekinesis which in his case consisted of the movement of small objects without contact. Placing his hands above the object to be moved, he would make a few passes and after a time it would begin to move or jump, following his hands. It was exactly as if a hair had been attached to the object and was fastened to his fingers, and Dr. Maxwell one day noticed an appearance like a ray of light or filament of gossamer which connected M. "Meurice's" fingers with the box which was being moved. He passed his own hands around the box and all over the medium's hands and arms, but felt nothing, so concluded that what he had seen was due to an ocular illusion.⁸ M. "Meurice" himself admitted that when about to attempt to move something, a sheath of filaments seemed to pass from his fingers on to the object of experimentation. On one occasion Dr. Maxwell heard a noise as of the rubbing of a hair during a sitting and M. "Meurice" frequently said that his hands seemed full of hair, a feeling which he variously described as a spider web sensation, as if his fingers were covered with a kind of cobweb. After many of the experiments M. "Meurice" appeared to be very exhausted; he occasionally fainted and suffered from violent gastric attacks.

I do not propose to examine here the genuine or fraudulent character of these phenomena. For my present purposes I am assuming that the telekinesis was genuine and that the thread seen by Dr. Maxwell was a form of mediumistic emanation from the sensitive's fingers. In this case, then, we have a semi-material link existing between an object and the medium, and it is either through or by this link that sufficient contact is established to move the object in question. The terms "movement without contact" are merely descriptive. They mean in essence "movement without *apparent* contact." It is only the miracle hunters who want movement without any contact. No true psychological researcher ever expects to find objects moved without any contact or tables floating in the air without any support. It is the *form of contact* which is of importance, and which constitutes one of the great problems connected with the physical phenomena. In this case the form seemed to be a semi-material ray or line of force which only upon rare occasions becomes visible. The existence of such lines of mediumistic force would have remained ambiguous had it not been for the classic series of experiments by Ochorowicz with the young Polish medium Mlle. Tomczyk. The importance of these sittings has been overlooked mainly on account of their having been published in periodicals and thus not being easily accessible. The phenomena presented by Mlle. Tomczyk were of varying kinds, but the series which are of importance for our present purpose were almost identical with those demonstrated by M. "Meurice." In this case, however, objects, besides being moved, were actually levitated, and a long series of photographs were obtained showing many aspects of these remarkable phenomena (Figure 8). Again as before, the existence of threads was suspected, and later such were actually seen and photographed. The filaments or "rigid rays" as Ochorowicz named them proceeded from various parts of

the medium's fingers and joined the object to be levitated. It was comparatively easy to arrange photographic conditions so that the rays were visible and it was still easier to photograph the thinnest material filaments known and to compare the results. These showed that the rigid rays were not comparable to any known substance, and to many persons proof as to the genuineness of the manifestations seemed to have been fully obtained.⁹

In the case of Mlle. Tomczyk as in that of M. "Meurice", filaments of semi-material substance seem to have been extruded from the fingers and by means of these threads telekinetic phenomena were obtained.¹⁰ At the time of the experiments Mlle. Tomczyk

was in a poor state of health and the phenomena appeared to be obtained at the cost of a good deal of strength; the medium, like M. "Meurice", being often very exhausted after the sittings. It will be remembered how Sir William Crookes remarked the extreme fatigue which D. D. Home exhibited after a successful séance and the same effect has been noticed in many other mediums. Evidently the extrusion of the "plasma" is accompanied by a certain amount of physical and nervous tension; the medium, after the sitting, feeling that vital force has been drained away from him.¹¹ The same thing was also noticed in the case of Eusapia Palladino, where the medium showed signs of extreme prostration at the conclusion of a séance at which many phenomena had appeared, and Mme. D'Esperance reports the same sensations as occurring after her sittings for materialization.¹² The best example, however, of a medium who extrudes plasma is undoubtedly "Eva C" as she is called, the famous Marthe Béraud of the Villa Carmen experiments. At these sittings which took place at the residence of a General and Mme. Noel in Algiers, about 1905, it was said that a materialized "spirit" appeared who called itself Bien Boa (Figure 9) and who was photographed by more than one camera. Although the evidence for the supernormal in the case is weak (Marthe herself confessed to fraud)¹³ many persons still believe in the genuine character of the performance, and some of the descriptions of the phenomena recall what others have said concerning the appearance of the plasma.¹⁴ For example, one witness avers that:



Figure 8. Stanisława Tomczyk levitating scissors (Julian Ochrowicz on the right).



Figure 9. Form of Bien Boa observed by Charles Richet at Algiers.

"On Thursday, August 3rd, a few days before Professor Richet's arrival, a most interesting phenomenon was forthcoming. Marthe was alone in the cabinet on this occasion. After waiting for about twenty-five minutes Marthe herself opened the curtain to its full extent and then sat down in her chair. Almost immediately—with Marthe in full view of the sitters, her hands, head, and body distinctly visible—we saw a white diaphanous looking thing gradually build itself up close to Marthe. It looked first of all like a large cloudy patch near Marthe's right elbow, and appeared to be attached to her body; it was very mobile, and grew rapidly both upward and downward, finally assuming the somewhat amorphous appearance of a cloudy pillar extending from about two feet above the head of Marthe to her feet. I could distinguish neither hands nor head; what I saw looked like white fleecy clouds of varying brilliancy, which were gradually condensing, concentrating themselves around some—to me invisible—body . . ." ¹⁵

Prof. Richet himself, who was present at the séances, noticed the same vague amorphous shapes and says that not only the face of Bien Boa is indistinct and *floou* [faint], but also the outlines of the drapery are cloudy and vapory, forming a marked contrast with the precise and hard limits of a material handkerchief which was around the body of Aïsch, Marthe's companion in the cabinet. After the "confession" of Marthe and the consequent cessation of the Algiers sittings, little was heard of Marthe Beraud till 1909 when she began giving sittings for materialization in Paris. We cannot here survey the field of Eva's mediumistic activities from 1909 until 1921. She has been studied in Paris, Munich, London, and elsewhere and at each investigation the "plasma" has been observed. In "Eva C," it takes a variety of forms. The appearance of the phenomena is usually heralded by a copious flow of thick, white saliva, which often seems as if it were self-luminous, although it is doubtful whether this is the case. The plasma itself differs considerably both in color and solidity. In its more gaseous form it often resembles nebulous smoke, and when liquid is sometimes difficult to distinguish from saliva. It then appears in spots and patches of flocculent substance, and when these coagulate they resemble a cream cheese, which, besides being white, is sometimes light gray in color. To the touch this mass once felt to the present writer exactly as if he were feeling a piece of soft cream cheese encased in a transparent film or sheath, no particle of the substance adhering to the fingers. In its more solid form the plasma assumes a variety of aspects. Flat, whitish, yellowish or grayish disc-like objects are common as also are white veil-like appearances and white and gray strips. Less familiar phenomena consist of pieces of mouse gray tissue, or membrane and elastic cords which sometimes connect the medium's hands and fingers together. ¹⁶ Occasionally white pointed objects like pieces of candle protrude from the mouth of the medium, and the ends often resemble rude fingertips, the nail being represented by a triangular mark on the surface of the substance. The heads and hands produced by this medium vary greatly from what look like rude chalk drawings, to quite artistic colored productions which seem as if they had been actually printed. Very rarely the materialization is alleged to have been so perfect that actual hair has been obtained and on one occasion a photograph was secured of a small picture of a woman surrounded by a mass of black hairy substance, which felt stiff and fibrous to the touch. These "pictures" and "drawings" often look as if they had been cut out of paper or some soft material and creases where they have been folded are occasionally observed. At other times the basis for the production resembles white membrane

or gristle rather than paper, the picture being seemingly transferred to it. The hands, which usually are flat and more like white gloves than human members are said to have occasionally filled out before the eyes of the spectators and to have become perfect human hands in all respects. Similarly the heads, although usually flat picture-like objects, are said to become at times plastic and solid, so that the bones of the skull can be felt and the hair ruffled.¹⁷

The plasma then, in the case of "Eva C" is usually visible, tangible, and more usually solid than liquid. It is quite possible that the plasma exists in many forms. Indeed when we come to consider that associated with Kathleen Goligher,¹⁸ we shall see that it is very different from the variety exhibited by "Eva C". In the latter case, the plasma may, in its early stages at least be gaseous and invisible, only becoming solid at a later stage of its transient existence. In the case of Stanisława P. the plasma was not of such a highly developed character as that presented by "Eva C". Veil-like masses, rude pseudo-hands, and large strips of white substance constitute the principal phenomena, but the series of sittings was not long enough for us to be able to draw any conclusion of value. The same must be said of the Countess Costelviecz and the young Austrian, Willy S.¹⁹ who presents phenomena similar in character to those of "Eva C" but in a less developed form.

We now turn to Miss Kathleen Goligher of Belfast whose levitation phenomena are too well known to need any description in this place. In his last book, *The Psychic Structures at the Goligher Circle*, Dr. W. J. Crawford relates his recent experiments with the medium, and reproduces a few of the extraordinary series of photographs which he has obtained by flashlight. The plasma, according to the writer, is usually quite invisible in the case of Miss Goligher and it is only under certain conditions that it can be photographed. It forms rods and "psychic cantilevers", which projecting from the body of the medium levitate the table, and rap upon the floor of the séance room. In the photographs the plasma is seen extruding from the medium and tipping the table and lying about on the ground (Figure 10). As far as I know Dr. Crawford had not succeeded in obtaining any photographs when the plasma was in a state of full stress,²⁰ as the shock was said to be too great for the medium at that time. The photographs all show the plasma in an unstressed state, and in many respects closely resemble some of "Eva C's" productions. Generally speaking it consists of white and dark colored strips, rolls, and heaps of material like cotton wad or muslin which are seen about the medium's feet and hanging from beneath the table. In one unpublished photograph the plasma is seen beneath the table in the form of a long strip of white substance like animal membrane which bears a curious resemblance to some of the white tissues photographed on the French medium. In one of Crawford's early photographs a sort of white transparent pillar of gaseous material is seen rising into the air, so it would seem that this plasma also is found sometimes in a gaseous condition.²¹ The rods of plasma appear to be wonderfully flexible and to adapt themselves readily to the kind of work demanded of them. They possess many degrees of hardness, and the gripping ends are occasionally tangible and solid, although invisible in the dim red light. Near the medium in the region of her ankles (from which it seems the rods proceed) nothing solid can be felt, but the hand encounters a flow of cold, clammy, disagreeable spore-like particles, which pass outward from the medium and presumably are an essential part of the rod, since interference with them stops the phenomena. The ends of the rods can be felt more easily. An observer describes his



Figure 10. Kathleen Goligher and her ectoplasmic forms.

sensations after handling one of these ends. He says that his gloved hand received the impact of a nearly circular rod-like body flat at the end. The edges at the end were blunt, serrated, and slightly rough like very fine emery paper. Again in another case Dr. Crawford says he felt the plasma pressing over the sole of his boot like a flat, thick, pancake, and on another occasion a wooden rod he was holding came into contact with something "soft, dense, plasmic, half solid, half liquid."

It will be remarked that there are several striking differences between the plasma of what I might call the "Eva" school of mediumship and the Goligher school. In the former case the plasma is usually visible, tangible, not peculiarly sensitive to light and with the faculty of forming hands and faces, arms, feet, and sometimes full forms. In Miss Goligher's case the plasma is usually invisible,²² only partly tangible, excessively sensitive to light and with the faculty of forming rigid rods and beams capable of bearing great strains and stresses. What form of matter or force it can be which, whilst invisible and intangible can support a table on which a man is seated, is difficult to

conceive, and the solution will not be reached until many more opportunities for investigation are permitted.²³

We have seen in the course of the preceding remarks what various observers have said concerning the appearances and tactile sensation experienced when feeling the plasma. We must now pass to a consideration of what is said concerning its place of origin in and exit from the medium's organism. In early days it was thought of vaguely as "proceeding from the medium,"²⁴ and as it was nearly always invisible, we cannot blame the observers for their ignorance of its movements. When in the case of "Eva C" the plasma became a visible, tangible, substance, its mode of egress from the medium's body was able to be observed with greater accuracy. We cannot say whether the plasma has any standard route, if I may put it so, for its exit from the bodies of mediums. At present all we can do is to note the parts in each medium from which it seems to originate and compare similar phenomenon in as many other cases as possible. Beginning then with the case of "Eva C" it appears that the plasma usually proceeds from the mouth, especially from between the teeth and gums, from the nose, nipples, and vagina, and occasionally from the navel, armpits, sacral region, and fingertips. With Stanislaw P. the plasma was mostly observed proceeding from the mouth but few experiments have been made to ascertain the precise point of issue in Continental mediums. With Miss Goligher, Dr. Crawford prepared a series of experiments which are of the greatest interest. Unfortunately in his last book, he merely hints at the solution at which he had arrived and omits those photographs which support his conclusion. Having become convinced that his medium extruded a quantity of plasma in order to produce her phenomena, he set about endeavoring to discover from what part of her body it proceeded. In an ingenious series of tests with the help of carmine and a solution of methylene blue, for details of which the book should be consulted, Dr. Crawford proved to his own satisfaction that the plasma issued for the most part from the genitals, proceeded down the legs to the feet thence issuing as rods into the séance room. In the unpublished photographs, further details can be seen, it being clear that, as in the case of "Eva C", the plasma not only proceeds from the reproductive organs, but also issues from the breasts, these often becoming hard and full in both mediums.

We have seen above what various observers have said concerning the appearance of the plasma and its place of origin in the body of the medium. Our next step will be to consider briefly a few of the facts that have been gleaned concerning the actual nature of the substance itself . . .

In the case of "Eva C" one or two attempts have been made to retain a portion of the materialized substance but without success. On November 11, 1910, Baron von Schrenck brought a small metal porcelain lined box into which a materialized finger entered and executed a few shaking movements. The lid was immediately closed and after the sitting two pieces of human skin were found inside the box. These products did not appear to differ in the least from the ordinary histological structure of human skin but the Baron failed to find any defect upon either "Eva's" hands or feet at the conclusion of the sitting. On another occasion a German doctor attempted to seize a portion of a materialized product but failed to hold it and Mme [Alexandre-] Bisson reports that she has also tried to persuade the medium to permit a piece to be detached but without success . . .

It will be remembered how in the case of this medium a good deal of saliva is

secreted, and this together with the moisture from the plasma leaves stains on the garments worn at the sittings. Baron von Schrenck on several occasions had the secretions left by the teleplastic products analyzed both physico-microscopically and physico-chemically but the results obtained were scarcely satisfactory. With regard to the structure he sums up the matter thus: "That within it, or about it, we find conglomerates of bodies resembling epithelium with nuclei, veil-like filmy structures, coherent lamellar bodies without structure, as well as fat globules and mucus. If we abstain from any detailed indications concerning the composition and function of teleplasma, we may yet assert two definite facts:

(1) In teleplasma, or associated with it, we find substances of organic origin, various cell forms, which leave behind cell detritus.

(2) The mobile material observed, which seems to represent the fundamental substance of the phenomena, does not consist of india rubber or any other artificial product by which its existence could be fraudulently represented.

For substances of this kind can never decompose into cell detritus, or leave a residue of such" . . .²⁵ Without criticising the second of the above facts, we may note that according to Baron von Schrenck the plasma is "a sort of transitory matter which originates in the organism in a manner unknown to us, possesses unknown biological functions, and formative possibilities, and is evidently peculiarly dependent on the psychic influence of the medium."²⁶

In the case of Kathleen Goligher little has at present been done to determine the physical nature of the plasma. As the medium loses weight when the rods are "out" and as Dr. Crawford avers that the operators on one occasion drew over 50 lbs. of matter from her body, it is clear that part of the constituents of the plasma must necessarily be some of the ordinary compounds of the human body. There appears to be a decrease in volume of the fleshy parts of the medium during the extrusion of the plasma, this being noticeable both in the thighs, haunches, and elsewhere. The particles of matter, therefore, which make up the rods, are presumably ordinary matter taken from the medium's body either transformed or combined in such a way that they become an integral part of a "psychic" structure capable of performing mechanical work. At the ends the rods are more or less "materialized", and are as if a solid body were encased in a flexible skin or sheath of varying thickness and pliability. Behind this end tangibility ceases and only a sort of gaseous flow is perceptible proceeding from the medium. How a materialized end is manipulated through the agency of a "gaseous" link connecting with the sensitive is a mystery which awaits explanation as is also the nature of a rod which can sustain and resist so great mechanical pressures as those obtaining at the Goligher Circle.

It is possible that the fact of the fatal influence of light upon the structure may provide us with a clue as to its nature and working mechanism. We cannot help thinking of the analogy of a pipe which when empty is flaccid and lax, whereas when filled with fluid it attains a rigidity proportional to the pressure of the liquid within it. Mr. E. C. Craven,²⁷ in some recent speculations published in the pages of the periodical *Light*, suggests that the rigidity of the plasma may be due to the particles being in a state of electrical strain which is discharged through the influence of light waves. A good many experiments of this nature might be tried and it is through such work that the nature of these forces is likely to be understood. At present investigation has been

concentrated more upon the phenomena than upon the plasma which, it is alleged, produces them. It remains [for us] to introduce a series of new experiments which, if properly conducted by competent observers, may help us to understand more fully the theory of the plasma and its relation to psychical phenomena in general.

Possibly a good deal of information would be obtained if another medium producing the "rigid rays" could be discovered. With the exception of M. "Meurice," Mlle. Tomczyk, and Mlle. Melita P.²⁸ I do not know of any medium who has been credited with the peculiar phenomena associated with their names. The emanations of lines of force which at times, at least, are sometimes material, are so similar in character to the threads occasionally seen between the fingers of "Eva C," that it is probable that they are essentially of the same nature. Whatever may be the ultimate solution of the plasma problem the subject can scarcely be without interest to both medical men, psychologists, and physiologists. Seeing that according to Dr. Crawford the plasmic rods are able to carry on intelligent conversation, mental processes have their place in the production of the phenomena. Whether these processes are carried out by the medium or by an independent group of "operators" is not at present at all clear. Crawford himself was convinced that the phenomena were due to the intervention of "operators on the other side," but he does not give any really satisfactory evidence for his opinion.²⁹ Proof as to the origin of the messages and conversation must be found through the ordinary methods used in the investigation of mental phenomena. The elimination of the possibility of the medium having knowledge of the facts as well as the exclusion of chance coincidence and guessing, together with the verification of the facts alleged must be carried out before any satisfactory proof can be obtained. This properly falls within the purview of the investigator of mental phenomena and its discussion therefore has no place in this short summary of the plasma theory.

Materialization After Dingwall's Article

Observations and Studies

Several works on ectoplasm, and materialization in general, appeared after Dingwall's article was published in 1921. There were, for example, some developments in the Eva C. case. Although Geley (1918, 1919/1920) had summarized his findings with the medium regarding séances held between 1917 and 1918, it was only later that he published details about them (Geley 1924/1927).

There were two other important investigations into Eva C. In one in which Dingwall participated, some phenomena were obtained, but even though the researchers could not explain them via conventional means they remained unconvinced (Dingwall et al. 1922; but see Geley's [1922b] positive conclusion for the reality of the phenomena in the SPR work). The second was a series of sittings held at the Sorbonne in which it was concluded that, as regards the existence of ectoplasm, "*our experiments have resulted in results that can only be considered as completely negative*" (Lapicque et al. 1922, italics in the original).

However, Eva's case, and materializations in general, were strongly defended by Richet in his well-known and influential *Traité de Métapsychique* (1922:657–665). Using notes written in 1906, Richet wrote about phenomena produced by this medium:

After about half an hour, I open the curtains and see a faint luminosity on the floor . . . By degrees this light increases; it is like a small, luminous handkerchief lying on the floor . . . The luminous spot grows; its outlines are milky, undefined, and cloudy . . . It approaches the chair, increases in size, and takes a serpentine form which tends to rise toward the left arm of A's chair . . . Then . . . a point detaches itself from the mass, mounts up, bends and directs itself to Marthe's breast, her hands being held the whole time. The point continues to advance in a terrifying way like an animal pointing its beak; and as it advances, on the rigid stalk there appears a thin gauzy structure like a bat's wing . . . I can approach and look very closely, only an inch away. I see what looks like a swollen substance, moving as if alive, and changing its form . . . I see extensions like the horns of a snail, which start up to right and left; these horns are like transparent gelatine, they project from and sink back into the more defined central mass.

[I am using the English translation of the book, Richet 1923:516]

Dingwall himself made interesting observations of materializations with various mediums. In a séance with Willy Schneider “a luminous arm-like shape with a tapering point” (Dingwall 1922a:365) was seen. In 1923 he attended a séance with Stella C. While he laid on the floor, he observed “an egg-shaped body beginning to crawl towards the centre of the floor under the table . . . To the end nearest the medium was attached a thin white neck like a piece of macaroni” (in Price 1924:354).

Although Dingwall was not sure about the reality of Margery's phenomena, he observed various ectoplasmic formations in séances with her. For example:

After a few minutes darkness Walter [the medium's spirit control] asked me to feel the substance and note a hole like a gullet at the base of the cord leading to Psyche [Margery] . . . I first put my hand on the top of the substance. It was soft, clammy, and cold. I then lowered my hand, and noted that where the cord joined the mass there appeared to be a sort of skinny frill about half-inch high. Beneath this was the neck from which the cord hung, and in this neck I felt the depression into which, at Walter's request, I pushed my forefinger. It was soft and cool like the rest of the substance, but it did not extend so far as a quarter inch.

. . . I saw extended on the table from the edge near Psyche from one inch from the middle line of the table a long, knobby, greyish white shape like a crudely formed right hand—the thumb being merely a mass of substance joining the main mass. (Dingwall 1926a:108–109)



Figure 11. Ectoplasm in the shape of a ship and a cotton-like formation with small faces (including Arthur Conan Doyle's) obtained in T. G. Hamilton's mediumistic group.

Later reports of ectoplasm, and materialization in general, included the performances and media controversies around Helen Duncan (see the overview of Gaskill 2001). Examples of observations of various other materialization mediums appear in the publications of Bernoulli and Müller (1931), Blacher (1932), de Goes (1937), Edwards (1941), Grunewald (1922), Haley (1935), Lebidzinski (1921), Rainieri (circa 1955), and Schwab (1923).

An important contribution was T. Glen Hamilton's work with a group of mediums in Canada (e.g., Hamilton, 1929, 1931, 1932, 1934, 1942). In one of his reports Hamilton stated:

In one instance we find the substance taking on an appearance not unlike that of a brooch or medallion . . . In another, the mass is skillfully twisted exactly like a skein of yarn; in a third we find presented a careful imitation of a pendant ear-ring, while in two most astonishing cases the teleplasm has taken on the unmistakable resemblance to a ship—one of these having even representations of sails and rigging. (Hamilton 1931:267)

Hamilton also emphasized the mental aspect of the materializations produced by the mediums in his group. He argued that spirit communicators clearly directed the production of the manifestations, as seen in communications commenting about the development of the materializations, and announcing where they would appear in the room. The spirit control predictions about "coming teleplasms . . . were unmistakably confirmed" (Hamilton 1942:230).

Also of interest are the accounts of studies in which an emanation from a medium conducted electricity, since it seemed able to close a circuit (du Bourg de Bozas 1921),³⁰ and that something invisible occluded infrared rays and its deflections corresponded to the medium's inhalation and exhalation (Osty & Osty 1931–1932). Osty (no date circa 1933:28–29) commented later: “What we studied was in fact the mediumistic energy sufficiently condensed to be partially opaque to the infra-red, but not sufficiently so to be visible.” He speculated on the existence of stages of condensation of this agent (for other infra-red absorption tests see Hope et al. 1933).

It is not possible in an article to discuss many other modern examples of writings about materialization. But the reader should be aware of observations published from the 1940s on (e.g., Braude 2016, da Rocha 2011, Edwards 1941, T. Harrison 2008, Keen 2004, Rainieri no date circa 1955, Solomon & Solomon 1999, Wills 1942), including some with Eusapia Palladino (Carrington 1954a). There have also been overviews of the topic focusing on old cases (e.g., Amadou 1957, De Boni 1960/1975, Haraldsson 2017, Pilkington 2006, González Quevedo 1968/1971, Tynn 2009).

Critiques

The Sorbonne séances with Eva C. attracted much attention and critiques by the press because they had been conducted by various prestigious professors (for details and background information see Evrard 2016, and Lachapelle 2011). A journalist stated that Eva C.'s séances at the Sorbonne began with bizarreness and ended in ridicule (Vautel 1922), but it was also argued that it was not fair to conclude from one failed replication that a phenomenon does not exist (Geley 1922a).

Regardless of their validity, other critiques related to Eva C.'s mediumship contributed to dampen Eva C.'s reputation (e.g., de Heredia 1922, Jastrow 1922), and belief in the phenomena of materialization, something that continued in later years (Amadou 1957, Lambert 1954; for more details, and references, see Steigman 2016). Partly based on Eva C.'s performance at the Sorbonne, and in the performance of other mediums, journalist Paul Heuzé concluded in the Paris weekly newspaper *L'Opinion* that at the present time the existence of ectoplasm could neither be affirmed nor denied, but he wrote that it was up to proponents to present positive proof of the existence of the phenomena (Heuzé 1922b:789; see also Heuzé, 1922c).

In Germany a group of critics argued that there was no good evidence for physical mediumship (Gulat-Wellenburg, Klinckowstroem, & Rosenbusch, 1925). This led to an anthology edited by Schrenck-Notzing (1926) strongly defending the existence of the phenomena in which various authors wrote

about mediums Eva C., Goligher, Guzik, Kluski, Nielsen, and W. Schneider, among others (for reviews of these two books, see Dingwall 1926b,c).

There were also damaging developments with Kathleen Goligher. Her investigator, Crawford, committed suicide in 1920, apparently suffering from a nervous breakdown (Crawford 1920), leading some to think Crawford may have discovered fraud (Jastrow 1920). Also damaging was Fournier d'Albe's (1922) claim that Goligher committed fraud, even though his evidence was not enough to discredit all the phenomena, and particularly the observations of ectoplasm.

But other investigations of Goligher were positive. This was the case of further observations of the ectoplasmic formations after Crawford's death, which were photographed (Donaldson 1933, Stephenson 1936a,b). In fact, Crawford's work was held in high regard by many. Dingwall (1922b) was critical of aspects of it, but stated that it was "the most important contribution toward the study of telekinesis" (p. 150). Schrenck-Notzing (1921) and Sudre (1922) both considered Crawford's contributions to the understanding of physical mediumship to be of great importance. The first of these compared Crawford's observations to those of Eva C. and Stanisława P. and argued that their similarity led to the speculation of the existence of laws underlying a still largely unknown biopsychic system.

Critiques about materialization mediums have continued until recent times. This is evident in discussions of fraud in modern cases (Braude 2016, Nahm 2018, Puharich 1960/2008), and in various retrospective analyses of old cases (e.g., Amadou 1957, Brandon 1983, Hall 1962, Parker & Warwood, 2016).

Later Writings About Theoretical Ideas

Following previous concepts, perhaps the only theoretical consensus among those accepting the existence of the phenomenon has been the idea of projection of some vital force from the body of the medium (e.g., Carrington 1954b, González Quevedo 1968/1971, Osty & Osty 1931–1932, Sudre 1926). In his *Introduction à la Métapsychique Humaine* Sudre formally stated that:

The phenomena of materializations have put beyond doubt that metapsychic subjects can extract from their body, and probably from nearby bodies, an unknown substance-energy capable of imitating all forms of life and raw matter . . .
(Sudre 1926:209)

an idea he continued to uphold in a later work (Sudre 1956/1960).

Drawing on some of the ideas of the new physics, Richet wrote:

When I put a hand in front of a mirror, the image of my hand is reflected: reflection of light. In front of a thermometer, reflection of heat. In front of a galvanometer, reflection of electricity. It is true that in front of one balance there is nothing there. But is it unreasonable to suppose that this projection of light, heat, and electricity could be accompanied by a projection of mechanical force? . . .

Materialization is a mechanical projection. We already have projection of light, heat, and electricity. It is not going very far to see as possible, besides these projections of heat, light, and electricity, a projection of mechanical force. The memorable demonstrations of Einstein establish at which point mechanical energy approaches luminous energy. (Richet 1922:597)

Sudre (1956/1960) and others thought that the directing intelligence behind materializations was mainly the medium's mind (for a more recent view see González Quevedo 1968/1971). Others continued supporting the traditional spiritualist view (e.g., Bozzano 1926, Hamilton 1942). In a book criticizing René Sudre's (1926) textbook, Bozzano (1926) protested against Sudre's explanation of materializations in terms of the ectoplasmic and ideoplastic abilities of the medium. In his view, in some materializations there was an external directing will, separate from the mind of the medium and sitters. Bozzano emphasized full body materializations (e.g., Katie King) in which he believed a distinct personality and will was expressed by the materialized form. He also argued that Sudre's explanation strained credulity in cases in which more than one figure appeared in the séance room and in those cases in which the figure communicated veridical information and talked in languages unknown to everyone at the séance. This also included cases in which the figure had been identified as a particular deceased person.

Following earlier speculations (Coleman 1865, Reimers 1876), some, among them Fodor (1934), Crookall (1967), and Johnson (1953/1977), related materialization to a subtle body of the medium. In one version the medium's astral body was believed to absorb ectoplasm from the physical body, making it both solid and visible (Fodor 1934). In a variant of these ideas, and assuming the presence of a spirit's perispirit, it was suggested that the medium's ectoplasm could be drawn into this external subtle formation, where it would gradually take a shape. "The phantasm will condense as more substance is deposited, being able to assume all forms of consistency before becoming a perfect living organism" (Andrade no date 1958:309).

Similar to Geley, biologist Hans Driesch followed vitalistic ideas. He saw physical mediumship as an indication that the mind could act on space, in the same way that it acts on the physical body in processes such as metabolism. "Materialisations would then be organized assimilation in an

extended field . . . Materialisations would be at the same time a supernormal embryology" (Driesch 1932/1933:119–120).

Geley was so sure of the existence of materializations, coming from his research with Eva C., that he wrote: "Official psycho-physiological science as taught in the Universities will now have to take account of ectoplasm and accommodate its teaching thereto, whatever current doctrines may have to be discarded" (Geley 1924/1927:177). Another writer was so sure the existence of materializations had been proved that he stated that the research was "past the period when our task was to verify the actuality of the phenomena" (De Brath 1935:15). In later years several authors discussed materializations assuming that at least some cases presented good evidence for the reality of the phenomena (e.g., Johnson 1955, Sudre 1956/1960). Although there are more recent examples of this trend (e.g., Braude 2007, Pilkington 2006), there has also been much skepticism contributing to keep materializations, and their explanations, out of science. In addition to what has been mentioned above, one author stated soon after Dingwall's article was published that "none of the scientific researchers have provided evidence that materializations or teleplasty exist" (Meyer 1922:60). Several other authors also expressed doubts in later years (Amadou 1957, Hyman 1989, Tyrrell 1947, West 1954). Today many parapsychologists are skeptical of these phenomena, and the topic, unlike in Dingwall's days, is rarely investigated.

However, useful contributions come from various authors' (parapsychologists and others) retrospective analyses of past mediums that not only discuss the reality of these phenomena, but also biographical and methodological aspects, specific controversies, and sometimes instances of fraud. This includes articles and books about mediums such as Carlos Mirabelli (Braude 2017), Helen Duncan (Gaskill 2001), Indridi Indridasson (Haraldsson & Gissurarsson 2015), Anna Prado (Magalhães 2012), Francisco Peixoto Lins (Palhano Júnior & Neves 1997), Elizabeth d'Esperance (Parker & Warwood 2016), Francis Ward Monck (Randall 2003), "Margery" Mina Crandon (Jaher 2015), and Franek Kluski (Weaver 2015).

Concluding Remarks

Dingwall's article is a good reminder of many observations and ideas about ectoplasm, and materialization in general, from the old days of psychical research, and particularly from the first two decades of the Twentieth Century. As such, it is a good paper to read to start becoming acquainted with some of the work on the subject by previous generations. This includes the above-mentioned work of Crawford, Schrenck-Notzing, and others.

Dingwall's overview is valuable even though it has some omissions.

Among the topics I wish Dingwall had discussed in some detail are observations and ideas from earlier Nineteenth-Century spiritualist literature, some of which I mentioned in my Introduction. Regardless of its controversial nature, this literature is relevant to understand the variety of materialization phenomena on record, as well as the idea that the power underlying the appearances of forms comes from the medium's body (and the sitters). Dingwall also omitted the observations of materializations of many previous researchers, among them de Rochas (1897), Imoda (1912), and Morselli (1908), and the above-mentioned conceptual ideas of Geley (1919/1920).

I have presented an introduction, and annotations, to Dingwall's article with many references about the topic hoping to help the reader unfamiliar with this literature to get an idea of some of the available material on the topic as well as to help contemporary readers to know more about people and ideas mentioned. This includes, but is not limited to, specific mediums, and the variety of phenomena. I have also presented references to more recent observations of materializations. These, it is important to say, are only a selection of the available material, several of which are not systematic investigations, but consist of informal popular accounts (e.g., Kean 2017:333–335, 337).

Although my interest is mainly historical, I realize that many study the topic to determine if the phenomena are real or not. As pointed out by various modern authors (e.g., Braude 2007, Haraldsson 2017, Pilkington 2006, Tynn 2009), there are good observations that cannot be ignored. But the topic is still generally dismissed. In general this material tends to be seen today with suspicion due, at least in part, to recorded instances of fraud, such as those put on record by Puharich (1960/2008), Schrenck-Notzing (1924), and Wallace (1906). This suspicion has been reinforced by reports of the only recent investigations on the topic recorded in the scientific literature (e.g., Braude 2016, Nahm 2014, 2016).

Furthermore, too many photographs of materializations—old and new—look suspicious and even ridiculous. While this does not mean the phenomenon is not real, it is a strong social and psychological deterrent keeping people away from the topic, particularly researchers who may worry about their reputations. In addition, we seem to lack today the necessary mediums that not only can produce the phenomenon at a certain level of consistency for it to be observable, but also the type of medium who is capable of performing under controlled conditions, or willing to try.

But regardless of the difficulties, hopefully future work on the topic will be inspired by essays such as Dingwall's, so as to benefit from awareness of

previous findings, as well as of methodological issues, and the problem of fraud. But more important, to be significant, this work needs to go beyond the observational stage so typical of much of this literature. By this I mean that, if it is possible to make a good case for the reality of the phenomenon, and that it appears consistently enough to be studied carefully, research needs to be conducted to learn something about its nature. As Dingwall wrote in the essay reprinted here:

It remains to introduce a series of new experiments which, if properly conducted by competent observers, may help us to understand more fully the theory of the plasma and its relation to psychical phenomena in general.

Notes

- ¹ Several interesting articles on the topic were published in *Light* in 1921 (e.g., Barrett 1921, De Brath 1921, Lodge 1921, Scatcherd 1921). See also articles in *Scientific American* (Black 1922), *L'Opinion* (Heuzé 1922a), *New York Times* (Jastrow 1922), *Revue des Deux Mondes* (Nordmann 1922), *Living Age* (Oesterreich 1921), and in *The Month* (Thurston 1922).
- ² These are references to English classical scholar Frederic W. H. Myers and Polish philosopher and psychologist Julian Ochorowicz, both of whom were well-known psychical researchers (Hamilton 2009, Weaver in press). This quote appears in Myers (1903:Vol. 2:545).
- ³ These mediums were important contributors to the study of materialization during the first decades of the Twentieth Century (Inglis 1984). On Juliette Alexandre-Bisson and Albert von Schrenck-Notzing, see Schrenck-Notzing (1914a:71–73) and Sommer (2009).
- ⁴ Physician John E. Purdon (1884) used the term psycho-plasma to refer to the “stuff which constructed the materialized figures” (p. 1). Crawford also used psychoplasm, which “consists of actual molecules of matter, possibly complexly organized molecules of the same order as those composing cell protoplasm. These molecules would appear to be shot out of the human body at the extremities, in obedience to impulses sent from the brain of the medium, and to be projected into the space surrounding him” (Crawford 1915:197). Others have used the terms “spirit-substance” (Keulemans 1885:163) and bioplasm (Farmer 1886:169). Even though Richet has been credited for adopting the term ectoplasm from biology, its first appearance in psychical research is not known with certainty (Demarest 2013, Granger 2014). Richet wrote about séances he had with Palladino: “In séances with Lodge, Myers, Ochorowicz, every time we were touched, we said, half jokingly, ‘an

ectoplasm again!’ ” (Richet 1922:637, footnote).

- ⁵ The concept of Od, derived from Reichenbach’s (1849/1851) work, was very influential in early Spiritualism (Alvarado 2013). An early author referred to “the odylic emanation of a good medium” to account for the appearance of a hand (Wolff 1854:268). Adin Ballou (1852) referred to a spiritual magnetism common in sensitives and mediums he called spiricity. He wrote that this principle “serves as their [spirits] principal element of intercommunication. They can inhale and absorb it, exhale and radiate it, impregnate it with their peculiarities of *thought*, *affection*, and *will*, and thus transmit influences to inconceivable distances, nay, transport their perceptive consciousness so as to be virtually present anywhere within their permitted range of existence” (pp. 3–4).
- ⁶ The perispirit, as this principle is called in English, was discussed by Kardec (1860:38–39, 120–121, 1862:62–65, 78–79, Chapter 4) based on information received by mediums. In an article published in the *Revue Spirite*, Kardec (1858) explained physical phenomena via the operation of the perispirit. Referring to the materialization of hands seen in séances with D. D. Home and other mediums, Kardec argued that they were produced by the condensation of the subtle matter of the perispirit obeying the will of the spirit. He wrote that “the perispirit can present itself to us in a visible solid and vaporous state, or in an invisible vaporous state” (p. 124). On the perispirit, see also Delanne (1897) and Filatele (1864). There were similar ideas previous to the development of Spiritism, one example being Chardel (1818).
- ⁷ For information about Crookes, Home, and Moses, see, respectively, Alvarado (2018), Lamont (2005), and Tymn (2015).
- ⁸ Dr. Joseph Maxwell, a French jurist and physician deeply involved in the study of psychic phenomena (Alvarado 2016a), mentioned Meurice throughout one of his books (Maxwell 1903/1905) who presented both physical and mental phenomena. According to Finch (1905), Meurice was a 32-year-old man who always appeared to be tense. Although he was mentally stable, Meurice could show mood swings and episodes of neuralgia. During telekinetic movements of a small box, an observer said he “perceived a tiny ray of light—something like a dewy spider’s web with the sunlight gleaming through it—connecting M. Meurice’s fingers with the box, but this was probably an illusion, as there was nothing palpable to the touch” (Maxwell 1903/1905:344). Together with cold breezes and tingling sensations, Maxwell (1903/1905:114) also mentioned tactile sensations of spider webs as one of the sensations felt with the emission of psychic force. Medium Elizabeth D’Espérance wrote about this:

The first sensation that I am conscious of, when sitting in the cabinet . . . , is this: I feel as if my face and hands were covered with cobwebs . . . The commencement of manifestations is announced by the feeling of cobwebs, but this does not recur unless the séance is interrupted. If a break occurs, it is repeated. When the séances are not successful, I feel the cobwebs, as it were, all the time; but at such times, there are really neither veils, nor forms, nor even webs. (in Aksakof 1898:155)

She also stated that she "could feel fine threads being drawn out of the pores of [her] skin" (D'Espérance no date circa 1897:229). Ectoplasm also gave the sensation of cobwebs to sitters in some of Eva C.'s séances (Alexandre-Bisson 1921:16, 250; see also Geley 1919/1920:55), and in séances with other mediums (Hamilton 1934:120).

- ⁹ On this research with Polish medium Stanisława Tomczyk, see Ochorowicz (1909, 1910, 1911). Ochorowicz (1910) referred to two emanations from his medium: Rigid rays and X^x rays. The first were invisible, and could raise objects and discharge an electroscope, and were unaffected by fire. But they had no photographic effects, and could not go through obstacles. The X^x rays were said to penetrate matter more than X and Gamma rays, and to affect photographic plates. But they did not exert mechanical actions and were unaffected by electrical or magnetic fields. In other tests Ochorowicz obtained photographs of fluidic threads. The threads were said to move objects and to leave traces on substances such as flour and soot. The threads, according to the medium's spirit control, were the same as rigid rays. In other work with the same medium, Ochorowicz (1911–1912, 1912) presented photographs of hands presumed to come from the medium's double.
- ¹⁰ For other cases of ectoplasmic threads associated with telekinesis, see Blacher (1932) and Kharis (1921). There were also observations of threads with Palladino, sometimes assumed to be an attempt at trickery (e.g., Lanza et al. 1903). On one occasion in Italy a thread was seen in a séance going from one hand of Palladino to the other. One of the sitters grabbed and pulled it. "The thread bent into an arc, resisted for a moment, and then snapped and dissipated instantly" (Bozzano 1903:88).
- ¹¹ Crookes (1874a) wrote about Home that "after witnessing the painful state of nervous and bodily prostration in which some of these experiments have left Mr. Home—after seeing him lying in an almost fainting condition on the floor, pale and speechless—I could scarcely doubt that the evolution of psychic force is accompanied by a corresponding drain on vital force" (p. 41). The withdrawal of this force from materialization mediums, commented a writer (Anonymous 1875), could produce loss of heat, which may be the cause of reports that "mediums often complain

of coldness in the back, and of their backs beginning to ache towards the close of a séance” (p. 135).

¹² Regarding Palladino, Lombroso (1909) wrote:

After the séance Eusapia is overcome by morbid sensitiveness, hyperesthesia, photophobia, and often by hallucinations and delirium . . . , and by serious disturbances of the digestion, followed by vomiting if she has eaten before the séance, and finally by true paresis of the legs, on account of which it is necessary for her to be carried and to be undressed by others. (p. 115)

See also Geley’s (1924/1927:21) comments about Franek Kluski regarding after-séance prostration, heart palpitation, thirst, and vomiting of blood. Mediums also experience physiological sensations and changes *during* the production of phenomena, as seen in Tomczyk’s sensations of numbness, cold, and tingling in the fingers, and muscle contractions in the arms and other parts of the body (Ochorowicz 1910:99). Hamilton (1934:117–122) also reported interesting observations with his mediums.

¹³ The so-called confession has been questioned and has been denied (Maxwell 1906). In any case this needs to be assessed in the context of the controversies surrounding critiques of the séances and of Richet’s participation in them (see Evrard 2016:172–199 and Le Maléfan 2002).

¹⁴ See Richet’s (1905) report, and later discussions of the ensuing controversies around the Villa Carmen séances (Evrard 2016, Le Maléfan 2002). For descriptions of Eva C.’s phenomena see Alexandre-Bisson (1921), Geley (1919/1920), and Schrenck-Notzing (1920a).

¹⁵ Richet (1905:305). I have added the quote signs, omitted by Dingwall. See also Richet’s (1922:657–665) dramatic descriptions of moving snail-like ectoplasm.

¹⁶ Geley (1919/1920) wrote:

The substance has variable aspects; sometimes, and most characteristically, it appears as a plastic paste, a true protoplasmic mass; sometimes as a number of fine threads; sometimes as strings of different thickness in narrow and rigid lines; sometimes as a wide band; sometimes as a fine tissue of ill-defined and irregular shape. The most curious form of all is that of a wide-spread membrane with swellings, and fringes, whose general appearance is remarkably like that of the epiploon (caul). (pp. 54–55)

¹⁷ For photos of materialized heads with Eva C., see Geley (1919/1920, 1924/1927).

¹⁸ The ectoplasm from Goligher, who performed in the context of a family circle in Ireland, was studied by mechanical engineer William J. Crawford (1921). See also Donaldson (1933), Fournier d’Albe (1922),

and Stephenson (1936a,b). See Schrenck-Notzing's (1921) comments about Crawford's work.

- ¹⁹ The Countess was a Portuguese medium (Frondoni-Lacombe 1918). On the Polish medium Stanisława Popielska see Lebiedzinski (1921) and Schrenck-Notzing (1920a:251–260). Austrian medium Willy Schneider was investigated by many, among them Dingwall (1922a). Schrenck-Notzing (1920a:Figures 221–225) presented photos of ectoplasmic formations with this medium.
- ²⁰ A partly solid-looking rod appears in Figure W in Crawford (1921).
- ²¹ See Crawford (1921:Figures 7, 9, and 10).
- ²² It was invisible at first but it was later visible and photographed (Crawford 1921, Donaldson 1933, Fournier d'Albe 1922, Stephenson 1936a,b).
- ²³ Several writers speculated that Crawford, a mechanical engineer, may have suggested his medium produce phenomena conforming to his ideas (Barrett 1921, Bozzano 1929, Schrenck-Notzing 1921, Sudre 1926). This is particularly relevant in the case of table levitations and the medium's "psychic rods" (Crawford 1916).
- ²⁴ In an observation in the United States, a "great, long additional arm and hand was . . . seen protruding from the body of the medium, and it shot back into one of the normal arms of the medium as swiftly as the eye could follow it" (Anonymous 1873:83). According to Oxley (1876), a white mist was seen to come out from one of Monck's hands. For other emanations from medium's bodies see Colley (1877). In a séance with Palladino a second left arm of the medium was seen to touch someone "and then return back and melt into Eusapia's body, vanishing" (Bottazzi 1909/2017:180; for another similar case of an arm issuing and returning to a shoulder see Venzano 1907:100–101). Bottazzi (1909/2017:201) suggested that "limbs" came out from Palladino's body, which then returned and dissolved into it.
- ²⁵ Schrenck-Notzing (1920a:250). See also Lebiedzinski (1921).
- ²⁶ Schrenck-Notzing (1920a:249–250).
- ²⁷ See Craven (1921). He stated:
- How can the attenuated, colloid matter of which the cantilevers are formed be made rigid so as to transmit and, be capable of sustaining large stresses? Why does this rigidity break down under the influence of ultraviolet light and moisture? May it not be that the particles which constitute the cantilevers are in a state of electrical strain, each mutually repelling the other? (p. 242)
- ²⁸ Melita P. was a non-professional medium briefly discussed by Kharis (1921).

- ²⁹ Reading through many mentions of the “operators” in Crawford’s books, it seems that they acted as collaborators in the research, suggesting things to do and ideas to test. A similar situation is evident as well in Ochorowicz’s (1909, 1910) research. The “spirits” have given explanations about the process of materialization, as did Palladino’s control John King about fluidic emanations (Ochorowicz 1909:76; see also Hamilton 1932:254–255). In the past some mediums have stated that “spirits” have mentioned the existence of a cord connection between the medium and materialized figures in séances with Monck (Bennett 1877) and Kate S. Cook (Rondi 1877).
- ³⁰ While Palladino was able to discharge an electroscope by placing her hands close to the instrument, but without touching it (Courtier 1908, Imoda 1908), Crawford (1919) did not find evidence that his medium’s invisible projections conducted electricity.

Acknowledgments

I am grateful to the Society for Psychical Research for financial support. Thanks are also due to Michael Nahm, from the Institute for Frontier Areas of Psychology and Mental Health (IGPP), for several bibliographical suggestions to improve my paper.

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