Scientistic Magnetism and Hauntological Metarealism: The Phantasmatic Doubles of Duchamp and Durville

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Recently the early Modernism of Marcel Duchamp has been linked with the new sciences.¹ Rarely has it been contextualized within the scientistic occultisms of Paris, particularly the experimentation undertaken at the French School of Magnetism by Hector Durville, and its intersection with a spate of scientific and medical discoveries.² Within this context, Duchamp's engagement with scientistic occultism and spectrality at the same time as Durville was experimenting with the magnetism and photography of phantasmatic doubles, may be located within an occulture of hauntology in which the empirical concept of realism was being redefined in terms of invisible sources of energy, as signified by Duchamp's quest for what he called his "subconscious preoccupations toward a metarealism", which he identified as "the satisfaction of a need for the miraculous".³ During extensive experiments

¹ The most thorough investigation of Duchamp and the new sciences is: Linda Dalrymple Henderson, *Duchamp in Context. Science and Technology in the Large Glass and Related Works*, Princeton 2005.

² Linda Dalrymple Henderson "The Forgotten Meta-Realities of Modernism: Die Uebersinnliche Welt and the International Cultures of Science and Occultism", *Glass Bead*, Paris, no. 0, 2016; http://www.glass-bead.org/article/the-forgotten-meta-realities-of-modernism A notable exception to touch upon the significance of Durville's Librairie du Magnétisme to the legitimation of occultism as a science and the development of Modernist Meta-Realities, Dalrymple Henderson concludes "it is clearly time to explore this long forgotten underpinning of Modernism in the international cultures of science and occultism [and] invisible meta-realities to which they give rise."

³ Marcel Duchamp, letter in English to Walter Arensberg, dated 22 July 1951; cited in French, *L'Œuvre de Marcel Duchamp*, catalogue raisonée (Paris: 1977), vol. 1, 34; Arturo Schwarz, *The Complete Works of Marcel Duchamp* (London and New York, 1970; revised edition, 1997), 528. I am grateful to David Hopkins for bringing this reference to my attention.

with magnetism, publicized by the Society for Psychical Research, the existence of invisible realms beyond the reach of the human eye appeared to be scientifically proven by a series of discoveries: The X-ray by Wilhelm Conrad Röntgen, radioactivity by Henri Becquerel; radium, polonium and radioactive isotopes by Marie and Pierre Curie, and wireless telegraphy based on the electromagnetic waves identified by Heinrich Herz.⁴ So convincing did the empirical evidence seem by 1900 that in a spate of articles, Gustave Le Bon argued that all materials were radioactive, matter could dematerialise, human bodies would become transparent and yet be photographed, while the atom was the reservoir of "a hitherto unrecognized force", namely "atomic energy". 5 Conterminously the intricate phases of male and female hysteria, hallucinations, hypnotic transferences, seizures, somnambulism, trances, magnetic performances, out-of-body experiences, and double personas were being mapped in neurology, neuroanatomy and neuropsychiatry and illustrated by medical photography. Jules Bernard Luys' Iconographie Photographique des Centres Nerveux, Jean-Martin Charcot's Iconographie de la Salpêtrière and Nouvelle Iconographie de la Salpêtrière, Hippolyte Baraduc's L'Âme Humaine, illustrating human thought, emotions, the soul and vital fluids, plus Commandant Darget's photographs of "fluido-magnetic" bodily emanations, such as Rayons V (Vitaux)", all seemed to validate what Baraduc and many others, especially Hector Durville, termed "la force vitale". Along with X-rays, radiology and radioactivity, these

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⁴ Linda Dalrymple Henderson, "X Rays and the Quest for Invisible Reality in the Art of Kupka, Duchamp, and the Cubists", in: *Art Journal*, 47, 1988 no. 4, 323–340.

foustave Le Bon, "La Luminescence invisible", Revue Scientifique, 28 January 1899; "De la transparence des corps opaques pour les radiations lumineuses de grande longueur d'onde", Revue Scientifique, 11 February 1899; "La Rayonnement électrique et la transparence des corps pour les ondes hertziennes", Revue Scientifique, 29 April 1899. In L'Évolution de la Matière (Paris 1905); The Evolution of Matter, trans. F. Legge, London 1907, 2, Le Bon points out that due to these factors "they reveal that, between the world of the ponderable and imponderable, till now considered widely separate, there exists an intermediate world". Le Bon's book on atomic energy, L'Évolution des Forces, was published in Paris in 1907.

6 Dr. H. Baraduc, La Force Vitale. Notre Corps Vital Fluidique, Sa Formule Biométrique, Paris 1897. Amongst many references by Durville to "la force vitale", refer Magnétisme Personnel ou Psychique: Éducation de la Pensée, développement de la volonté. pour être heureuse, fort, bien portant et réussir en tout, Paris, 1890. So prevalent did this theory

revelations were readily mobilized as scientistic proof of the mysterious power of spontaneous generation, following Jean Baptiste Lamarck's evolutionary theory and its Neo-Lamarckian revision as Transformism, alongside its reconception by Henri Bergson as "l'élan vital", and its manifestation in auras, effluvia, etheric bodies, astral bodies and *dédoublement*. Life does not evolve mechanically and rationally, as Bergson stipulated in *L'Évolution créatice*. "Elle ne procède pas par association et addition d'éléments mais par dissociation et dédoublement."

Buoyed by this new science and medicine, Hector Durville, assisted by his sons, Henri and Gaston, embarked upon a series of what he called "scientific experiments" at their School of Magnetism to unleash "la force vitale". Defining magnetism as a "science" and an "agent lumineux", Hector Durville plumbed all eight levels of deep magnetism in his subjects after which he described not just the emergence of the Etheric and Astral body, as defined by Annie Besant, but photographed their emanation in the form of luminous phantoms. Conceiving of these phantasms as having a special effect upon the photographic plate, he photographed them performing like a shadow of the physical body and exuding the

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become that even Louis Pasteur's discovery of microbes was enlisted as an example of "la force vitale".

⁷ Henri Bergson, L'Évolution créatrice, Paris, 1907; 1941, 90.

⁸ Hector Durville, *Traité expérimental de magnétisme. Cours professé à l'École pratique de magnétisme et de massage*, Paris 1895; Hector Durville, *Le Magnétisme humain considéré comme agent physique, mémoire lu au congrès magnétique international*, Paris 1890; Hector Durville, *Lois physiques du magnétisme. Polarité humaine. Traité expérimental et thérapeutique de magnétisme. Cours professé à la clinique du magnétisme en 1885–1886*, Paris 1896.

⁹ Hector Durville, Le Magnétisme considéré comme agent lumineux. Extrait du "Traité expérimental de magnétisme", Paris 1896; Hector Durville, Le Fantôme des Vivants, anatomie et physiologie de l'âme. Recherches expérimentales sur le dédoublement des corps de l'homme, Paris 1909. A few years later Hector Durville maintained that Magnetism had been established as a science; see: Hector Durville and Paul C. Jagot, Histoire raisonnée du Magnétisme et du Psychisme pratique, Paris 1915.

phosphorescent radiation of "Rayons N". This research appeared to be reinforced by that of Baraduc, particularly his photographs to capture "l'homme fluidique" and "la force vitale". It also seemed to be reinforced by the experiments and photography deployed by parapsychologist Albert de Rochas to reveal how magnetized subjects performing art were able to unleash phantasmatic forms of energy which he also likened to "la force vitale". Amidst this fervour of experimentation and interdiscursivity, Duchamp embarked upon research into these new sciences, occultist vitalism and scientistic magnetism, albeit not without what he called a "meta-irony" in his quest for "metarealism". By focusing upon the uncanny affinities between the occulture hauntology of Duchamp and Durville, this essay will explore how this interdisciplinary *metarealist* modernist and this scientistic magnetist endeavoured to negotiate, if not illuminate, through diverse mediums but analogous ways, luminous emanations, transmutations and phantasmatic doubles.

Le Fantôme des Vivants: Henri Durville's, Albert de Rochas' and Paul Nadar's Magnetic Photography at the Société Magnétique de France

With the strong support of Baraduc, de Rochas, Sar Joséphin Péladan, Madame Blavatsky, Gérard Encausse "Papus", and other well-established Occultists, in 1887 Hector Durville launched the Société Magnétique de France. Following the success in 1889 of the Spirit and Spiritualist Congress alongside the International Congress of Magnetism in Paris, in 1893,

¹⁰ So long sustained was public interest in Durville's explorations of "living phantoms" that in 1922, he delivered a series of lectures on it; see: Hector Durville, *Le Magnétisme*. *C'est un agent physique*, Paris 1919. To this day, his books are published.

¹¹ Hippolyte Baraduc, *L'Âme humaine, ses mouvements, ses lumières et l'iconographie de l'invisible fluidique*, Paris 1896.

¹² Albert de Rochas, Les États profonds d'hypnose, Paris 1892; L'Extériorisation de la Sensibilité, étude expérimentale et historique, Paris 1895; Les Sentiments, la musique et la geste, Grenoble 1900.

¹³ "Irony is a playful way of accepting something. Mine is the irony of indifference: It's a Meta-irony". Quoted in: Albert Cook, "The 'Meta-Irony' of Marcel Duchamp", in: *The Journal of Aesthetics and Criticism*, 44, 1986, no. 3 (Spring), 263–270, here 263. "La signe de mes préoccupations subconscientes vers un métaréalisme". Quoted in: John F. Moffitt, *Alchemist of the Avant-Garde. The Case of Marcel Duchamp*, New York 2003, 111.

Hector and Henri Durville also opened the École pratique du Massage et de Magnétisme on Avenue Mozart in Paris, with a branch in Lyon. 14 At the same time they established the spiritual society, l'Ordre Eudiaque, launched the *Journal du magnétisme et psychisme expérimental* and established their own publishing house, *Librairie du Magnétisme*, able to publish Hector's many treatises and others addressing "la force psychique", hallucinations, ailments and the human soul. 15 In his treatise, *Histoire Raisonée du Magnétisme et du Psychisme Pratique*, Hector Durville demonstrated how the magnetic poles punctuated every part of the human body, as signified by the positive and negative signs inscribed on anatomy correlating to the attraction and repulsion of horse-shoe magnets. 16 Likened to a flickering flame that could project as far as five metres either horizontally or vertically, Durville considered magnetic energy constituted "l'élan vital". 17 When emanating from such key sensory points as eyes, nose, ears and mouth, as well as from the hands and fingertips, on the right side, de Rochas showed how the colour of this vital force became a brilliant blue but when emanating from the negative left side, it turned a fiery red although its intensity depended upon individual energy. 18

Conceiving of the human body as both a receptor and transmitter, Durville commissioned drawings to illuminate how magnetic energies were not just attracted by the body but generated from it. So powerful were these magnetic energies that Durville likened

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¹⁴ Congrès international sur le magnétisme, 21–26 October 1889, was followed by a Rapport Générale, Paris, Carré, 1890; the Congrès Spirite et Spiritualiste international was held in Paris, 9–16 September 1889, followed by another in 1902; the Congrès International de Hypnotisme expérimental et thérapeutique was also held in Paris in 1889.

Hector Durville, L'Enseignement du magnétisme. École pratique de magnétisme et de massage, Paris 1895; Hector Durville, Le Magnétisme considéré comme agent lumineux.
 Hector Durville and Paul C. Jagot, Histoire Raisonée du Magnétisme. For more on Durville's publications and practices, see: Fae Brauer, "Magnetic Modernism. František Kupka's Mesmeric Abstraction and Anarcho-Cosmic Utopia", in: David Ayers et al. (eds), Utopia. The Avant-Garde, Modernism and (Im)possible Life, Berlin and Boston 2015, 135–

¹⁷ Hector Durville, *Magnétisme personnel. Éducation de la pensée. Développement de la Volonté. Pour être Heureuse, Fort, Bien Portant et Réussir en tout*, Paris 1899; see especially his illustrations, "Le Rayonnement psychique d'échange".

¹⁸ Durville, *Magnétisme personnel*, 27.

them to rays and electrical sparks able to energize the body physically and psychically. Since these magnetic energies seemed to circulate and radiate as an invisible vital force field clearly perceptible to clairvoyants, spiritists, mediums, magnetizers, radiographers, and also the camera, Durville likened them to magnetic phantoms. ¹⁹ The radiating auras that they generated from magnetized subjects were likened to magnetic waves connected to the phantasmatic etheric and astral body double, as theosophized by Annie Besant in *Man and his Bodies*, first published in 1896, cited extensively by Durville in *Le Fantôme des Vivants*, as well as *Magnétisme personnel ou psychique*. ²⁰ So interpenetrated were the etheric and astral body that Durville posited them as both occupying the Astral Plane of evolution. ²¹

Conceiving of photography as having a unique receptivity to their energies, Durville and de Rochas commissioned photographs from Paul Nadar onto magnesium plates to reveal how magnetism was able to mediate a phantasmatic doubling of the physical body. That the etheric and astral bodies could form alongside the physical body as phantoms was initially captured by Nadar. The son of Félix Nadar, he had achieved such renown for his experimental photography that he become Eastman Kodak's agent in France and the photographer most commissioned by Durville and de Rochas to capture phantasmatic doubles.²² His first photographs of de Rochas in his study captured his phantasmatic ethereal

¹⁹ Durville, *Le Fantôme des Vivants*, 275.

²⁰ Annie Besant, *L'Homme et ses Corps*, Paris 1902; Durville, *Le Fantôme des Vivants*, 27–36; Durville, *Magnétisme Personnel ou Psychique*, Paris 1905; Hector Durville, *Pour combattre les maladies par suggestion et auto-suggestion*, Paris 1907.

Durville, *Le Fantôme des Vivants*, 27–36; Besant, *L'Homme et ses Corps*, Paris 190: The first plane in the invisible energy field, the etheric body was perceived by Besant as larger than the physical body and able to act as a conduit to the higher astral body, on the Astral Plane of Evolution. Composed of four ethers interpenetrating the solid, liquid and gaseous constituents of the physical body like an etheric envelope, Besant described the colour of the etheric double as luminous white or clear grey. Only when the physical body died did the etheric body leave it, according to Besant, while the astral body remained. As Durville reflected, the manifestation of the etheric body phantom became "extraordinarily prevalent at this moment".

²² The youngest son of Félix Gaspard Tournachon, aka Nadar, Paul Nadar (1856–1939) successfully ran his father's third studio, 52 rue d'Anjou, and achieved renown for his aerial

body as both taller and wider than him and able to echo his stance. Aware of the phantasmatic ramifications of this phenomena, Durville and de Rochas explored, with the aid of Nadar, how these luminous emanations took the form of phantoms after magnetism.

As early as 1882, de Rochas had been photographed with a medium and a phantom. Ten years later, he pointed out that while dédoublement was extremely common, the visibility of the phantom was not necessary and took a different form, as had been illustrated by Nadar's photographs of him in his study. Following the phantom's powerful vibratory energy, which Durville likened to "la force vitale", he stipulated that their appearance followed a choreography of distinct stages invariably reflecting the state and gender of the physical body. Initially the visual realisation of this metamorphosis had occurred to him on receiving photos taken in 1905 of a young girl with her etheric or astral double.²³ Yet when Durville magnetised three women, Nénette, Edmée and Jane, he recorded how once their magnetic states had reached deeper levels, phantoms began to emerge as fluid light columns about 40 to 50 centimetres away from them.²⁴ "At this moment", Durville pointed out, "this fluid mass still did not resemble a human being: It was an indecisive mass, a vaporous column higher and larger than the magnetised subject."²⁵ Only with more magnetisation of Jane did this vaporous mass appear "smaller, more luminous taking, little by little, a human form" until Durville observed it took the form of her female body. ²⁶ It then repeated, according to Durville, "like a shadow, all her movements and gestures". 27 Whenever she raised and lowered her arms, so did her phantom.²⁸ "This is her double, her phantom", Durville concluded, "who is always on her left and sometimes just in front of her [...]. The contours are more or less clear and precise [with] above all, the superior part being much

photography from hot-air balloons, use of artificial lighting, animation of still pictures and

photo reportage.

²³ Durville, Le Fantôme des Vivants, 92, Fig. 11 – Jeunes filles dédoublées.

²⁴ Durville, *Le Fantôme des Vivants*, 155–160.

²⁵ Durville, *Le Fantôme des Vivants*. 175.

²⁶ Durville, *Le Fantôme des Vivants*, 179–180.

²⁷ Durville, *Le Fantôme des Vivants*, 180.

²⁸ Durville, *Le Fantôme des Vivants*, 180: Durville quotes from his magnetised subject: "Je lève le bras gauche du sujet; celui-ci dit aussitôt que le double lève le bras gauche. Je baisse ce bras et lève le droit; il s'écrie aussitôt que le double lève le bras droit."

more active than the inferior one."²⁹ While Durville explored this phenomenon with a range of other women – Marthe, Léontine, Madame François, Madame Vix and Mlle Thérèse – it appeared to be most clearly captured by Nadar's photographs of Mme Lambert's phantasmatic double from February 1908.³⁰

A medium who Durville and de Rochas frequently magnetised, Lambert had long studied with de Rochas but had rejected Spiritism and spurned the séances of Eusapia Palladino.³¹ Once she was magnetized by Durville, Lambert found that throughout the day and night a phantom would visit her. Initially the phantom appeared as a fluid vaporous mass of light, accompanied by spots of light floating in darkness. Yet gradually Lambert found that it transformed into the form of a luminous, white pillar or column, taller and larger than herself (see Fig. 2). After further magnetism, she watched it become increasingly luminous until it condensed into a human form taking the shape of a woman, with a body and face uncannily like her own (see Fig. 3). By no means did it shy away but continually visited Lambert until 1913 as subsequent photos reveal. Situating itself about twenty centimetres from Lambert's left side, "it repeated", according to Durville, "like a shadow, all her movements and gestures". 32 Whenever she raised or lowered her arms, so did her phantom. 33 Rather than walking beside her, the phantom glided by her.³⁴ So closely did it shadow Lambert that even when she went to bed, the phantom lay beside her. Animated by intense vibratory movements, Lambert found her phantasmatic double knocked loudly on tables, banged doors, and created such intense energy and heat that it could be measured with a thermometer.³⁵ The power of the phantom to glide through walls and doors in front of the

²⁹ Durville, *Le Fantôme des Vivants*, 180. All translations of quotations in this essay are by the author, unless noted otherwise.

³⁰ Durville, *Le Fantôme des Vivants*, 167–169. Wilfried-René Chettéoui also points out Charles Lancelin's participation in these experiments and how "diverses phases d'extériorisation du 'double' ont été décrites par les sujets eux-mêmes" (*La nouvelle parapsychologie. Une expérience métaphysique*, Paris 1993, 50).

³¹ Durville, *Le Fantôme des Vivants*, 167–169.

³² Durville, Le Fantôme des Vivants, 180.

³³ Durville, *Le Fantôme des Vivants*, 183.

³⁴ Durville, *Le Fantôme des Vivants*, 184.

³⁵ Durville, *Le Fantôme des Vivants*, 195.

physical body or vertically behind it, covering a kilometre in fifteen seconds, appeared to be matched by its power to radiate white light in different forms.³⁶

During Durville's subsequent experiments with the phantom of Léontine in 1908, he found that her phantom was able to generate a brilliant white light through the luminous ball floating by the head of the phantom, which he captured in a close-up. Not only did Durville's photographs reveal its jets of light beaming in different directions but also, in an effluviograph, its flaming luminosity – sufficiently dazzling, as Mme Lambert recalled, to light up a dark room.³⁷ Believing that the phantom emanated N-rays, the phosphorescent radiation discovered by René Blondot, Durville endeavoured to register this light at night on screens covered with calcium sulphide, a substance believed to produce brightness in contact with N-rays. 38 "I took the small screen [...] and placed it on the abdomen of the magnetized subject for two or three minutes without obtaining the slightest trace of luminosity", Durville recalled. "I then placed it by the phantom, and it became so strongly illuminated [that it gave] enough light to enable [us] to tell the time by a watch"39. Yet what appeared most striking to Durville was that "this invisible body carried with it the very principle of life, as well as will, intelligence, memory, consciousness, psychic sensibilities while the visible body does not possess any [of these] faculties". 40 In proving that humans, once magnetized, were able to perpetually double with their etheric and astral bodies, these photographs then demonstrated that their power was not confined to their physical body. This doubling seemed even more profound when magnetism was fused with art, as revealed by de Rochas.

³⁶ Léon Lefranc, "Le Corps Astral du Vivant. Forme – Matière – Couleur", in: *Le Monde Psychique*, 1911, 70–81.

³⁷ Durville, *Le Fantôme des Vivants*, 197–202.

³⁸ Investigated in the first decade of the twentieth century, N-rays were subsequently dismissed by the scientific community as arising from artefactual observations. Durville also used screens covered with sulphur, zinc and magnesium.

³⁹ H. Durville, "Experimental Researches Concerning Phantoms of the Living". Quoted in: *Annals of Psychical Science*, 7, 1908, 335–343, here 341: "These experiments, repeated about ten times with seven or eight different subjects, always gave similar results, which were very intense when the screens had been well exposed to the sun, less so when the exposure had been insufficient."

⁴⁰ Durville, *Le Fantôme des Vivants*, 353.

In his experiments, de Rochas explored how the magnetic force radiating in and from the physical body could charge the human nervous system and its fluid energies into unleashing a "superior form of being" with heightened sight, taste, hearing and touch. In this superconscious state, de Rochas discovered that magnetized subjects were able to feel musical vibrations and perform to them, perceive places they had never seen and respond to art that they had never known. This was realized when de Rochas magnetized the artist's model, Lina (Maria Mayo) and commissioned Nadar to photograph her. Without any training in mime, theatre performance or dance, the mesmerized Lina was able to perform in highly innovative ways to Wagner's music, Verlaine's poetry, Ravel's waltzes and national allegories with dramatic expressions comparable to those of experienced actors. Since music heightened the vibratory force of magnetism, a phenomenon de Rochas had observed affecting animals as much as humans, he captured how musical vibrations seemed to "jolt" Lina's nerve fibres and sensibilities, penetrating her unconscious sensibilities directly.

Once deeply magnetized, with the aid of music and Nadar's photography de Rochas was able to reveal how Lina achieved a doubling within her physical body, as if both her etheric and astral bodies had fused with it to achieve a state of superconscious. This appeared acutely evident to de Rochas, in the last photographs taken of Lina dancing the *Habanera* from George Bizet's *Carmen*. This happened only after de Rochas had given Lina prolonged passes to take her from the fifth to the eighth phase of magnetism where her sensibilities became so exteriorized that they could form a phantom. The more the music vibrated, according to de Rochas, the more vibrantly Lina danced and exorcised her body of effluvia, as can be seen in the left photo. The more luminous forms seemed to gather around her, the more they gradually condensed and stratified into brilliant white light forms and rays a metre in front of her. (see Fig. 3) These luminous rays then seemed to join her body, as signified by white lines intersecting with her head, arms and hands. "This column then took the form of her [gyrating] carnal body", de Rochas explained, "both visible and palpable to

⁴¹ Lt.-Colonel de Rochas d'Aiglun, Les Fluides des Magnétiseurs précis des expériences du Bon de Reichenbach sur ses propriétés physiques et physiologiques, classées et annotées par le lieutenant-colonel de Rochas d'Aiglun, Paris 1891, 53.

⁴² Lt.-Colonel de Rochas d'Aiglun, *Les Sentiments, La Musique et Le Geste*, Grenoble 1900, 204–227.

⁴³ De Rochas d'Aiglun, Les Sentiments, La Musique et Le Geste, 265–267.

⁴⁴ De Rochas d'Aiglun, Les Sentiments, La Musique et Le Geste, 267.

all present and proven by these instantaneous photographs taken with a Kodak. This phantom exteriorized from the interior of her body, is known", he concluded, "by the names astral or etheric body. It represents", he concluded, "the vital force". 45 Drawing up a table of octaves and vibrations showing how sixteen octaves corresponded to 38,000 vibrations per second, de Rochas then deduced that the energies produced by music and dance had the power to exteriorize not just the etheric and the astral body but "the vital force". 46 Exteriorised by the energies of dance and music, the astral body was then able, de Rochas concluded, to have an effect upon the photographic plate which, he claimed, "has a sensibility to capture, as one knows, thousands of stars invisible to our eyes". 47 Once the magnetic vital force became fused with art, according to de Rochas and Durville, its power could become so enhanced that the physical body could be transported into the superconscious state of the astral plane. 48 While de Rochas illuminated how this transpired in the creative performances of his mesmerized subjects, Duchamp explored it through his *metarealism*.

Le fantasme de "la grande machine de précision": Magnetism, Occultism and Duchamp's *Metarealism*

With this extraordinary burgeoning of research, experiments and publications on electricity, magnetism and electromagnetism from 1890 until 1910, Jean Clair surmizes that these new energies proved "as powerful as they were invisible". 49 Clair also stresses the fluidity with which the experiments with spiritism, magnetism and the occult were engaged by the new scientists, the inventor of the cathode ray tube, Sir William Crookes, being one of the most ardent supporters of Spiritism while the pioneering astronomer, Camille Flammarion, was theorizing the transmigration of souls on distant planets and documenting apparitions and telepathy. At the same time as the Nobel-prize-winning physiologist Charles Richet founded the Société française de métapsychisme while monitoring séances, as Clair points out, the Administrator of the École Polytechnique, de Rochas continued the work of "Mesmer and

⁴⁵ De Rochas d'Aiglun, Les Sentiments, La Musique et Le Geste, 271.

⁴⁶ De Rochas d'Aiglun, *Les Sentiments, La Musique et Le Geste*, 271. See also: de Rochas d'Aiglun, *Les États profonds de l'hypnose*, 31–32.

⁴⁷ De Rochas d'Aiglun, Les Sentiments, La Musique et Le Geste, 269.

⁴⁸ Durville, *Le Fantôme des Vivants*, 7–8.

⁴⁹ Jean Clair, Sur Duchamp et la fin de l'art, Paris 2000, 26.

Puységur by studying Baron Reichenbach's phenomena of 'odic' radiation'. ⁵⁰ Even Duchamp's brother, Duchamp-Villon had trained as an intern in Radiology at the side of Albert Londe and Jean-Martin Charcot at Salpêtrière. ⁵¹ While Clair perceives Duchamp's trip to Munich in 1912, due to its renown as the European capital of occultism, as a testimony to Duchamp's enthrallment, he points out that even in 1922, Duchamp had written from New York to his brother, Jacques Villon, on Christmas Day: "I know a photographer here who takes photographs of ectoplasms around a male medium – I had promised to help him in one of the séances and then got lazy but it would have amused me a lot." ⁵² Duchamp's enthrallment was well nourished.

When Pierre Camille Revel's 1890 treatise on the transmigration of souls and physiological magnetism was republished in 1905, it was done so not just by the Bibliothèque Chacornac's *Librairie Générale des Sciences Occultes* but by Hector and Henri Durville's publishing house, Librairie Générale du Magnétisme. Entitled *Le Hasard, sa Loi et ses conséquences dans les sciences et en philosophie, suivi d'un Essai sur la Métempsycose considérée au point de vue de la Biologie et du Magnétisme physiologique, this edition by Revel was owned by Duchamp.⁵³ That its references may throw fresh light on Duchamp's interdisciplinary investigations into the experimental research and practices within the occult sciences and scientistic magnetism is indicated by the telling inscription written in ink on its cover by English Surrealist David Gascoyne, to whom Duchamp had entrusted it some 40 years later: "One of the sources of the originality of Marcel Duchamp".⁵⁴ Particularly prominent in this 458 page tome is the magnetism component, its second part being devoted entirely to <i>Des Sciences magnétiques*, with its relationship to science stressed by Revel:

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⁵⁰ Clair, Sur Duchamp et la fin de l'art, 26.

⁵¹ Clair, Sur Duchamp et la fin de l'art, 26.

⁵² Clair, *Sur Duchamp et la fin de l'art*, 33; Engl. trans.: "L'Iconographie de l'invisible fluidique", *Tout-fait*, 1, 2000, no. 3 (December) 2000;

https://www.toutfait.com/issues/issue_3/News/clair/clair2.html. This was communicated by Hector Obalk, and quoted by Clair. To boost his argument, Clair points out that the annual Theosophy Society conference was held in Munich in 1907.

⁵³ Moffitt, Alchemist of the Avant-Garde, 101.

⁵⁴ Jean Clair, "Duchamp at the Turn of the Centuries", in: *TOUT-FAIT. The Marcel Duchamp Studies Online Journal*, 1, 2000, no. 3 (December), note 63.

Considering the analogy that exists between the phenomena of attraction and repulsion and physical magnetism and physiological magnetism, the term magnetism should be used as the general scientific term.⁵⁵

To allay any skepticism about magnetism, Revel recommended the treatise by Durville, "one of the most complete of the works", he wrote, able to explain "the viable practice of magnetism" and the way its passes could unleash effluvia from the human body and release the ethereal and astral bodies. ⁵⁶ Revel also commended the ways in which the magnetic polarities of the human body and the effluvia radiating from it were demonstrated by Commandant Darget's 85 photographs of human effluvia projected onto plates and illustrated by de Rochas' photography in his books, Les Forces non définies and L'Extériorisation de la Sensibilité. Revel highlights the ways in which de Rochas revealed the connections between mesmerism and creativity in Sur les états superficiels et sur les états profonds de l'hypnose.⁵⁷ Upon analyzing Baraduc's experiments published in La Force vitale. Notre corps vital fluidique, sa formule biométrique, Revel defends the concept of metempsychosis and the phenomenon of apparitions, "les fluides humains". 58 He also defends "the vibrations of human vitality amongst the sensitive and the neurotic", concluding that "it permits us to deduce the existence of a living reality belonging to the invisible."⁵⁹ Despite objections, Revel considered that all who studied these psychophysiological phenomena, designated within the category of the occult, were inevitably led to admit the existence of what he called "une force neurique rayonnante", equivalent to a magnetic force field enveloping every human. 60 As Revel significantly concluded:

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⁵⁵ P. Camille Revel, *Le Hasard, sa loi et ses conséquences dans les sciences et en philosophie, suivi d'un essai sur la métempsycose basée sur les principes de la biologie et du magnétisme physiologique*, Paris 1909, 321.

⁵⁶ Revel, *Le Hasard, sa loi et ses conséquences*, 322. Presumably he was referring to Durville's *Traité expérimental de magnétisme*.

⁵⁷ Revel, *Le Hasard*, sa loi et ses conséquences, 435–437.

⁵⁸ Revel, *Le Hasard*, sa loi et ses conséquences, 361.

⁵⁹ Revel, *Le Hasard, sa loi et ses conséquences*, 431–434.

⁶⁰ Revel, Le Hasard, sa loi et ses conséquences, 438.

On considering the enormous progress made by the magnetic sciences, since Mesmer, one has to ask oneself if in the near future, the propositions rejected by our academicians, will not be accepted. On re-examining the history of physiological magnetism, one observes the following march [in progress in which] the invisible world will be fully accepted.⁶¹

Published four years before *Le Fantôme des Vivants*, no mention is made of Durville's impending research. Yet from the time that Durville's treatise was published in 1909, it attracted the attention of some of the major Parisian newspapers (*les quotidiens*), as well as the occultist press, as exemplified by its review in October 1909 in *Le Progrès Spirite*. *Philosophie kardéciste, Psychologie expérimentale*.⁶² Early in 1911, Durville's research for *Le Fantôme des Vivants* had also been closely analysed in the publishing organ for the Institute of Psychic Research in France, *Le Monde Psychique*, with de Rochas as its President of Honour. From its first issue, this journal proudly claimed to have studied decomposition of the human form into physical, spiritual and phantasmatic bodies, to have revealed the magnetic procedure to extract the phantom from the living body, and to have confirmed the reality of its external existence.⁶³ It promised to continue to address the issue of phantoms: "Death is not alone in having a phantom; the living have one too, a different one", it explained, "[t]heir study forms a very different chapter of occultism".⁶⁴ This article was accompanied by two black and white photographs of the phantom of Mme Lambert (See Figs. 1 and 2).

Within months of these publications the 22-year old Duchamp had embarked upon portraying his close school-friend who he had known since the Lycée Corneille, Raymond

⁶¹ Revel, Le Hasard, sa loi et ses conséquences, 463.

⁶² "Les Fantômes de Vivants peuvent communiquer", in: *Le Progrès Spirite. Philosophie kardéciste, Psychologie expérimentale*, October 1909, 157–158.

⁶³ "Nous vous avons montré la décomposition de l'être humain en ces trois parties fondamentales: esprit, fantôme, corps physique. Nous vous avons montré le procédé magnétique à l'aide duquel on extrait le fantôme de l'homme vivant. Nous avons fait constater la réalité de l'existence du fantôme vivant extérioré." *Le Monde Psychique, organe mensuel de l'institut de Recherches Psychique de France*, 1911, no. 5 (July), 131.

⁶⁴ *Le Monde Psychique*, 1911, 131.

Dumouchel (see Fig. 4).⁶⁵ Having just graduated in medicine, Dumouchel had embarked upon a special study of medical radiology, particularly X-rays of the human body, which proved integral to Duchamp's conception. Far from Dumouchel's clothing and ambience being rendered in the local grays and greens of Albert Gleizes' Cubistic portrait of Jacques Nayral, Dumouchel's jacket appears as an acidic turquoise while the phantasmatic shadow or double hugging his body is coloured as a strident magenta amidst vaporous zinc white highlights tinged with cerulean greens and mustard yellows. So amorphous is this puce phantasmatic shadow that it may be also read as an irradiating and vibrating aura. Not the only time that this has been observed, Lawrence Steefel pointed out the "uncanny aura" emanating from Dumouchel's body, "as if in a punning parody of a hallucinatory spiritualistic illumination". 66 Yet rather than appearing to be drawn from spiritualism, Duchamp's representation of this aura seems comparable to illustrations of magnetic fluids and N-Rays, including those in the "Rayons N" book that Duchamp owned by Revel.⁶⁷ "Magnetizers and Occultists must feel triumph as they see the existence of N-rays now admitted to by science", Revel had written: "This new discovery, which seems so to interest non-believers and scientists alike, did not at all surprise those given over to the close study of Occult Science. The latter have long since known about the existence of human radiations, and these now appear to include N-rays."68

Inscribing the back of the painting, "à propos de ta 'figure', mon cher Dumouchel", with the word figure in inverted commas, Duchamp signals, with characteristic irony, that this portrayal of his friend's "figure" is not straightforward. As indicated by Duchamp's retrospective reflections on this painting to the Arensbergs, his ironically playful explorations of an occultist light and iridescent colour to portray his old school friend's relationship to the

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⁶⁵ Born in Auffay, 40 kilometres from Rouen, Raymond Jacques-Émile Dumouchel (1882–1974) was the second son of Marie Juliette and of Jacques Edmond Dumouchel, a notaire like Duchamp's father. They befriended one another at the Lycée Pierre Corneille in Rouen in 1897.

⁶⁶ Lawrence D. Steefel Jr., "Marcel Duchamp and the Machine", in: Anne d'Harnoncourt and Kynaston McShine (eds), *Marcel Duchamp*, New York 1973, 69–80.

⁶⁷ Marcel Duchamp: *Le Buisson*, 1911; *Paradise*, 1910–1911 (in which Dumouchel also appears in the role of Adam).

⁶⁸ P. Camille Revel, *Le Hasard, sa loi et ses conséquences*, 1905 edition, 348–349; as translated and quoted by Moffitt, *Alchemist of the Avant-Garde*, p. 103.

invisible energies of radiology and magnetism, seemed to have proved instrumental to his abandonment of "retinal painting". ⁶⁹ As Duchamp explained to Pierre Cabanne:

Since Courbet, it's been believed that painting is addressed to the retina. That was everyone's error. The retinal shudder! Before, painting had other functions: it could be religious, philosophical, moral. If I had the chance to take an antiretinal attitude, it unfortunately hasn't changed much; our whole century is completely retinal, except for the Surrealists, who tried to go outside it somewhat. And still, they didn't go so far!⁷⁰

Even the sexual anatomy of Dumouchel seems to dissolve into the phantasmatic luminosity of an "etheric envelope". Following the research of Durville and de Rochas, as well as the treatise on auras as etheric forces spawned by Léon Denis, Duchamp's "figure" may comprise Dumouchel's "psychic effluvia" in colours signifying, following Besant's and Leadbeater's *Thought-Forms*, "Noble Ideals" and "Love of Humanity".⁷¹

Consistent with Durville's and de Rochas' illustrations of magnetic waves emanating from men's and women's bodies, Dumouchel's "psychic effluvia" also appears comparable to the magnetic energy and N-rays that Duchamp considered could be radiating from Dumouchel's body, particularly in what Duchamp called "le halo de la main". Like the N-rays and magnetic emanations drawn and photographed by Durville and de Rochas, this light

⁶⁹ In a letter dated 28 January 1951 to Louise and Walter Arensberg, Duchamp wrote: "The portrait is very colorful (red and green) and has a note of humor which indicated my future direction to abandon mere retinal painting." Archives of the Francis Bacon Foundation, Claremont, California, as quoted by: Arturo Schwarz, *Marcel Duchamp*, New York 1975, iii; see also: Dalrymple Henderson, "X Rays and the Quest for Invisible Reality".

⁷⁰ Cabanne, *Dialogues with Marcel Duchamp*, 43; see also: Pierre Cabanne, *Entretiens avec Marcel Duchamp*, Paris 1967.

⁷¹ L. Lefranc, "Les États du Sommeil Magnétique du Fantôme du Vivant ou Corps Ethérique", in: *Le Monde Psychique, Organe Mensuel de "l'Institut des Recherches Psychiques de France pour l'étude expérimentale des phénomènes spirites*, 1, 1911, no. 2 (April), 3–7; Annie Besant and C. W. Leadbeater, *Thought-Forms*, London 1901; Fig. 1, *Key to the Meaning of the Colours*, nos. 3. and 1.

⁷² Moffitt, *Alchemist of the Avant-Garde*, 113.

does not just seem to radiate from the hand but to light up the surrounding space. Conjuring the healing power of this physician with what Léon Denis calls "the curative power of magnetizers", transmitted by hand, it is significantly Dumouchel's left, not right hand.⁷³ It is also conveyed like Roentgen's pioneering X-ray of the left-hand of the Swiss physiologist who had also trained as a physician, Albert von Kölliker. Given how its physiognomy is represented as an X-ray, as is Dumouchel's head, Duchamp's portrayal may then be decoded as a physician able to fuse the science of radiology piercing human flesh with the science of occultism unleashing magnetic energies and the phantasmatic double. That it represented *metarealism* for Duchamp is demonstrated by his declaration: "le halo autour de la main [du Docteur Dumouchel] est un signe de mes préoccupations subconscientes vers un métaréalisme."⁷⁴ Subsequently and significantly, he compared the practice of an artist to that of a medium. "To all appearances", he stated in English, "the artist acts like a mediumistic being who, from the labyrinth beyond time and space, seeks his way out to a clearing".⁷⁵

Despite the specificity of Duchamp's title for his following painting, *Le Buisson* (see Fig. 5), he insisted that it was "without a definite plot", as if he was trying to find "his way out to a clearing", as he explained to Mary Ann Adler:

I was looking for a raison d'être in a painting otherwise than the visual experience [...] the Bush and the two nudes in relation to one another seemed at that time to satisfy the desire I had to introduce some anecdote without being anecdotal. In other

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⁷³ Léon Denis, Dans l'Invisible. Spiritisme et Médiumnité. Traité de spiritualisme expérimentale. Les Fantômes des vivants et les Esprits des morts, Paris 1906, 251.

⁷⁴ Moffitt, *Alchemist of the Avant-Garde*, 111. Apparently when Walter Arensberg questioned Duchamp about the relationship of "the halo", Duchamp responded that "the halo around the hand […] is a sign of my sub-conscious preoccupations directed towards something beyond realism". Duchamp added "the halo around the head indicates my deliberate intention to add a touch of wilful distortion".

⁷⁵ Marcel Duchamp, "The Creative Act", in: *Session on the Creative Act*, Convention of the American Federation of Arts, Houston 1957; *Apsen*, 5 & 6, The Minimalism Issue, 1957. This is the same year as André Breton's *L'Art Magique*, which appeared on 25 May 1957; see: Bibliothèque littéraire Jacques Doucet, Paris: BRT 117.

words, I did not in that painting illustrate a definite theme, but the disposition of three elements evoked for me the possibility to invent a theme for it afterwards.⁷⁶

Drawing upon Édouard Schuré's *Les Grands Initiés*, particularly his analysis of the importance of initiation in the ancient age and his passage on the seduction of Eurydice by Aglaonice, John F. Moffitt deduces that its iconography represents a Dionysian initiation into Eros, specifically Lesbianism.⁷⁷ Convincing as this argument may seem, particularly in relation to Duchamp's reflection upon eroticism as "the basis of everything I was doing", ⁷⁸ it overlooks the azure aura enveloping both figures in nature and their interrelationship with such seminal sources as "le théâtre d'âme" of Schuré, particularly captured by his play, *Les Mystères d'Éleusis*. ⁷⁹ Published in 1890, regularly performed in Paris and in 1909 at the Theosophical Congress in Munich through the mediation of Rudolf Steiner, Schuré's play seems to have coincided with the publication in English of Durville's book, *The Mysteries of*

⁷⁶ Marcel Duchamp, letter to Mary Ann Adler, April 1951, Philadelphia Museum of Art, Arensberg Archive. Quoted in: d'Harnoncourt and McShine (eds), *Marcel Duchamp*, 244.

Moffitt, Alchemist of the Avant-Garde, 114–117. Moffitt also cites Annie Besant's and C. W. Leadbeater's Les Formes-Pensées and Édouard Schuré's Les Grands Initiés. Esquisse de l'histoire secrète des religions (Paris 1889). Although Moffitt does not mention Schuré's close relationship with Rudolf Steiner from 1906, Schuré identified Steiner as one of "the great initiators".

⁷⁸ Cabanne, *Dialogues with Marcel Duchamp*, 88. On the subject of Duchamp's exploration of eroticism during the sexual repression of the French Radical Republic, see: Fae Brauer, "De la rationalisation d'Éros. Le fléau d'Onan, l'impératif de procréation et les automates sexuels de Duchamp", in: Marc Décimo (ed.), *Marcel Duchamp et l'érotisme*, Dijon 2008, 139–163; Fae Brauer, "Rationalizing Eros. The 'Plague of Onan', the Procreative Imperative and Duchamp's Sexual Automatons", Newcastle upon Tyne 2007, 126–148.

⁷⁹ Le Drame sacré d'Éleusis was first published in 1890. "Le Théâtre de l'âme" by Schuré comprised six of his plays, including *Rêve Éleusinien à Taormina*, preceding *Léonard da Vinci*, a play in five acts. See: Édouard Schuré, *Léonard da Vinci précédé du Rêve Éleusinien à Taormina*, Paris 1905. As Schuré indicates in his 1926 book, *Le Théâtre initiateur. La Genèse de la tragédie. Le Drame d'Éleusis*, a collation of five lectures he delivered in 1925, he regarded *Les Mystères d'Éleusis* as the origin of drama.

Eleusis, in which Durville connected Eleusian trances with ancient Greek practices of magnetism. 80

If Duchamp's figures are identified with The Mysteries of Eleusis as Demeter and Persephone, then Le Buisson would seem an appropriate signifier for the sanctuary of Eleusis and for this Goddess of Fertility, wife of Zeus and mother of both Dionysus and the virginal Persephone. With Demeter's eyes closed and her right hand outstretched just above and behind her kneeling daughter's head, this Goddess appears to be making "magnetic passes" in order to initiate the golden-haired Persephone into the Eleusian mysteries of birth, death, rebirth and eroticism. In a trance, Persephone may have fixed her inner gaze upon a vision of her descent into an inferno of eroticism amidst the souls of the dead, followed by her rebirth on earth each Spring – a cycle that would become all too imminent after Hades' abduction of her into the underworld. On her descent in performances of Schuré's play, a priest would appear to fumigate the stage to make the demonic creatures in the underworld appear like phantasmagorical beings. 81 The brilliant blue aura Duchamp chose to envelop her magnetized body and that of her mother as the magnetizer, and which tints Persephone's kneeling flesh, may signify the colour of their magnetic field and its relationship to "the vital force", including what Léon Denis also called "les radiations de la force psychique", which seem to be projecting from the right side of Demeter's reddish body. 82 Given the increasing research and publications on magnetism and "les fantômes des vivants", as well as on doubles following Schuré's book on the phantasmatic double of the young painter, Marrias, first published in 1890, these two women appear to personify the two magnetic poles. They could

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⁸⁰ Rudolf Steiner, *Le Mystère Chrétien et les Mystères Antiques*, with an introduction by Édouard Schuré, Paris 1908. Schuré's *Les Mystères d'Éleusis* has more recently been republished as *Le Drame Sacré d'Éleusis* (Paris 1993).

⁸¹ Édouard Schuré, *Le Drame Sacré d'Éleusis* (Paris 1993); Pierre-Louis Besombes, "Les Mystères d'Éleusis, du mythe de Déméter et Perséphone aux Persephone aux mystères des Wisigoths", 10 September 2017; plbesombes-et-le-templier.com

⁸² Denis, Dans l'Invisible, 37. The full subtitle to the 1911 edition reads Traité de Spiritualisme Expérimental, Les Faits et Les Lois; Phénomènes Spontanés – Typtologie et Psychographie, Les Fantômes des Vivants et Les Esprits des Morts; Incorporation et Matérialisation des Defunts; Méthodes d'expérimentation – Formation et Direction des Groupes; Identité des Esprits; La Médiumnité à Travers les Âges. It includes "the phantoms of the living", which is addressed at length in the second part of this treatise (from page 77).

also signify what Durville defined as *dédoublement* – one woman's body appearing to be split into different magnetized parts.⁸³

From Joseph Delboeuf's 1879 essay, *Sur le dédoublement du moi dans les rêves*, the concept of *dédoublement* had not just been explored through magnetism by Durville and de Rochas, but had been increasingly diagnosed in the neurological sciences, particularly the concept of dissociative disorder and split persona by Jean-Martin Charcot, Gilles de la Tourette, Charles Richet, and most notoriously by Pierre Janet. After hypnosis of his patient, Lucie, when Janet discovered her multiple persona, he called it "le dédoublement de la personnalité". St First using the term in 1886, Janet identified its manifestations, including those he called "l'automatisme psychologique", not just in hysterics but also in mediums and magnetized subjects. Conterminously *dédoublement* was being explored in dreams and in occultist magnetism, as demonstrated in the first part of this essay focusing upon the experiments conducted by Hector Durville. Just as Janet had observed how his patients suffering from traumatic hysteria would change their persona under hypnosis, so Durville had recorded how his magnetized subjects would begin to lose and then exteriorize their sensibility. Rather than take the form of another persona, Durville observed vaporous fluid light forms emanating around his magnetized subjects, as he explained:

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⁸³ Édouard Schuré, *Le Double*, Paris 1890. Each night, the phantom which looks identical to the main character, Marrias, haunts him until replaced by Madame Alford. While this prospect is mentioned in Dalia Judovitz, *Unpacking Duchamp. Art in Transit* (Berkeley 1995), the doubling of artistic identity following Duchamp's observation that artists seemed to come in pairs in the twentieth century, as exemplified by "Picabia-Duchamp", is explored in: Dalia Judovitz, "Une sorte de pédérastie artistique. Accouplement créatif chez Duchamp et Picabia", in: *Itinéraires. Littéraire, Texte, Cultures*, 1, 2012, 79–91.

⁸⁴ P. Janet, "Les Actes inconscients et le dédoublement de la personnalité pendant le somnambulisme provoqué", in: *Revue Philosophique*, 22, 1886, no. 3, 577–592.

⁸⁵ P. Janet, "Les Phases intermédiaires de l'hypnotisme", in: *Revue Scientifique (Revue Rose)*1, 1886, no. 23, 577–587; P. Janet, "L'anesthésie systématisée et la dissociation des phénomènes psychologiques", in: *Revue Philosophique*, 23, 1887, no. 1, 449–472.

⁸⁶ Joseph Delboeuf, "Sur le dédoublement du moi dans les rêves", in: *Revue Philosophique de la France et de l'Étranger*, 8, 1879 (July–December), 616–618.

Their sensibility which had disappeared at the beginning of somnambulism [...] radiates now around them, up to a distance that may reach a distance of 2 m. 50 and even 3 meters. At some moment [...] such *sensibility*, which all the subjects see in the form of vapour, a whitish fluid, gray or grayish, sometimes with light iridescent shades, is condensed and localized on each side of them, at a distance that may vary from 20 centimetres [...] to 80 centimetres.⁸⁷

Acknowledging that this exteriorization of sensibility and doubling were similar, Durville pointed out that the first was a state in which the sensibility was believed to radiate around the person, while the second was a state in which the sensibility became contained in the phantom, as realized by his photographs of Madame Lambert (see Figs. 1 and 2) as well as those of Léontine, Marthe and Nénette.⁸⁸

That very year Duchamp embarked upon two studies of the female nude in which their bodies are surrounded by a white aura appearing as, to use Durville's term, a "form of vapour, a whitish fluid" that seems to radiate from their bodies "at a distance of 2 m. 50 and even 3 meters". 89 This vaporous whitish floating substance, rather than fluid, re-emerges in the watercolour and oil painting that followed in January–October 1911, begun at Duchamp's family home in Rouen. In the watercolour entitled *Sonata* (see Fig. 6), the women playing this music have been identified as Duchamp's sisters watched by their mother. While Yvonne is pictured playing the piano, Magdeleine is playing the violin with Suzanne depicted reading in the foreground amidst a dominant vaporous white substance. This vaporous white substance reemerges in the oil painting, *Apropos of Little Sister* (see Fig. 7). Appearing to dominate and activate the space surrounding Duchamp's Cubistic portrait of his thirteen-year old sister, Magdeleine, the open facets of her X-ray stick-like body seem to flow into these pulsating white planes. As she becomes increasingly absorbed in reading by candlelight, they

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⁸⁷ Durville, *Le Fantôme des Vivants*, 178 (my translation).

⁸⁸ Durville, Le Fantôme des Vivants, 189.

⁸⁹ Arturo Schwarz, *The Complete Works of Marcel Duchamp*, New York 1997, vol. 1, no. 178 (*Nude Standing*) and no. 179 (*Standing Nude, Neuilly*).

in turn seem to reverberate with her S-shaped posture and ethereal vibrations as her "force vital", if not her "élan vital" in terms of Bergson's concept of the creative impulse. ⁹⁰

While the vaporous white substance in *Sonata* plays a different compositional role, it performs a comparable occult vitalist one. Since none of the sisters in this musical ensemble are depicted touching, the open faceting with which their bodies are rendered permits them to appear absorbed in and unified by the vaporous white substances emanating most intensely from the music being played. Like Lina's interaction with music while dancing the *Habanera* (see Fig. 3), the more the music may have reached a crescendo, the more intensely may these luminous auras seem to cluster around Yvonne at the piano and Magdeleine at the violin (see Figs. 5 and 7).

Not only do these vaporous white substances reappear in *Portrait (Dulcinea)* (see Fig. 8), they also seem to punctuate the body and the intervening spaces in Duchamp's rendering of this woman, fashionably attired, who he had apparently spied walking her dog in Neuilly. 91 Likening the rendering of *Dulcinea's* body to X-rays, Linda Dalrymple Henderson deduces that they progressively and ironically denude her as she moves through the painting. Simultaneously the Cubistic X-ray rendering of her body in angular but opened facets permits it to merge with the vaporous whitish substances until they seem to take over, as indicated by their dominance on the left-side of the composition. Like Mme Lambert's phantom (see Figs. 1 and 2), this white vapour seems to be trailing and accompanying *Dulcinea* until at the end of her walk, it seems to have moved one step ahead. While this repetition of the body moving through space appears consistent with chronophotography, particularly that of Jules-Étienne Marey and Albert Londe, it is also equivalent to *dédoublement*. One of the few to consider "the phantasm of doubling" in Duchamp's art, Thierry du Duve points to Duchamp's position as an "oculist witness" and performer, before *The Passage from the Virgin to the Bride*. 92

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⁹⁰ The entry for this painting on the Centre Pompidou website for their 2015 exhibition, *Marcel Duchamp, La Peinture, même*, refers to these white shapes as "des halos blancs et ocres [qui] évoquent un autre monde".

⁹¹ Cabanne, Dialogues with Marcel Duchamp, 33.

⁹² Thierry De Duve, *Pictorial Nominalism. On Marcel Duchamp's Passage from Painting to the Readymade*, Minneapolis and Oxford 2005, 39; see also 40. For another iteration of this quote, see: Thierry De Duve, "Resonances of Duchamp's Visit to Munich", in: Rudolf E.

Even in his shift to the mechanomorphic automaton, Duchamp did not necessarily abandon the phantasmatic double but seemed to intertwine the two to generate what may be called, following Herman Parret, "le fantasme de la grande machine de précision". 93 A term commonly used to promote new machines, by 1910 "la grande machine de haute précision et grande Vitesse" figured prominently in Longine's advertisements for its instruments to measure speed and time, its first electromechanical Chronométrage being used at the 1912 Fête Fédérale Gymnastique at Bâle. This term also figured prominently in promotions by Renault, particularly after its introduction of Frederick Winslow Taylor's system of scientific management to accelerate production of its fast moving, precision-made cars – not necessarily to the satisfaction of its workers at its Paris Factory at Billaincourt who, in November 1912, went on strike with the support of many, including Duchamp's brothers.⁹⁴ This dissension may well have dovetailed with antipathy to the ergonometry of Jules Amar through which, as I have argued elsewhere, the worker was perceived as being meticulously moulded into an anonymous, identity-less, subordinated pinion of a machine – nothing more than, in Amar's words, le moteur humain. 95 Corporeality denied, this "human motor" became, according to Anson Rabinbach, "an exemplar of that universal process by which

Kuenzli and Francis M. Naumann (eds.), Marcel Duchamp. Artist of the Century, Cambridge and London 1991, 41–63, here 58.

⁹³ Herman Parret, "Préface", in: Jean-François Lyotard, Les Transformateurs Duchamp / Duchamps TRANS/formers, Leuven 2010, 11; see also: Herman Parret, "Le Corps selon Duchamp", Protée, 28, 2000, no. 3, 88-100, here 90.

⁹⁴ See: Archives Nationales, F7 1 3931. After the first strike was quelled on 4 December, 1912, the next strike broke out on 12 February 1913. Lionised by C.G.T. spokespersons and lobbyists, the strikers were heroized by the Socialist press and Anarcho-Syndicalist journals imaging how Taylorism would place the worker in the palm of the capitalist's hand. They were championed by the Puteaux Modernists, including Duchamp and his brothers, Jacques Villon and Raymond Duchamp-Villon. See: Fae Brauer, "Representing 'Le Moteur Humain': Chronometry, Chronophotography, 'The Art of Work' and the 'Taylored Body'", in Visual Resources. An International Journal of Documentation, 19, 2003, no. 2 (June), 83–106. 95 Jules Amar, Le Rendement de la machine humaine. Recherches sur le travail, Paris, 1910; Le Moteur Humain et les Bases Scientifiques du Travail Professionel, Paris 1914; see also: Fae Brauer, "The Sado-Masochism of Invention. Marcel Duchamp's Ironic Inversions of Jules Amar's Human Motor", in: Janus Magazine, 2008, no. 14 (Fall-Winter); no pagination.

energy was converted into mechanical work, a variant of the great engines and dynamos spawned by the industrial age."⁹⁶

Seeming to travesty Taylorism, ergonometry, precisionism and accelerationism, Duchamp's incongruous fusion of the mechanomorphic with the phantasmatic seems comparable to Gilbert Ryle's hauntological concept of "the ghost in the machine" and what Herman Parret calls Duchamp's engagement, from 1912, with "le fantasme de la 'grande machine'". Proposition in Initially demonstrated by Duchamp's white phantasmatic double derived from a white chess piece, possibly the Knight, this "ghost" seems to hover amidst the browns, yellows and ochres in *Sad Young Man* (see Fig. 9). Appearing in a "state of anaesthesia" and possibly painted in one by Duchamp, according to Steefel, the "ominous" tone that he discerns in this painting appears to be reinforced by the phantoms he glimpses behind the young man, "about to strike a blow at his head". 98

The white phantasmatic double in Duchamp's *Nu descendant un escalier (No. 1)* seems to seep out from the jumble of fragments in desaturated coloured facets of browns, blacks and greens. Stripped not just of clothing but flesh and blood, without any distinctly humanoid signifiers or corporeal identity, let alone any erotogenic signs of a naked body, Duchamp confounds the descender's identity as a human nude. More like a mechanical, metallic automaton haunting the worker's body, it appears "locked into a corset of a suit of armour", according to Octavia Paz, which "is inviolable". ⁹⁹ Once the distinct directional lines and transparent X-ray planes in *Nu descendant un escalier (No. 2)* (see Fig. 10) seem to concert into a chronophotographic articulation of swift movement, this pulsating, phantasmatic, mechanomorphic carcass seems to plummet down the stairs. "Descending out of a multiple reverberation of swinging phantom states", Steefel perceptively concludes, "the nude careens and coalesces in a complex, jostling sweep toward an unknown step we cannot

⁹⁶Anson Rabinbach, *The Human Motor. Energy, Fatigue, and the Origins of Modernity*, Berkeley 1992, 4.

⁹⁷ Gilbert Ryle, *The Concept of Mind*, London 1949; Herman Parret, "Le Corps selon Duchamp", *Mélancolie entre les arts*, vol. 28, no. 3, 2000, 88–100, here 90; see also: *Exposition Marcel Duchamp à Beaubourg: La Peinture, même*, 30 September 2014; http://www.centrepompidou.fr/cpv/ressource.action?param.id=FR R-ec3e28755f5.

⁹⁸ Steefel, "Marcel Duchamp and the Machine", 72.

⁹⁹ Octavia Paz, quoted in: Cook, "The 'Meta-Irony' of Marcel Duchamp", 263.

see". 100 In Duchamp's final rendering of this painting from its black-and-white photograph in 1916, commissioned by the Arensbergs, the blanching of every fragment of this "nu" and the ways in which its open facets seem to skim through space at great speed, just like the phantoms that Durville observed gliding through walls and doors at one kilometre every fifteen seconds, makes it appear like the phantasmatic automaton of "la grande machine de précision". This was the very term used by the French armament industry during the First World War to describe the machines best able to produce "artillerie lourde à grande puissance" and "au grande Vitesse", epitomized by Amar's ergonometric inventions, particularly his econometric shovel designed to accelerate the digging of trenches. 101 This blanching is also demonstrated by *The Bride* in Duchamp's *Large Glass*, hovering like a phantom above the bachelors and who, as David Hopkins points out, seems to have been conceived as undergoing "three definite psychic or psychosexual states". 102 The ubiquity of the phantom amidst this increasingly mechanized economic sphere is even demonstrated by the large white form hovering by the "mechanized" woman photographed sitting at her Underwood typewriter in the 1910 advertisement – one of the promotions regarded as a reference for Duchamp's Readymade, *Underwood*. 103 Hence no matter how automatist the human body becomes in Duchamp's mechanomorphic configurations, it always appears to be shadowed, if not overshadowed, by its phantasmatic double. 104

While the X-ray transparency of planes seems to be continued in Duchamp's "swift nudes", as Duchamp denudes matter, despite his deceptive title, all signifiers of a human body seem to dissolve into speeding electrons beyond human perception. Rather than descending, they represent a different kind of speed and movement that Duchamp called "a flowing [of energy] around and between the central figures", which are the king and queen of

¹⁰⁰ Steefel, "Marcel Duchamp and the Machine", 72.

¹⁰¹ Jean-Claude Laparra, La Machine à vaincre, de l'espoir à la désillusion. Histoire de l'armée allemande, 1914-1918, Saint-Cloud 2006.

¹⁰² David Hopkins, Marcel Duchamp and Max Ernst. The Bride Shared, Oxford, 1998, 42.

¹⁰³ Marcel Duchamp. L'Art à l'ère de la reproduction mécanisée, Paris 1999/2004; illustration 54, 55: "Machine à écrire Underwood"; Catalogue, Underwood Victories, 1910, page 15; Santa Barbara, University of California, University Library, Romaine Trade Catalogue, Special Collections.

¹⁰⁴ For a comparable argument, see: Herman Parret, "Le Corps selon Duchamp", 90.

electrons, "large atoms wearing a cloak of positive electricity". ¹⁰⁵ Appearing as light and transparent as Durville's phantoms, the so-called "swift nudes" or electrons seemingly glide across the space – to use Durville's term for the movement of the phantasmatic double – leaving vapour "trails", as Duchamp points out, which "crisscross the painting". ¹⁰⁶ As he explained to Arturo Schwarz: "I expected to render the idea of a strong king, or a male king and a feminine queen, a female queen. And the nudes were not anatomical nudes, rather things floating around the King and Queen without being hampered by their materiality". ¹⁰⁷ Aspiring to go beyond the invisible realm of X-rays and N-rays, Duchamp's "Swift Nudes" series then evoke the ultimate decomposition of form — what Le Bon called, in his 1905 book *L'Évolution de la matière*, "the dematerialization of matter". ¹⁰⁸ Amongst the 62 illustrations of dematerialization in Le Bon's book was a photograph of effluvia proving the dematerialisation of matter during their 'passage' across a material object, together with two photographs capturing the transparency of bodies amidst spectres. ¹⁰⁹ This dematerialization entailed cathode rays with radioactive beta emissions and electrons whizzing at enormous velocities – over 10,000 kilometers per second. ¹¹⁰ As Duchamp's

¹⁰⁵ "The title King and Queen was once again taken from chess but the players of 1911 (my two brothers) have been eliminated and replaced by the chess figures of the king and queen." Cabanne, *Dialogues with Marcel Duchamp*, 33.

¹⁰⁶ "Obviously the difference was the introduction of the strong nude and the swift nude", he explained. "There was the strong nude who was the king; as for the swift nudes, they were the trails which crisscross the painting, which have no anatomical detail, no more than before". Cabanne, *Dialogues with Marcel Duchamp*, 35.

¹⁰⁷ Schwarz, The Complete Works of Marcel Duchamp, 116.

¹⁰⁸ Le Bon, L'Évolution de la Matière, 5–31.

¹⁰⁹ Le Bon, *L'Évolution de la Matière*, Fig. 26: *Photographie des effluves provenant de la dématerialisation de la matière pendant leur passage à travers un obstacle matérial : lamme de verre ou d'ébonite*. Also refer Figs. 41 and 42 : *Détermination au moyen de la photographie de la transparence des corps pour les diverses régions du spectre*.

110 This dominated popular discussions of cathode rays from 1896 onwards. Thomson's experiments determined that the speed of the electron was over 10,000 kilometers per second and it was subsequently determined that radioactive beta emissions travelled even faster, figures as high as 100,000 miles (160,000 kilometers) per second and more were regularly cited as electron velocities.

contemporary, the scientist, Georges Matisse observed: "matter dematerializes little by little; it disincarnates itself, as a spiritist would say. An atom becomes an ion, an ion becomes an electron, then an X-ray, and, finally, electromagnetic energy." Matisse's reference to Spiritism and magnetism was apt, particularly as the flamelike stream of electrons with a hint of spiralling circles suggests a reciprocal relationship between them and electromagnetic currents in a magnetic force field, particularly the earth's magnetic force field. It also evokes the flamelike energy and rays that Durville described as emanating from "magnetic man", as well as the transparency and interpenetration of phantasmatic doubles in attaining "la force vitale" and achieving Bergson's concept of "l'élan vital". In this case, the bodies represented by both Durville and Duchamp never appear autonomous but perpetually haunted.

Hauntological *Metarealism* and Spectres of Immortality: Phantasmatic Doubles and "Ghosts in the Machine"

In his essay, *Spectres of Marx*, Jacques Derrida refers to influences and forces that operate remotely and partially, without being genuinely present in a work, but not entirely absent. Neither substance nor essence, these spectres that haunt like ghosts signify the loss of a secure, stable and unified human identity within a controllable environment. As Derrida points out, "a spectre does not only cause séance tables to turn, but sets heads spinning". In the series of comparisons in this essay, the uncanny ways in which Durville and Duchamp set heads spinning is illuminated from the irradiating and vibrating aura in Duchamp's portrait of Dumouchel to the phantasmatic luminosity of the etheric envelope captured by Durville and de Rochas, comparable to the N-Rays captured by Blondel and described by Durville. While the figure of Demeter may appear to be in the process of magnetizing Persephone in Duchamp's *Le Buisson*, these two figures appear to be enveloped within an azure aura comparable to those described by Durville, de Rochas and Besant, pertaining to the etheric and astral spheres. While white vaporous substances appear in *Apropos of Little Sister* and seem to be enveloping Duchamp's two sisters as they play the piano and the violin in *Sonata*,

¹¹¹ Georges Matisse, "La Théorie moléculaire et la science contemporaine", in: *Mercure de France*, 1 June 1913, 520–5.

¹¹² Jacques Derrida, *Specters of Marx. The State of the Debt, the Work of Mourning and the New International*, trans. Peggy Kamuf, New York and London 1994, 38.

¹¹³ Derrida, Specters of Marx, 127.

intensifying around their musical instruments, they are also captured in Durville's photographs of Madame Lambert's phantasmatic double and de Rochas' photographs of the psychic effluvia unleashed during the climax of Lina's dance. Just as the phantasmatic double seems to pursue Madame Lambert, so it appears to follow and accompany Duchamp's *Dulcinea*, until it seems to pass her. While the phantasmatic double seems to fuse with the mechanomorphic automatons in Duchamp's series of *Nudes Descending a Staircase*, it seems to skim through space in Duchamp's *Swift Nudes* as swiftly as Durville's phantasms seem to glide through walls and doors. Hence in all these photographs and artworks, the phantasmatic double remains omnipresent, equivalent to a hauntological *metarealism*. Yet for all the analogies that may be drawn between the phantasmatic bodies of Durville and Duchamp and their endeavours to visualize the invisible forces of occultist vitalism, especially "la force vitale" and its relationship to "l'élan vital", there were fundamental differences in their hauntologies.

So popular did Durville's book and his title become that *le fantôme des vivants* was coined by psychical researchers to describe the phenomenon of the haunting of the present in the face of a Godless world constantly being affirmed by Neo-Lamarckian evolutionary scientists and ergonomists like Amar in France. If this hauntological *metarealism* may be regarded as arising from the trauma of loss, then for Durville and many other Scientistic Magnetists, it may be specifically diagnosed in relation to the increasing laicization of the Third Republic launched by Léon Gambetta from 1881 culminating in the traumatic Separation of Church and State in 1905 in the Radical Republic, the loss of God and particularly, the loss of the concept of the soul and immortality. As Durville openly acknowledged, his photographically documented experiments with magnetic energies and phantoms of living bodies had been designed to prove that "la force vitale" existed, independent of matter, and that it revealed the anatomy and physiology of the soul. As Durville stated in capital letters at the end of his treatise:

"Le dédoublement du corps humain est un fait certain qui se démontre par expérimentation direct. Cette dualité prouve en même temps que la Force est

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¹¹⁴ In *Manifestations du Fantôme des Vivants: Pour dédoubler le corps humain* (Paris: Bibliothèque Eudiaque, 1910) 10, Hector Durville acknowledges the precedent set for this title by Frederic William Henry Myers and Frank Podmore's *Phantoms of the Living* (London: Society for Psychical Research, 1886), but laments what he calls its French mistranslation by Mariller as *Les Hallucinations télépathiques*.

indépendante de la Matière et que notre individualité se compose d'un Corps brut et d'une Âme intelligente". ¹¹⁵

To reinforce the empirical nature of his evidence and its function as scientific proof, Durville subsequently declared "the dedoubling of the human body is a rigorous scientific fact ... especially since publication of [...] my Living Phantoms with its photographs showing the universality of this phenomenon and its realization through magnetism". 116 Durville had then dramatically concluded that ultimately his photography of magnetic energies had scientifically proven with empirical evidence that "la force vitale" was not only independent of matter, with equivalent attributes to the theological concept of the soul. 117 He also reasoned that "while the phantom functioned freely outside the body, the Soul which directs it ... must continue after death" in which case, "immortality is a fact which may be demonstrated scientifically". 118 As Alex Owen succinctly surmizes, "some psychical researchers undoubtedly were seeking proof of the immortality of the soul, and possibly all were searching for either consolation or meaning in an otherwise bleakly materialistic world". 119 This search for an independent spirit and the ubiquity of "la force vitale" may then be also viewed as a quest for freedom from the bounded trap of technologized capitalism, commodity consumerism, ergonometry, and the increasing mechanization of the human body turning it, following Amar's ergonometry, into nothing more than a "human motor".

While Duchamp conceived of art as a means of exploring hauntological *metarealism*, "non-retinal" reality and paranormal phenomena in conjunction with "la force vitale" – not without meta-irony – he also conceived of the artist as "a mediumistic being". Yet

¹¹⁵ Durville, Le Fantôme des Vivants, 354.

¹¹⁶ Durville, quoted in: Lefranc, "Les États du Sommeil Magnétique", 7.

¹¹⁷ The tests reported by Durville represent an historically important attempt to empirically document the topic through the induction of experiences. While his book, *Le Fantôme des Vivants*, was repeatedly cited by later writers on the topic, some aspects of his research were replicated and extended, but the reports have fewer methodological details than those of Durville; see for example: Lefranc, "Les États du sommeil magnétique".

¹¹⁸ Durville, Le Fantôme des Vivants, 354: Puisque le fantôme fonctionne librement en dehors du corps, l'Âme qui le dirige peut et doit subsister après la mort. Si'il en est ainsi, L'IMMORTALITÉ est un fait qui peut être démontré scientifiquement.

¹¹⁹ Alex Owen, *The Place of Enchantment. British Occultism and the Culture of the Modern*, Chicago 2015, 26–27.

anticlerical and atheistic Duchamp was not at all concerned with what he called "all this twaddle" about "the existence of God" and the soul. 120 As his Nude Descending a Staircase and his ready-mades reveal, Duchamp also did not shy away from exposing temporality as materialistic and mechanistic with irony, if not meta-irony – a characteristic conspicuous by its absence in the work of Durville. In his exposure of the ways in which a human body can function as if it were a machine, as Steefel points out, Duchamp also signalled how it can operate without a soul. 121 Hence even though Duchamp, like Durville, explored how the diverse dimensions of light waves, magnetic and electromagnetic waves, radium, X-rays and N-rays interpenetrated one another in the vitalist force field to generate an extraordinarily powerful fusion of energies, his phantasmatic doubles signified neither the hauntology of the soul nor immortality. Instead they seemed to signal the possibility of Bergson's concept of "l'élan vital" in relation to the evolutionary concept of spontaneous morphogenesis as a creative impulse within what Bergson called a "métapsychique" reality, analogous to Duchamp's concept of *metareality*, without the intervention of God. 122 As Bergson explained to the British Society for Psychical Research in his 1913 presidential speech, "Phantasms of the Living" and "Psychical Research": "There is, present and invisible a certain metaphysic unconscious of itself - unconscious and therefore inconsistent, unconscious and therefore incapable of continually remodelling itself on observation and experience as every philosophy worthy of the name must do". 123 To emphasis the resonance and sustenance of "l'élan vital" within this "métapsychique" reality, Bergson succinctly concluded, "it's

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¹²⁰ Clair, *Sur Duchamp et la fin de l'art*, p. 33. Nevertheless Clair points out that "to consider Duchamp as opposed to the supernatural, is to forget that Duchamp had not ceased to interest himself, between the ages of ten and twenty, and perhaps beyond, in paranormal phenomena. Even after the war, he would speak, of art as a means of accessing "non-retinal" reality and of the artist as a "medium".

¹²¹ Steefel Jr., "Marcel Duchamp and the Machine", 74 and 79, note 32, citing Bruno Bettelheim, "Joey: A Mechanical Boy", *Scientific American*, Vol. 200, No. 3, March 1959, 117.

¹²² Sarah Kolb, "There is no progress, change is all we know.' Notes on Duchamp's Concept of Plastic Duration", in: *The Nordic Journal of Aesthetics*, 28, 2019, no. 57–58, 87–108.

<sup>Henri Bergson, "Phantasms of the Living" and "Psychical Research": Presidential
Address to the Society for Psychical Research, London, 23 May 1913,</sup> *Mind-Energy*, trans.
H. Wildon Carr, ed. Keith Ansell Pearson and Michael Kolkman (Basingstoke, 2007), 77.

organisms that die, not life,"¹²⁴ a dictum subsequently explored in Paris at the Institut Métapsychique International from its inception in 1919 by Bergson and his close friend, the Noble Prize-winning physiologist, Charles Richet.¹²⁵ Hence at a time of Taylorism, ergonometry and precisionism, Duchamp's phantasmatic doubles may have also signalled, with his "tongue in his cheek", the uncanny disruption to modern materialism and technological order that could be unleashed by chance spectres in hauntological *metareality*, particularly "ghosts in the machine", if not "le fantasme de la 'grande machine'".

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¹²⁴ J. Saussman, ""It's organisms that die, not life"; Henri Bergson, Psychical Research and the Contemporary uses of Vitalism": Chapter 1 in *The Machine and the Ghost: Technology and spiritualism in nineteenth- to twenty-first-century art and culture*, S. Mays and N. Matheson (eds) (Manchester: 2013): 16-36.

¹²⁵ Jesse Hong Xiang, *The Outline of Parapsychology* (London: 2009) 42.