PHOTOGRAPHING THE "PHANTOMS OF THE LIVING": THE FOTODINAMISMO FUTURISTA OF ANTON GIULIO AND ARTURO BRAGAGLIA, 1911-1913

by

RACHEL ANNE BARTH

A THESIS

Presented to the Department of the History of Art and Architecture and the Graduate School of the University of Oregon in partial fulfillment of the requirements for the degree of Master of Arts

December 2013

THESIS APPROVAL PAGE

Student: Rachel Anne Barth

Title: Photographing the "Phantoms of the Living": The *Fotodinamismo Futurista* of Anton Giulio and Arturo Bragaglia, 1911-1913

This thesis has been accepted and approved in partial fulfillment of the requirements for the Master of Arts degree in the Department of the History of Art and Architecture by:

Joyce Suechun Cheng Chairperson William Sherwin Simmons Member Kathleen Nicholson Member

and

Kimberly Andrews Espy Vice President for Research and Innovation;

Dean of the Graduate School

Original approval signatures are on file with the University of Oregon Graduate School.

Degree awarded December 2013

© 2013 Rachel Anne Barth

THESIS ABSTRACT

Rachel Anne Barth

Master of Arts

Department of the History of Art and Architecture

December 2013

Title: Photographing the "Phantoms of the Living": The *Fotodinamismo Futurista* of Anton Giulio and Arturo Bragaglia, 1911-1913

Between 1911 and 1913, two Italian brothers named Anton Giulio Bragaglia and Arturo Bragaglia produced Futurist photography which they termed "photodynamism". These images, together with the theoretical manifesto *Fotodinamismo futurista*, represent a remarkable effort in avant-garde photography and theory in the early 20th century. The Bragaglias' intent in making these photographs was to produce deeply emotional images of modern dynamic motion which convey the spiritual essence of human beings that becomes exteriorized in the process of physical movement.

Through a short, intense campaign in 1913, Umberto Boccioni succeeded in expelling the Bragaglias from the Futurist movement. Because of this, the importance of their photography has often been neglected, underrepresented or misrepresented in scholarship. This thesis offers an alternative reading of the photodynamic project based on its occult foundation and a better sense of how to understand photodynamism within the context of the movement and the broader history of photography.

CURRICULUM VITAE

NAME OF AUTHOR: Rachel Anne Barth

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene University of California, Irvine St. Mary's College of California, Moraga

DEGREES AWARDED:

Master of Arts, Art History, 2013, University of Oregon Bachelor of Arts, Art History, 2008, University of California, Irvine

AREAS OF SPECIAL INTEREST:

Modern Art History of Photography Italian Futurist Photography

PROFESSIONAL EXPERIENCE:

Graduate Teaching Fellow, University of Oregon, Department of the History of Art and Architecture, 2012-2013

Cataloger, Visual Resources Collection, University of Oregon, 2011-2013

Consignment Director, I. M. Chait Gallery and Auctioneers, 2010-2012

GRANTS, AWARDS, AND HONORS:

AAA Dean's Graduate Fellowship, University of Oregon, 2013

Raymond Bates Research Travel Scholarship, University of Oregon, 2012

Graduate Teaching Fellowship, University of Oregon, 2012-2013

Marian C. Donnelly Graduate Book Award in Art History for Outstanding Student Essay, University of Oregon, Eugene, 2013

Presenter, "Fotodinamismo Futurista and the Occult," American Association of Italian Studies Conference, 2013

ACKNOWLEDGMENTS

I wish to first express sincere gratitude to my advisor, Professor Joyce Cheng, for her invaluable guidance and strong support from the beginning of my time as a graduate student. I also am very grateful to Professors Sherwin Simmons and Kate Nicholson for acting as members of my committee and freely providing their wisdom, knowledge and encouragement. Special thanks go to the wonderful faculty of the Department of the History of Art and Architecture for supporting my work and encouraging me, and to my graduate cohort, both current students and alumni, for being so steadfast in their friendship. Finally, to my family- I am inexpressibly grateful for your support.

I sincerely thank the Dean Frances Bronet of the School of Architecture and the Allied Arts, the Department of the History of Art and Architecture, and the family of Mr. Raymond Bates for awarding me generous scholarships to travel to Italy and complete my research. I am very grateful to the museum staffs and archivists who assisted me in that research, including Maria Possenti and Francesca Bongioanni of the Fratelli Alinari Archives in Florence, Federico Zanoner of the Museo d'Arte Moderna e Contemporanea di Trento e Rovereto, and the staff of the Getty Photographs Department and Research Institute. Jamie Richards of the University of Oregon's Department of Comparative Literature provided invaluable translation help. Lastly, I want to acknowledge Giovanni Lista as the preeminent scholar in the field of Futurist photography; I could not have done this research without the benefit of his.

To my Uncle Rob- thank you for always encouraging, guiding me, teaching me about *iconos* early on and (unwittingly?) preparing me to be a fellow art historian. To my Momthank you for believing in me and being an incredible example of faith and strength.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
II. SHORT-LIVED ACCEPTANCE: PHOTODYNAMISM AND BOCCIONI	10
III. MISREPRESENTED RELATIONSHIPS: PHOTODYNAMISM, SCIENTIFIC MOTION PHOTOGRAPHY AND BALLA	41
IV. ESOTERIC FOUNDATIONS: PHOTODYNAMISM, OCCULT PHOTOGRAPHY AND RUSSOLO	53
V. A LASTING INFLUENCE: PHOTODYNAMISM AND PERFORMANCE	75
APPENDIX: FIGURES	87
REFERENCES CITED	148

LIST OF FIGURES

Fig	gure	Page
1.	Anton Giulio & Arturo Bragaglia, <i>Il pittore futurista Giacomo Balla</i> [The	
	Futurist Painter Giacomo Balla], gelatin silver print, 1912	87
2.	Giacomo Balla, <i>Dynamism of a Dog on a Leash</i> , oil on canvas, 1912	88
3.	Anton Giulio & Arturo Bragaglia, Dattilografa [Typist], gelatin silver print,	
	1911	89
4.	Anton Giulio & Arturo Bragaglia, Ritratto polifisionomico di Boccioni	
	[Polyphysiognomic Portrait of Boccioni], gelatin silver print, 1913	90
5.	Anton Giulio & Arturo Bragaglia, <i>Un gesto del capo</i> [A Gesture of the Head],	
	gelatin silver print, 1911	91
6.	Anton Giulio & Arturo Bragaglia, L'inchino [The Bow], gelatin silver print,	
	1911	. 92
7.	Anton Giulio & Arturo Bragaglia, Cambiando Positura [Changing Position],	
	gelatin silver print, 1911	93
8.	Étienne-Jules Marey, Chronophotographic Study of Man Pole Vaulting,	
	photograph, 1890-1891	94
9.	Giacomo Balla, Girl Running on a Balcony, oil on canvas, 1912	95
10	. Luigi Russolo, <i>The Solidity of Fog</i> , oil on canvas, 1912	96
11.	. Umberto Boccioni, <i>The Street Enters the House</i> , oil on canvas, 1911	97
12	. Umberto Boccioni, <i>Simultaneous Visions</i> , oil on canvas, 1911	98
13	. Carlo Carrà, <i>The Red Horseman</i> , oil on canvas, 1913	99
14.	. Umberto Boccioni, <i>Dynamism of a Soccer Player</i> , oil on canvas, 1911	100

Figure	Page
15. Umberto Boccioni, <i>The Charge of the Lancers</i> , collage and tempera on	
cardboard, 1915	101
16. Anonymous, Boccioni in his studio, in front of the sculpture	
'Head+House+Light', gelatin silver print, 1913	102
17. Mario Nunes Vais, The Futurist group: Palazzeschi, Papini, Marinetti, Carrà,	
Boccioni, gelatin silver print from original glass plate, 1913	. 103
18. Umberto Boccioni, <i>Io-noi</i> [I-We], gelatin silver print, 1905-1907	. 104
19. Umberto Boccioni, <i>Matter</i> , oil on canvas, 1912	105
20. Umberto Boccioni, <i>Dynamism of a Woman's Head</i> , pencil, tempera, pen,	
and collage on canvas, 1914	. 106
21. Eadweard Muybridge, <i>Head-spring, a flying pigeon interfering</i> , Plate 365	
from photographic series Animal Locomotion, collotype, 1887	. 107
22. Étienne-Jules Marey, <i>Gymnast jumping over a chair</i> , photograph, 1883	. 108
23. Anton Giulio & Arturo Bragaglia, Le due note maestre [The Two Master	
Notes], gelatin silver print, 1911	109
24. Giacomo Balla, Rhythm of the Violinist, oil on canvas, 1912	110
25. Giacomo Balla, Sketch of Girl Running on a Balcony, pencil and ink on	
paper, 1912	. 111
26. Giacomo Balla, Sketch of Girl Running on a Balcony, pencil, pen and red ink	
on paper, 1912	112
27. Giacomo Balla, Sketch of Girl Running on a Balcony, pencil on paper,	
1912	. 113

Fig	ure	Page
28.	Giacomo Balla, Sketch for Iridescent Interpenetrations with Girl Running,	
	pencil, ink and watercolor, 1912	114
29.	C. Pagès, <i>Movement</i> , Diagram of the right legs of a horse at a walking pace,	
	1886	115
30.	Giacomo Balla, Iridescent Interpenetrations No. 7, oil on canvas, with the	
	artist's original frame, 1912	116
31.	Giacomo Balla, Iridescent Interpenetrations (from the Düsseldorf notebooks),	
	pencil and watercolor on paper, 1912	117
32.	Giacomo Balla, Study for Iridescent Interpenetration, pencil and watercolor	
	on paper, 1912	118
33.	Giacomo Balla, Study for Iridescent Interpenetrations No. 2, pencil and	
	watercolor on paper, 1912	119
34.	Louis Darget, Fluidic photograph of thought, "Anger" (23 June 1896),	
	gelatin silver print, 1896	120
35.	William H. Mumler, Master Herrod and his double, albumen silver print,	
	c. 1870	121
36.	Édouard Isidore Buguet, Spirit Photograph Portrait of Camille Flammarion,	
	photograph, 1874	122
37.	Hippolyte Baraduc, Photograph of the fluidic nimbus of a medium's thumb,	
	gelatin silver print, 1893	123

38.	Anton Giulio Bragaglia, In mezzo il trasparente corpo astrale di un soggetto	
	sdoppiato, si va condensando poco a poco presso il proprio doppio in trance	
	(Trucco di fot. Spiritica) [In the middle a transparent astral body of a doubled	
	subject, that is condensing little by little near its own double in trance	
	(Trick Spiritualist photograph)], gelatin silver print, 1913	124
39.	Anton Giulio Bragaglia, Le mani del fantasma penzolano presso il soggetto	
	(Trucco di fot. Spiritica) [The hands of a phantom dangling near the subject	
	(Trick Spiritualist photograph)], gelatin silver print, 1913	125
40.	Anton Giulio & Arturo Bragaglia, <i>L'uomo che si leva</i> [The Man who Rises],	
	gelatin silver print, 1912	126
41.	Adrien Majewski, Hand of Miss Majewski (digital effluvia), gelatin silver print,	
	ca. 1898	127
42.	Hermann Schnauss, <i>Electrograph of a hand</i> , albumen print, 1900	128
43.	Luigi Russolo, <i>Ballerina + Dynamism</i> , mixed media on cardboard,	
	1918	129
44.	Luigi Russolo, Verso of Ballerina + Dynamism, mixed media on cardboard,	
	1918	130
45.	Anton Giulio & Arturo Bragaglia, <i>Il fumatore</i> [The Smoker], gelatin silver print,	
	1911	131
46.	Luigi Russolo, <i>Plastic Synthesis of a Woman's Movements,</i> oil on canvas,	
	1912	132
47.	Luigi Russolo, <i>The Music</i> , oil on canvas, 1911-1912	133

Fig	ure	Page
48.	Luigi Russolo, Self-Portrait (with etheric double), oil on canvas,	
	ca. 1910	134
49.	Anton Giulio & Arturo Bragaglia, Mano in moto [Hand in Motion],	
	gelatin silver print, 1911	135
50.	Marey, Movements of a hand, gravure made from one of Marey's first films,	
	1888	136
51.	Eadweard Muybridge, Movement of the hand, beating time, Plate 535 from	
	the series <i>Animal Locomotion</i> , collotype, 1887	137
52.	Anton Giulio Bragaglia, Thaïs: Thaïs Galitzsky su sfondi decorati da Enrico	
	Prampolini [Thaïs Galitzsky, backgrounds decorated by Enrico Prampolini],	
	film still, 1917	138
53.	Anton Giulio Bragaglia, Thaïs: Scena finale del suicidio [Final Suicide	
	Scene], film still, 1917	139
54.	Anton Giulio Bragaglia, Thaïs: Scena finale del suicidio [Final Suicide	
	Scene], film still, 1917	140
55.	Arturo Bragaglia, <i>Dancer</i> , gelatin silver print, c. 1920	141
56.	Harry C. Ellis, <i>Loïe Fuller dans son atelier de Passy</i> [Loïe Fuller in her studio	
	in Passy], photograph, ca. 1910	142
57.	Unknown, Loïe Fuller lors d'une répétition [Loïe Fuller during a repetition],	
	photograph, 1898	143
58.	Arturo Bragaglia, Ritratto fotodinamico di una donna [Photodynamic Portrait	
	of a Woman], gelatin silver print, ca. 1924	144

Figure	Page
59. Arturo Bragaglia, <i>Ritratto polifisionomico</i> [Polyphysiognomic Portrait],	
gelatin silver print, 1930	. 145
60. Wanda Wulz, <i>Gymnastic exercise</i> , reproduction on glossy paper, 1932	146
61. Alvin Langdon Coburn, Ezra Pound, photograph, 1917	. 147

CHAPTER I

INTRODUCTION

In its July 1913 issue, the Florentine newspaper *Lacerba* ran a small advertisement placed inconspicuously on the bottom right corner of the penultimate page which read: "IT CAME OUT YESTERDAY: *Futurist Photodynamism* by Anton Giulio Bragaglia with 16 magnificent plates without the text. Price for the great luxury edition 10 *soldi*". This advertisement officially announced the arrival of "photodynamism" and its creators, the brothers Anton Giulio Bragaglia and Arturo Bragaglia, onto the avant-garde scene. The Bragaglias had begun their photographic experimentation two years earlier in the spring of 1911, and had debuted their work in a 1912 exhibition at the Sala Pichetti in Rome, which was financed by the Futurist leader Filippo Tomasso Marinetti. The Bragaglias' appropriation of the word "dynamism," the term most emblematic of the Futurist enterprise, clearly expressed their artistic intentions and affiliation with the group from the start. The Futurists believed that dynamism was synonymous with the true rhythm of modern life, which they sought to evoke in their

¹ Giovanni Papini and Ardegno Soffici, ed, *Lacerba*, Anno 1, n. 13 (1 July 1913), 147. Translation by the author. Original text: "È USCITO IERI: Fotodinamismo Futurista di Anton Giulio Bragaglia con 16 magnifiche *tavole* fuori testo. Prezzo di propaganda, della grande edizione di lusso 10 soldi." *Lacerba* was published between 1913 and 1915 by Ardegno Soffici and Giovanni Papini, two Italian writers, artists, and anarchical thinkers. It was utilized chiefly as a platform to encourage Italian intervention into the war, but also was used to disseminate avant-garde ideas through the publication of manifestos, litigious articles, and the advertisement of related public events. During 1913-1914, *Lacerba* was closely aligned with the Futurist movement, and the group partially co-opted the paper as a polemical battle ground in which to carry out their correspondence publicly.

² Due to the close nature of the Bragaglias' partnership during these years, it is necessary firstly to clarify the manner in which they will be discussed throughout this thesis. I will refer to the older brother Anton Giulio as "Bragaglia"; when I refer to his younger brother Arturo, I will call him "the younger Bragaglia". Alternately, I will refer to them collectively as "the Bragaglia brothers" or "the brothers". Bragaglia was the theorist of photodynamism, which is why I will refer to him individually when I discuss the photodynamic theory, and I will refer to the Bragaglias collectively when I discuss their photodynamic images because they produced the majority of them together.

writing and artworks. As Joshua Taylor has written, "'Dynamism' was a magical word for the Futurists. It signified the difference between life and death, between participating in an evolving, expanding universe and withdrawal into an eddy of personal isolation […] Dynamism was at [Futurism's] heart".³

By October 1913, only four months after their July advertisement was published, the Bragaglias' work had been rejected by the Futurist circle as the result of a swift and vehement campaign led by the painter and sculptor Umberto Boccioni. Boccioni cemented their rejection by publishing this emphatic statement of condemnation in the October 1913 issue of *Lacerba*:

Warning. Given the general ignorance in matters of art, we Futurist painters declare that everything referred to as "photodynamic" has to do exclusively with innovations in the field of photography. Such purely photographic researches have nothing to do with the PLASTIC DYNAMISM invented by us, nor with any form of dynamic research in the fields of painting, sculpture or architecture.⁴

With this cautionary notification to European artists, Boccioni disavowed any connection between the Bragaglias and the rest of the Futurist artists, although the brothers did have friends and supporters within the movement, namely Giacomo Balla and Luigi Russolo. Boccioni denigrated photography, proclaiming that the medium could never possibly express "plastic dynamism," which was his theory concerning the artistic synthesis of the "absolute and relative motion" of an object, 5 even though the aesthetic achieved in photodynamism accorded exactly with one of the nine central goals

³ Joshua C. Taylor, *Futurism* (New York: The Museum of Modern Art, 1961), 11.

⁴ Umberto Boccioni, trans. Caroline Tisdall & Angelo Bozzolla, in *Futurism* (New York & Toronto: Oxford University Press, 1978), 140. Boccioni's notice originally published in *Lacerba* (1 October 1913), 211.

⁵ Boccioni's theory of "absolute motion" referred to the dynamism that he believed was inherent to all objects, autonomously residing within them whether they are in motion or at rest. He also theorized that objects also have "relative motion," which was his definition for how objects move physically when acted on by another object. See Boccioni's "Absolute Motion + Relative Motion= Dynamism," in *Futurist Manifestos*, 150.

delineated by the Futurist painters in their "Technical Manifesto of Futurist Painting": "That movement and light destroy the materiality of bodies."⁶

In December 1911-- two years prior to announcing photodynamism to the public through *Lacerba* and their subsequent expulsion from the group-- Bragaglia had written and published a manifesto entitled *Fotodinamismo futurista*. ⁷ This was the first essay on the theory and aesthetics of avant-garde photography to be produced in 20th century Europe. It was also Bragaglia's only Futurist manifesto and text on photography. He states at the outset of the manifesto that "The concept of Photodynamism was inspired by the "Technical Manifesto of the Futurist Painting" for which Boccioni was chiefly responsible. The language of the manifesto here and throughout clearly indicates that Bragaglia wished to relate photodynamism directly to Boccioni's work and theories, which the painter had first elaborated in a public lecture on May 29, 1911 at the Circolo Internazionale Artistico in Rome. Bragaglia meant photodynamism as a public response to Boccioni's work, intended either to affirm his theory through work in another medium or to confront him with visual proof that the expression of dynamism currently being sought in painting could also be accomplished in photography.

The best visual evidence that photodynamism was meant as a challenge to the Futurist painters is the 1912 image *II pittore futurista Giacomo Balla* (Fig. 1; see the Appendix for all figures). In this portrait, one cannot help but compare the effectiveness of the two mediums because they are placed side by side. The expressive capacity of photodynamism is represented in the image of the Futurist painter Giacomo Balla, who

6

⁶ Umberto Boccioni, Carlo Carrà, Luigi Russolo, Giacomo Balla, and Gino Severini, "Technical Manifesto of Futurist Painting," In *Futurist Manifestos*, 30.

⁷ Some scholars such as Caroline Tisdall and Angelo Bozzola conjecture that the manifesto might have actually been written in 1913 but dated earlier to 1911. They also state that the assigning of earlier dates to work was a practice of other Futurist artists like Boccioni.

⁸ Anton Giulio Bragaglia, *Fotodinamismo futurista* (Torino: Giulio Einaudi, 1970), 13.

stands beside one of his best known works, *Dynamism of a Dog on a Leash* (Fig. 2). The Bragaglias abstract Balla's person; he has become transformed in movement and is dematerialized and enveloped by an aura of light which gives the sense that his inner energy and soul have been exteriorized. In comparison to the photograph, Balla's painting of a diminutive scurrying dachshund looks comical and solely motivated by the desires to depict an image evocative of modern city fashion and to slow down speedy movements, making their mechanics visible since they are impossible to see in daily life with the naked eye. Since the Bragaglias' image is composed in such a way as to provoke and invite comparison between their mode of photography and Balla's painting, this image perfectly encapsulates the statements in Bragaglia's manifesto in which he advises painters that photography should be utilized as a model in order to better represent dynamism plastically. As Bragaglia asserted (albeit diplomatically): "although avoiding competing with painting, and working in totally different fields, the means of photographic science are so swift, fertile, and powerful that they are plainly much more forward looking and much more attuned to the needs of our emerging life than all other means of representation." Il pittore futurista Giacomo Balla is therefore an audacious visual declaration- much more so than Bragaglia's comparatively passive writing in regards to painting- that photodynamism can represent modern dynamism more successfully than any other mode of artistic representation, and thus truly fulfills the Futurist program.

The *Fotodinamismo futurista* manifesto and photodynamic images produced between 1911 and 1913 comprise a complex body of photographic work. The

⁹ Anton Giulio Bragaglia, "Futurist Photodynamism (1911)," trans. Lawrence S. Rainey, *Modernism/Modernity* 15 (2008): 377. Throughout this thesis, I will be alternately quoting from and referencing Bragaglia's *Fotodinamismo futurista* in the original Italian, Rainey's translation of the manifesto in *Modernism/Modernity*, and an earlier translation of excerpts of the manifesto by Caroline Tisdall from Umbro Apollonio's 1970 anthology *Futurist Manifestos*. These two latter are the best English translations of Bragaglia's manifesto.

Bragaglias' photography is especially groundbreaking within the Futurist context because it was truly avant-garde in terms of its technique. By contrast, the work of other Futurist artists in more traditional mediums like painting and sculpture was largely derivative of artistic innovations produced within other movements and styles, most significantly Divisionism and Cubism. For example, while Futurist collages were certainly complex and dynamic artworks, the forms of *papier collé* and collage were created by Picasso and Braque and only adapted by the Futurists. ¹⁰ The avant-garde technique and aesthetic the Bragaglias created to express external and internal human dynamism had not been derived from any other single movement or artist, and was unique within the medium of photography.

For the most part, Futurist photography and film have not been considered integral to the history of the movement and are left out of a number of surveys altogether. This exclusion in scholarship and exhibitions is likely due to the Bragaglias' brief participation within the movement, Boccioni's authoritative position, and the dominance of more traditional art forms in Futurism (and likewise in European modernism). The most significant Futurist scholars from the 1960s, like Marianne Martin, Rosa Trillo Clough, and Joshua Taylor, either completely disregarded or footnoted the brothers' contribution. Maria Drudi Gambillo and Teresa Fiori's two volume *Archivi del Futurismo*, which remains the most complete anthology of Futurist documents, does not include the Bragaglias, excepting the few derogatory statements Boccioni made in his correspondence about the brothers and their medium.

¹⁰ For further reading on this topic, see Christine Poggi, *In Defiance of Painting: Cubism, Futurism, and the Invention of Collage* (New Haven: Yale University Press, 1992).

¹¹ The end of Futurism is chiefly stated to coincide with the death of Marinetti in 1944. However, secondary scholarship on the movement did not begin until the 1960s, after some of the stigma stemming from its late association with Fascism had subsided.

Furthermore, the majority of the important Futurist exhibitions have left out photodynamism, both in the period and since. The Bragaglias were excluded from the first Futurist exhibition entitled "La Mostra d'Arte Libera," which was held in spring 1911 in Milan. Similarly, the brothers had no presence in the 1912 group exhibition at the Galerie Bernheim-Jeune in Paris, which was the first Futurist exhibition outside Italy. The exhibitions of the period did not result in highly positive critical reception or good sales, and so it was not until 1961 that another major exhibition of art from the movement was held. This 1961 exhibition, which took place at the Museum of Modern Art and was accompanied by a catalogue written by Joshua Taylor, was touted as "the most comprehensive exhibition of Futurism ever assembled," though it primarily privileged painting and fully overlooked photography. ¹² In a recent example, the 2009 blockbuster exhibition at the Centre Pompidou called *Futurism in Paris: The Avant-Garde Explosion* likewise neglected all Futurist photography.

Though the Bragaglias' contribution to the movement- not to mention all subsequent Futurist photography- has been thus undervalued and underrepresented, there have been a number of scholars who have since recognized the impact of their work. Caroline Tisdall and Angelo Bozzolla devoted an entire chapter to the brothers in their 1978 survey on Futurism. For their time, this scholarly pair was an anomaly among Futurist scholars in the amount of attention they paid to the Bragaglias, which had also been evinced earlier in a short article in 1975. However, serious treatment of the Bragaglias did not come again until 2001 when Giovanni Lista published a crucial survey of the movement and also put forth the groundbreaking text *Futurism and Photography*,

¹² Museum of Modern Art Press Release, Tuesday, May 30, 1961, http://www.moma.org/docs/press_archives/2843/releases/MOMA_1961_0058_54.pdf?2010

which was the first and still most thorough study of the subject. Since Lista published *Futurism and Photography*, more scholars have produced writing which stresses the importance of the Bragaglias' role in Futurism and within photographic history; the most noteworthy of these are Christine Poggi, Lawrence Rainey, and David Mather. Mather has published the newest work on this subject, in which he writes:

At a time when photography was gaining aesthetic status in Italy and abroad by virtue of its power to mimic the generic conventions of painting, the efforts of the [Bragaglia] brothers were an anomaly. They broke with aesthetic conventions with a visual system that contradicted technical tendencies in their field of photography oriented toward increased visual clarity and enhanced precision—manifested in the camera \Box s ability to capture the frozen instant. ¹⁴

Though these scholars have indeed highlighted the Bragaglias and asserted their value to the movement, none have produced writing which concentrates on the brothers as the main subject of their work; at most they are the focus of only a chapter of their texts.

Because of this, scholarship on the Bragaglias is still missing a more thorough study of the nuances within and inspirations behind photodynamism.

This thesis seeks to fill this void by investigating why photodynamism had such 'Futurist' potential, and why it was forcibly excluded from the movement. The aesthetic and theoretical concerns of photodynamism will be elucidated though locating it historically and conceptually in relation to two photographic genres which profoundly

⁻

¹³ Lista is such an important Futurist scholar because in these texts and his subsequent works, he has raised the movement to a new level of complexity. He has complicated Futurism by presenting it as a movement full of contradictions due to the "ideological ambiguity" which stemmed from the "constant shifting of theoretical positions". He was the first scholar to truly highlight the importance of other media besides painting and sculpture to the movement, particularly photography, and was the first to really assert the significance of the Bragaglias' work. He has also taken an unorthodox analytical tack in choosing to investigate with equal emphasis the artistic production of the second phase of Futurism, which is chiefly overlooked compared with the first phase. To do this reconstitutive work, Lista rediscovered many of these artworks himself in archives and private collections. Quotes from Giovanni Lista, "The Media Heat Up: Cinema and Photography in Futurism," in *Vertigo: A Century of Multimedia Art from Futurism to the Web*, ed. Germano Celant and Gianfranco Maraniello (Milano: Skira, 2008), 49.

¹⁴ David S. Mather, "Energetic Excess: The Visual Structure of Movement in Early Italian Futurism, 1910-1915" (PhD diss., University of California, San Diego, 2011), 173.

influenced its development: 19th century "scientific" motion photography and late 19th and early 20th century occult photography. This discussion of occult photography will include an examination of the esoteric beliefs of the Spiritualist and Animist religious movements which motivated these images, and an investigation of the influence of Henri Bergson's philosophy on the Bragaglias. Additionally, the nature of the Bragaglias' relationship with some of the most seminal Futurist artists-- namely Boccioni, Balla, and Luigi Russolo-will be examined throughout the thesis. Finally, this thesis will consider the relationship between photodynamism and performance. This thesis will contend that photodynamism was founded on a combination of occult beliefs from various sources which influenced the development of its theory and aesthetic, set it apart from the more scientifically motivated art to which it is chiefly likened in scholarship, accounts for photodynamism's connection to the dances of Loïe Fuller, and perhaps provides an explanation for their rejection from the movement, in addition to the other main scholarly theories for this circumstance. Photodynamism will be argued to have emerged from Bragaglia's conflation of a number of sources: the initial example of photographic motion studies, the opposed occult theories of Spiritualism and Animism¹⁵, Bergsonian philosophy, and Bragaglia's own avant-garde agenda, which was a Futurist search for the best visual expression of dynamism through Boccioni's theory of absolute and relative motion.

The goal of this thesis is to give more substance to this complex story and question the most prevalent characterizations of the Bragaglias' project by asserting the centrality of its occult foundation. The Bragaglias' photodynamic project truly reflects the complex and interdisciplinary nature of European modernism at this time. Hence, it deserves more attention than it has received to date. This thesis therefore seeks to fill a

¹⁵ Bragaglia also very briefly mentions Theosophy and its leader, Madame Blavatsky, in his 1913 article "I fantasmi dei vivi e dei morti," but Theosophy does not have a prevalent place in his theories.

dual purpose: to shed further light on the Bragaglias' contribution, with the corollary that the popular perception that Futurist painting and sculpture unequivocally represents the greatest artistic output of the movement is challenged, and to provoke a reconsideration of photodynamism in relation to both the Futurist movement and avant-garde photographic history.

CHAPTER II

SHORT-LIVED ACCEPTANCE: PHOTODYNAMISM AND BOCCIONI

Evidently a different nature opens itself up to the camera than opens to the naked eye-- if only because an unconsciously penetrated space is substituted for a space consciously explored by man [...] The camera introduces us to unconscious optics as does psychoanalysis to unconscious impulses.

—Walter Benjamin¹⁶

Shortly after the Bragaglias began producing their images in the spring of 1911, Anton Giulio Bragaglia started promoting photodynamism fiercely. He lectured frequently and pasted photodynamic images like *Dattilografa* onto postcards which he widely disseminated in public (Fig. 3). His zealous activity was quintessentially Futurist, akin to the example set by Marinetti, the self-professed "caffeine of Europe." During 1912 the brothers were introduced to the most important literary and artistic figures of the Futurist circle like Marinetti, Balla, and Boccioni. Some of the Futurist artists were even the subjects of the Bragaglias' photographs, as seen in such examples as *II pittore futurista Giacomo Balla* (Fig. 1) and *Ritratto polifisionomico di Boccioni* (Fig. 4). ¹⁷ Marinetti began funding the Bragaglias' photodynamic research shortly after meeting them. His financial support firmly established the Bragaglias as Futurist artists and gained them acceptance within the tight-knit circle.

But this inclusion within the group was short-lived due to Boccioni's influence. In the fall of 1913, he began urging his fellow Futurist colleagues to discount the brothers' photodynamic work. He wrote a vehement letter dated September 4, 1913 to gallery

¹⁶ Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations* (New York: Schocken Books, 1968), 236-237.

¹⁷ Giovanni Lista states that the photograph *Polyphysiognomical Portrait of Boccioni* had been long misattributed to Giannetto Bisi until 2001, when Lista corrected this error in his exhibition catalogue *Futurism & Photography*. Giovanni Lista, *Futurism & Photography* (New York: Merrell Publishers Limited, 2001), 24 & 91.

owner Giuseppe Sprovieri¹⁸ in which he exhorted Sprovieri to exclude the Bragaglias' photography from all upcoming Futurist exhibitions: "I urge you, writing in the name of all the Futurist friends, to refuse all contact with the photodynamism of Bragaglia- It is an arrogant uselessness that damages our aspirations of liberation from the schematic or successive reproduction of stasis or of motion. For an elementary beginning that which Balla HAS DONE". 19 According to Boccioni, the Bragaglias' photodynamism is equivalent to, but less sophisticated than the work that Balla has already produced, and is thus irrelevant. However, the explanations given here were not Boccioni's only or true motivations for rejecting the Bragaglias. He had many motivations, the chief of which were the disparagements of Futurist painting from French art critics who looked down on any perceived associations between painting and photography, Boccioni's highly traditional attitude regarding the hierarchy of mediums, and the defiant challenge which Bragaglia presented to the Futurist painters, both in his manifesto and the brothers' images. Subsequently, Boccioni succeeded in getting them ousted from the Futurist group on October 1, 1913 by encouraging his fellow Futurist artists to cease any support of photodynamism, convincing gallery owners like Sprovieri to bar their work from exhibitions, and finally by swaying Marinetti to withdraw his financial backing from their research.20

¹⁸ Sprovieri was a valuable friend and supporter of the Futurists who sponsored some of their first and most major exhibitions. Therefore writing this letter was a severe move on Boccioni's part which effectively cut the brothers off from getting any further public exposure and support for their photography.

¹⁹ Maria Drudi Gambillo and Teresa Fiori, ed., *Archivi del Futurismo*, Volume Primo (Roma: De Luca Editore, 1958 & 1962), 288. Translation from Christine Poggi, *Inventing Futurism: The Art & Politics of Artificial Optimism* (New Jersey: Princeton University Press, 2009), 141.

²⁰ This date can be firmly fixed due to the publication of Boccioni's personal correspondence and public notices run in *Lacerba*.

The split with Boccioni was decisively detrimental to the Bragaglias' work. Without sponsorship, acceptance and exhibition opportunities, their joint photographic experimentation ceased shortly thereafter in late 1913. Boccioni's rejection of the Bragaglias' work has effectively relegated the brothers to a place of relative historical obscurity. Their forced excommunication, as Giovanni Lista calls it, also impeded any artistically motivated photography within Futurism until the medium was reinstated as a legitimate art form in the second 'phase' or 'wave' of Futurism during the 1920s and 1930s. Unfortunately, photography's reentrance into a Futurism now involved with Fascism meant that it was tainted by its role in fascist propaganda, rather than being more purely artistic in aim as was the Bragaglias' pre-war photodynamism.

Within two years, photodynamism had debuted and been forcibly rejected. What happened between 1911 and 1913 which would account for the brothers' expulsion from the Futurist group? Though Futurist questions may seem straightforwardly explicable compared to the problems posed by other modern art movements, the story of photodynamism is complex and scholars have not come to answers for it easily.

Biographical Notes

The Bragaglia brothers were born in Frosinone, a small city southeast of Rome in the region of Lazio. Anton Giulio Bragaglia, the eldest of his family, was born on February 11, 1890. Arturo Bragaglia was born January 7, 1893. In 1906 at age 16, the elder Bragaglia became a director's assistant at the film production company La Società Italiana Cines in Rome due to his father Francesco Bragaglia's position there as general director.²¹ During this time Bragaglia was able to work with preeminent Italian filmmakers

²¹ Francesco Bragaglia's main profession was not in the film industry; some sources say Francesco was an engineer, while others assert he was a lawyer. Little is known about him.

like Mario Caserini and Enrico Guazzoni, and his early experience at Cines had a major impact on his nascent and future career, The younger Bragaglia's background before photodynamism is not at all as well documented as his elder brother's, but because of his family's strong involvement with the Cines studio and his technical proficiency in photography, it is logical that he also had a strong connection with the Italian cinema early on. The Bragaglias' background in the film industry is highly significant, not only because it influenced their future careers, but also because it sets them apart from the other Futurist artists, most of whom were trained in the more traditional arts like painting. It additionally impacted the development their photodynamic technique and accounts for the connection between photodynamism and the dances of Loïe Fuller.

Producing Futurist Photography: The Photodynamic Technique and Aesthetic

Within their photographic partnership, the brothers filled separate creative roles. Bragaglia acted as the driving theoretical force behind the experiments while his younger brother provided the bulk of the technical expertise, although Bragaglia produced some photographs independently as well. 22 The photodynamic images were the first photographic experiments produced within the Futurist movement. The extant images number about 30 in total; there were likely more but the negatives have since been lost. Bragaglia asserts in his manifesto that these images comprised the first artistic, avantgarde photography to be achieved within the history of the medium, although it should be emphasized immediately that photodynamism was *not* the first avant-garde photography in actuality. The history of avant-garde photography begins earlier and elsewhere, particularly in America with the Photo-Secessionists and pictorialists whose

²² Because Anton Giulio Bragaglia was the theoretician of photodynamism, and due to the scanty level of attention paid to the Bragaglia brothers by Futurist scholars, many photodynamic images are attributed solely to him. In fact, they were almost always produced in partnership with his younger brother.

images were published in the pages of Alfred Stieglitz's *Camera Work*. However, though the Bragaglias did not produce the first avant-garde photographic work, their photodynamic images were certainly avant-garde since their work constituted a radical departure from the current vogue of pictorialist photography.

The brothers were secretive about the technique used to produce their enigmatic photodynamic images. Scholars agree today that without moving the camera, the brothers directed their brightly lit subject to move in a specific gestural fashion, such as bowing or moving his or her head or hands, for the duration of a second-long exposure. Bragaglia implied in his manifesto that though they were using a mechanical medium, the role of the artist was still paramount; he said that as artists they "[purified] the operation of the camera which [they] directed and dominated." Sarah Carey argues that the theory behind this technique gave credence to Bragaglia's argument that their photography was fundamentally dynamic and artistic:

Reacting against the traditional relationship between realism and photography in the nineteenth century, Bragaglia wanted to disclaim the precise, mechanical and glacial reproduction of life in order to capture life's spontaneity and to unrealistically record reality [...] Bragaglia's photodynamism overcame the burdensome temporal problem of photography (that a photograph stops time and renders that moment "dead") by playing with multiple and long exposures that gave life and vitality to the image. It finally allowed the medium to emerge from the deadlock between the demands of pictorialism and realism.²⁵

The effect of this technique, as seen in images like *Un gesto del capo* (Fig. 5) and *L'inchino* (Fig. 6), was that the human form transforms into something highly blurred,

²³ I was unable to discover what type of camera was used, and whether the long exposure was due to their use of a camera with a slow shutter speed or their leaving the lens open.

²⁵ Sarah Carey, "From *fotodinamismo* to *fotomontaggio*: The Legacy of Futurism's Photography," *Carte Italiane* 6 (2010): 222. Bolding indicates that I wish to emphasize this sentence. Briefly, pictorialism and realism refer to stylistic movements in photography in the 19th and early 20th centuries. The work of pictorialists, which was often published in *Camera Work*, was manipulated to imitate the soft, hazy, loosely romantic mood and facture of paintings and drawings. Realist photography was born of the opposite impulse to objectively and accurately record.

²⁴ Bragaglia, "Futurist Photodynamism (1911)," 365.

dematerialized and permeable. The bodies of the subjects dissolve to the extent that the images are nearly abstract. Streaks of light index the body's movement, mark its trajectory, and preserve traces of the body and spirit in places which the body no longer physically inhabits. This trajectory of movement is not limited by a clear sense of time or defined by setting in any cogent manner. Movement is described in terms of the physical, psychic, and dynamic essences that it exteriorizes. It is an emotive, expressive force, an impression, not a scientific process to be painstakingly analyzed and dissected. Bragaglia explains that the reason for this aesthetic of dematerialization wherein actions are "[destroyed] by motion and light" was to approximate as fully as possible how moving bodies really look and the spirit of this motion:

When you tell us that the images contained in our Photodynamic works are unsure and difficult to distinguish, you are merely noting a pure characteristic of Photodynamism. For Photodynamism, it is desirable and correct to record images in a distorted state, since images themselves are inevitably transformed in movement [...] In Photodynamism, the greater an action's speed, the less intense and clear is the image that it leaves [...] As an image grows more distorted, it becomes less real, and hence more ideal and lyrical, still further abstracted from its own particularities and closer to a type, with the same evolutionary effect of distortion as was followed by the Greeks in their search for beauty.²⁷

The brothers' intent was to produce photographs which, through a hypersensitive technique, thoroughly recorded the "intermovemental fractions" of time-- the tiniest fractions of time previously unseen in art-- and thus depict the entire spectrum of movement involved in an action within a single image. Bragaglia states that in doing so they revealed the inner psychic qualities of their subjects—their spirits-- which are

06

²⁶ Bragaglia, "Futurist Photodynamism (1911)," 376.

²⁷ Ibid., 376 & 370.

²⁸ Bragaglia, "Futurist Photodynamism", in *Futurist Manifestos*, ed. Umbro Apollonio (London: Thames and Hudson Ltd., 1973), 40.

involuntarily displayed while one moves,²⁹ and thus provided proof of the existence of "metaperceptive realms".³⁰ Bragaglia claims "it is only through our researches that it is possible to obtain a vision that is proportionate, in terms of the force of the images, to the very tempo of their existence and, what's more, proportionate to the speed with which they have lived in space and in us," thus arguing that only the photodynamic technique could express the true spirit and sensation of modern motion.³¹

The photodynamic technique and aesthetic remained essentially stable for the duration of the brothers' experimentation. Since their style remained constant, the photodynamic images can be best categorized in terms of iconography. The primary subjects of photodynamic images, whether implicit or explicit in the images, are human beings. No photodynamic image portrays more than two human beings; most depict only one. The photodynamic oeuvre can be divided between images which depict the human body in motion and images which focus on an inanimate object being worked on or animated by human force, primarily via the hands. This is important because it demonstrates the anthropocentric occultist foundation of the photodynamic project. 33

An early 1911 example of the first category of photodynamic images is

Cambiando positura (Fig. 7). This photograph is one of a small number which Bragaglia

²⁹ Bragaglia distinguished between movement and motion in his manifesto. Movement described the physical action of a body, while motion was the spiritual sensation caused and externalized by that movement. While the two are indivisible in photodynamism, the concept of motion was more important to Bragaglia because of its spiritual aspects.

³⁰ Lista, "The Media Heat Up," 51.

³¹ Bragaglia, "Futurist Photodynamism (1911)," 370.

³² Of course, categorization of a body of work is a subjective venture. My method of categorization stems from my argument that the Bragaglias' photodynamism was rooted in vitalist philosophy concerned with the human being and soul, though other scholars use different methods of classification. David Mather, for example, categorizes the photodynamic images by types of expressive gestures. Mather, "Energetic Excess," 169.

³³ This will be further elaborated in Chapter IV.

references by name in his manifesto as a demonstration of his theory. In this image a single, formally clothed male figure shown from the torso up is depicted in motion in an ambiguous dark space. His body fills the entire frame. At the top right of the image, the man is depicted in a straight, upright posture. His downward trajectory toward the bottom left of the image is marked through a sweeping arc of thick white streaks which abstract his figure. These streaks connect the man in his original upright position to his lower altered position. Embedded in these streaks, the face and appendages of the man are multiplied several times, phantasmic vestiges which are traces of his body as it moves through space. This gives the impression that there are several bodies emerging from the original. The man's visage- with his parted hair, wrinkled forehead, lifted eyebrows, widened left eye and silhouetted triangular nose- is depicted most clearly in the bottom left of the image. This clarity is owed to the figure's slowed movement within his trajectory. The significance of the title, *Cambiando positura*, is reflected not only in the literal alteration of the man's physical location through forward movement, but also in the variation of his pose as he raises his fists to his cheeks.

The second category of photodynamic images, in which inanimate objects are featured, is less common among photodynamic images than the first category.

Dattilografa (Fig. 3) is a significant photograph because it is the only image which Bragaglia is known to have disseminated in postcard form while publicizing photodynamism. The title of this photograph makes it clear that although the central object of focus is a typewriter that occupies approximately half of the image, the real subject is actually the typist herself, who is represented here as animating the machine through the work of her vaporous, disembodied hands. Her two hands, truncated just below the wrist, emerge from the lower middle and right of the image. The speed of their movement is conveyed by the multiplied, blurred versions of the hands (particularly the

right) which are created as they fly up and down through space, curling downward like talons toward the white circular keys of the machine. Though space is somewhat indicated through the bulky typewriter resting on a hint of a solid surface, the background of the image is an opaque black void. Time is similarly ambiguous.

These two images are representative of the Bragaglias' body of work; similar visual analysis can be done on their other photodynamic images. Transparent, multiplied human bodies or fragments of bodies are captured as they move through space. Their movement is marked by streaks which dematerialize their forms, destroy their bodily integrity and transform them into spectral, permeable beings. Like the 19th and 20th century occult photography which is the subject of Chapter IV, photodynamic images have a "paradoxical ontological status"; they "oscillate between visibility and invisibility, presence and absence, materiality and immateriality."³⁴

The Theory of Photodynamism

The fact that Bragaglia produced a manifesto on photography is evidence that he desired acceptance into the Futurist movement, since this was their most preferred form for the dissemination of ideas. The polemical tone of *Fotodinamismo futurista* further proves Bragaglia's conformity to Futurist practices. Bragaglia immediately positions photodynamism in direct opposition to Étienne-Jules Marey's chronophotography, as well as early cinematography. Bragaglia sets photodynamism apart from these by asserting that it possesses the unique ability to portray the "inner, sensorial, cerebral, and psychic emotions" of human beings through the representation of movement, unlike earlier 19th century "scientific" photography like Marey's, which Bragaglia

³⁴ Tom Gunning, "To Scan a Ghost: The Ontology of Mediated Vision," *Grey Room* 26 (2007): 99. Gunning writes this about occult photography, but it is also true for the photodynamic images.

³⁵ Bragaglia, "Futurist Photodynamism", in *Futurist Manifestos*, 45.

considered purely scientific and positivist in aim, unable to be emotive and expressive. He described photodynamism as a far more complex and thorough study of motion: "Such representation will not render thirty images of the same object in order to represent it in motion, but will render it **infinitely multiplied** and **extended**, while the figure *present* will appear **diminished**."³⁶ This indicates that Bragaglia's interest lay in expressing an abstracted representation of motion rather than representing his subject clearly and breaking down the mechanics of his bodily movement in great detail, which is what is done by chronophotography.

Bragaglia states that the goal of photodynamism is instead to synthesize "the area of movement which produces sensation, the memory of which still palpitates in our awareness". This claim to a synthetic representation of movement is visually manifested in the blurry, multiplied, fused, and elongated bodily forms of the photodynamic subjects. Although Boccioni claimed otherwise, as have subsequent scholars, the Bragaglias' aesthetic of motion was indeed antithetical to the manner in which movement is represented in Marey's chronophotography and Eadweard

³⁶ Bragaglia, "Futurist Photodynamism (1911)," 372.

³⁷ Bragaglia, "Futurist Photodynamism", in *Futurist Manifestos*, 38.

Muybridge's stop-motion photography.³⁸ These forms of photography aimed to analyze human and animal movement by segmenting actions into minute fragments, and through this create a visual systematization of movement within a single image (Marey) or series of images (Muybridge). Indeed, in *Fotodinamismo futurista* Bragaglia refers to images such as Marey's *Chronophotographic Study of Man Pole Vaulting* (Fig. 8) disparagingly as being useful only in a didactic, empirical sense for teaching children gymnastics.³⁹ He believed that the total value of the chronophotographic enterprise lay in its potential as a rudimentary instructional tool. Bragaglia writes that the effect of this "scientific" photography is a "disintegrating and shattering" of motion which could never achieve a rhythmic, synthetic representation of movement; he makes the same argument about cinematography, claiming that movement, which should be seen as fluid and continuous, is similarly broken and "subdivided" in the frames of film strips.⁴⁰

Although Bragaglia condemns both chronophotography and cinematography in his manifesto, it is clear that photodynamism was indebted to both. While photodynamism is certainly aesthetically and conceptually disparate from chronophotography and stop-motion photography, these groundbreaking motion studies were the first in the medium and made photodynamic research possible. As Marta Braun

_

³⁸ Bragaglia never mentioned Muybridge in his writings, but due to his description of Marey's chronophotography it is likely that he would have, or perhaps did, consider Muybridge's stopmotion photography akin to chronophotography. Photographic scholar and curator Lyle Rexer recently published a very interesting differentiation between Marey and Muybridge which contradicts Bragaglia's view and is provocative to consider here. Rexer says Marey "did not stop time by freezing motion but rather rendered time visualized, by freezing the continuity of motion through many images in a single frame". Rexer goes on to say that Muybridge did "precisely the opposite," that "The two pioneers embody something like the difference between the continuity of video (Marey) and the discontinuity of film montage (Muybridge)". This contemporary critique is more unbiased and accurate than Bragaglia's, however it can still be argued that compared to Marey's imagery, the Bragaglias' figures are represented in a still more unbroken, synthetic trajectory of motion which rather discourages clear seeing. Quotation from Lyle Rexer, *The Edge of Vision: The Rise of Abstraction in Photography* (New York: Aperture, 2009), 52.

³⁹ Bragaglia, "Futurist Photodynamism", in *Futurist Manifestos*, 39.

⁴⁰ Ibid.

writes, Marey's and Muybridge's work created "a language for representing simultaneity" in photography by "effectively [rupturing] the perspectival code that had dominated painting since the Renaissance." The real reasons behind Bragaglia's rejection of the two forms, beyond those stated in *Fotodinamismo futurista*, are tied to Boccioni's feelings about the two genres. As the main Futurist theorist and the leading Futurist painter and sculptor, Boccioni's work had a substantial impact on the Bragaglias. 42

The Bragaglias' Relationship to Umberto Boccioni

Because Bragaglia positioned the photodynamic work and theory in direct dialogue with Boccioni's theories on dynamism, an analysis of Boccioni's artwork and theories is essential for a better understanding of the Bragaglias' position and work in Futurism. Although Boccioni disavowed a positive working relationship with the Bragaglias on more than one occasion, his theories are very similar to the precepts expounded by Bragaglia in *Fotodinamismo futurista*. This is not surprising due to the fact that Bragaglia stated his debt to Boccioni's theories outright in his manifesto. However, Boccioni's artworks are stylistically very different from the Bragaglias' photography⁴³, as well as the work of Giacomo Balla and Luigi Russolo, whose paintings such as *Girl Running on a Balcony* and *The Solidity of Fog* (Fig. 9 & 10) were clearly influenced by photography. Boccioni's paintings are quite distinct, chiefly deriving from modern stylistic

⁴¹ Marta Braun, *Picturing Time: The Work of Étienne-Jules Marey (1830-1904)* (Chicago: University of Chicago Press, 1992), 281.

⁴² Marinetti was the official leader of the Futurist group, but Boccioni also had a great deal of influence. He was certainly the leader of the group in terms of their visual arts production, as Marinetti was a poet. Additionally, since Boccioni was able to convince Marinetti to withdraw funding from various projects like photodynamism, it could be argued that while Boccioni was alive he was the most influential Futurist; his opinion was certainly highly important to the Bragaglias.

⁴³ This indicates a gap between Boccioni's theory and practice.

innovations within Divisionism and Cubism. Before comparing the theories of Boccioni and the Bragaglias, the stylistic difference between their artworks will be discussed as an aesthetic of simultaneity versus instantaneity.

Boccioni was an academically trained artist whose painted oeuvre is highly varied and evidences distinct vicissitudinal stylistic phases throughout his career.⁴⁴ His influences can often be readily identified, ranging from the Impressionist, Post-Impressionist, Divisionist, Symbolist, Realist, and Cubist styles. His painted work did not culminate in the Futurist style, as might often be surmised. Before his untimely death at age 33 in 1916 he had returned to a more structured and subdued geometric exploration of space and form which is clearly influenced by Cézanne. Boccioni apparently had begun to abandon his Futurist pursuits in a kind of *rappel a l'ordre* which reflects his truly traditional, passéist nature.⁴⁵ Generally, Boccioni's work from 1911-1915 can be termed his Futurist phase.

Boccioni's Futurist artwork centers on his concept of simultaneity. Simultaneity is a very different concept than instantaneity because it is a particular theorization concerning the workings of time and space in modernity that has nothing whatever to do with sequence or linear time-- in fact, it confounds these concepts. Boccioni's paintings which best illustrate simultaneity are *The Street Enters the House* (Fig. 11) and *Simultaneous Visions* (Fig. 12). In these works which Boccioni called a "synthesis of

.

⁴⁴ While it is quite a fascinating topic, Boccioni's sculptural oeuvre will not be discussed here for the purpose of brevity and cohesion.

⁴⁵ While Boccioni was doing this in his own art during the war, the "return to order" in art was advocated by a number of artists *after* the close of the First World War, like De Chirico and Picasso, and including several Futurists who broke away from the movement, Carrà and Severini. Their work returned to a more classicizing and realist style, and was supported by the Italian journal *Valori Plastici* (1918-1922).

what one remembers and of what one sees,"⁴⁶ multiple perspectives are collapsed, coalescing on the plane of the central female figure, who in both cases is engaged in the act of looking at a modern civic scene from what should be a higher perspective.

The purpose of Boccioni's simultaneity was to engage the viewer bodily and visually conjure the myriad sensations of modern life. To do this, he utilized formal devices and strategies like multiple collapsed perspectives, dynamically angled lines which he called "force-lines," and swirling Divisionist brushstrokes of brilliant saturated color that created a sense of centripetal movement. The force-lines had a particularly imperative function within the theory of simultaneity; the Futurist painters wrote that they "must draw in and entangle the spectator, who will then also be obliged to struggle, in some way, with the protagonists in the picture."47 Boccioni's various formal elements, culled mainly from Divisionist and Cubist stylistic principles, combined to create images quite singular to himself within Futurism. His works were vortex-like as a result of curving figures and radically slanted architecture, all physical objects interpenetrating each other in an overwhelmingly, perpetually circular movement that evokes the simultaneity and "frenzied churning of modern urban life" and the myriad factors which stimulate and assault everyone's senses concurrently and constantly. 48 Nothing about his paintings can be considered photographic in the linear manner of the images produced by the Bragaglias, Balla and Russolo.

⁴⁶ Umberto Boccioni, et al, "The Exhibitors to the Public," in *Futurist Manifestos*, 47.

⁴⁷ Umberto Boccioni, Carlo Carrà, Luigi Russolo, Giacomo Balla, and Gino Severini, "Prefazione al catologo della prima esposizione di pittura futurista," in *Pittura scultura futurise (Dinamismo plastico*), ed. Umberto Boccioni (Milan: Edizioni Futuriste di "Poesia," 1914), 384. Originally published as "Les Exposants au public," in *Les Peintres futurists italiens* (Paris: Galerie Bernheim-Jeune, 1912).

⁴⁸ Coen, *Umberto Boccioni* (New York: The Metropolitan Museum of Art, 1988), xxiii.

The work of Balla and Russolo can be rightly characterized as photographic because of their insistence on what Flavio Fergonzi calls "the persistence of an image over time and space". 49 This is why, out of all the Futurist artists, their work shares the most affinities with the Bragaglias' photography. In images such as Balla's Girl Running on a Balcony (Fig. 9) and Russolo's Solidity of Fog (Fig. 10), this is accomplished by the multiplication of forms, which overlap and expand in a series of sequential actions or emanations across the space of the canvas. Balla and Russolo largely derived this technique from Marey's chronophotography in order to imply the instantaneity of movement. While the Bragaglias' photography also instantly multiplies the figure as he moves, the full body of the figure is not reproduced in a repetitive and strictly linear way as it is in the work of Marey, Balla and Russolo. As Bragaglia writes in his manifesto, their photographs dynamically "synthesize" the static "transitional states" of motion which Marey, Balla and Russolo instead separate. The photodynamic figure is not sequentially reproduced and frozen in distinct states, but is rather dissolved as he moves through space. His image persists but is spectral; it melts and coagulates into a streaky haze. However, the movements of the Bragaglias, Balla's and Russolo's subjects are all instantly captured, whether this is literally done in a matter of seconds by the mechanical eye of the camera or by the painter who methodically renders onto canvas the sequential actions of his figure, like Balla, or its tangible emanations, like Russolo.

Although their visual works remain incongruent, the Futurist theories written by

⁴⁹ Flavio Fergonzi, "On the Title of the Painting *Materia*," in *Boccioni's Materia: A Futurist Masterpiece and the Avant-Garde in Milan and Paris*, ed. Laura Mattiolo Rossi (New York: The Solomon R. Guggenheim Foundation, 2004), 48.

Bragaglia and Boccioni share a number of affinities.⁵⁰ *Fotodinamismo futurista* evidences Bragaglia's strong adherence to Boccioni's concept of the absolute and relative motion of objects. Throughout his entire manifesto, Bragaglia maintains that photodynamism portrays both exterior physical movement and inner spiritual motion. So though he adopts Boccioni's theory, his assertion concerning the capabilities of photodynamism directly challenges Boccioni's theory that the inner "absolute motion" of an object-- which he also unquestionably believed was a spiritual quality-- could be exposed through dynamic Futurist painting, and Futurist painting alone.⁵¹

Bragaglia's manifesto is additionally peppered with descriptions and definitions of photodynamism which echo Boccioni's theory of simultaneity. Such descriptions state that the photodynamic images "succeed in registering the expression and the vibration of actual life," and depict "perpetual motion." The influence of Boccioni's theory is very plain in section seven of *Fotodinamismo futurista*:

[...] we want to voice and grasp those transcendental qualities of the real as it changes its location and in turn changes the surrounding atmosphere, since we are striving to register the environment in its total volume, as perturbed or convulsed by the revolution which results from a body's moving within it: the environment that we know and perceive more intensely in the action of movement than in the tranquility of stasis [...]⁵³

⁵⁰ This discussion of Boccioni's theory is not limited to the content of a single manifesto, but rather considers the most salient similarities between his and Bragaglia's writings from a number of manifestos that Boccioni theorized both independently and with others. Several Futurist manifestos are co-signed by all the Futurist painters- Boccioni, Balla, Russolo, Carrà, and Severini. It is well recognized, though, that Boccioni was the chief theorist behind these manifestos. For example, the "Technical Manifesto of Futurist Painting" was signed by all the painters, but Boccioni's theory of absolute and relative motion comes from his manifesto "Absolute Motion + Relative Motion= Dynamism," which he wrote alone.

Umberto Boccioni, "Absolute Motion + Relative Motion= Dynamism", in *Futurist Manifestos*, 150.

⁵² Bragaglia, "Futurist Photodynamism (1911)," 365.

⁵³ Ibid., 366.

The concept of the total surrounding environment is highly important in Boccioni's concept of simultaneity, and Bragaglia reinforces its importance for his own theory. However, in actuality environment has a much more important place in Boccioni's canvases than in the Bragaglias' photographs, as the photographs focus tightly on a unitary subject and his trajectory within a dark, ambiguous atmosphere, and Boccioni's simultaneity depends on a multiplicity of interpenetrating forms. Regardless, the appearance of the theme of the total environment in Bragaglia's work clearly signifies Boccioni's influence in the development of his theory.

Finally, Bragaglia's manifesto implies that he considers photodynamism an improvement on Boccioni's theories and on Futurist artworks in general concerning the correct way to express the appearance of objects in motion. The 1910 "Technical Manifesto of Futurist Painting" states that "On account of the persistency of an image upon the retina, moving objects constantly multiply themselves; their form changes like rapid vibrations, in their mad career. Thus a running horse has not four legs, but twenty [...]" Carrà illustrated this highly literal concept in his *Red Horseman* (Fig. 13); Boccioni did so in images like *Dynamism of a Soccer Player* (Fig. 14). Bragaglia implicitly refers to this theory in his manifesto when he states that photodynamism has surpassed these more rude representations of movement: "We have, indeed, come quite a long way in our conception of Photodynamism: we no longer mechanically reproduce, as it were, the hundred arms that have gone into a gesture, but we try to render their dynamic result, of their trajectory: a synthesis of the entire gesture [...]" Fig. He is not referring to other versions or phases of the photodynamic theory, since there was only one; this discussion of "the hundred arms" refers instead to other artistic representations of

⁵⁴ Boccioni, et al. "Technical Manifesto of Futurist Painting," in *Futurist Manifestos*, 28.

⁵⁵ Bragaglia, "Futurist Photodynamism (1911)," 368.

movement. Clearly "the hundred arms" refers to Marey's chronophotography that depicts many frozen, overlapping states of a body in movement within a single image, but this also seems to pointedly reference the Futurist painters' strategies for expressing movement through a multiplicity of appendages. Bragaglia thereby asserts the fundamental inadequacy of this strategy for portraying dynamism. The result of this comparative analysis between Bragaglia's and Boccioni's theories shows that while Bragaglia was highly influenced by Boccioni's theories, he ultimately claimed that photodynamism had improved upon them.

Ties between Fotodinamismo futurista & Other Futurist Theories of Motion

Bragaglia makes no explicit mention in *Fotodinamismo futurista* of specific

Futurist manifestos to which he was relating the photodynamic work and theory besides
the "Technical Manifesto". Regardless, photodynamism was certainly produced in
dialogue with a number of Futurist theories of motion. Salient parallels can also be found
between *Fotodinamismo futurista* and the jointly written "Technical Manifesto of Futurist
Painting" (1910), Carrà's "Plastic Planes as Spherical Expansions in Space" (1913) and
"The Painting of Sounds, Noises and Smells" (1913), Severini's "Plastic Analogies of
Dynamism" (1913), and Boccioni's "Technical Manifesto of Futurist Sculpture" (1912),
"Plastic Foundations of Futurist Sculpture and Painting" (1913), "Plastic Dynamism"
(1913), and "Absolute Motion + Relative Motion= Dynamism" (1914). 56 While it is beyond
the scope of this thesis to minutely analyze all of the affinities and distinctions between
these theories and photodynamism, this demonstrates that the Bragaglias' theory was
certainly influenced by the work of other Futurists and that its principles definitely accord

⁵⁶ The photodynamic theory is most highly related to Boccioni's Futurist theories, which is why his theories have been highlighted. All of these manifestos can be found in Umbro Apollonio's *Futurist Manifestos* anthology.

with principles at the heart of the movement. It also shows that Fotodinamismo futurista had some lasting influence on Futurist theories written after its publication, despite any protestations to the contrary. This proves that the Bragaglias should not really be considered outliers or outsiders of Futurism; their contribution, however short-lived, can help us better understand the movement in full.

Principal Theories of Rejection

Fotodinamismo futurista indisputably proposes a challenge to Futurist painters, though Bragaglia makes no explicit mention of particular artists. Bragaglia claims that the mechanical nature of the camera coupled with the particular artistic technique and ethos of photodynamism made his photography capable of recording the true essence of dynamism in a way painting could not. This was certainly daring, since dynamism was the concept at the very core of the movement and especially since Bragaglia had not been part of its original theorization. Therefore he was both appropriating dynamism for his own and advising an improvement on what was not technically his intellectual property. He declares photodynamism to be an artistic tool "indispensable for the painter of movement" because it is perceptible enough to capture those "intermovemental" fractions of time which no other form of photography or other plastic art was able to express.⁵⁷ Fotodinamismo futurista asserts that photodynamism is a legitimate art form in its own right, as well as a highly beneficial means by which painters and sculptors can better and expand their own representations of dynamism. This challenge proved unpalatable, although it was not the only reason the Bragaglias were forced out of Futurism.

⁵⁷ Bragaglia, "Futurist Photodynamism", in *Futurist Manifestos*, 41.

Among the Futurist scholars who spend time discussing the Bragaglias, no single theory concerning why Boccioni rejected the brothers from the movement has been unequivocally accepted. The most common hypotheses simply echo Boccioni's statement in his letter to Sprovieri that he felt the Bragaglias' photographic work posed a threat to the Futurist program of dynamism by arresting movement and thus producing only a "schematic or successive reproduction of stasis or of motion." However, close analysis of the photodynamic images and theory and its relationships to the work of Boccioni, Balla, and Russolo in fact demonstrates the opposite, that photodynamism actually accorded well with the theory of dynamism, perhaps more so than some Futurist paintings. Therefore a wholesale acceptance of Boccioni's given reason for rejecting their work is unwise. While Boccioni's statement from the Sprovieri letter makes it seem as if his reasons for rejecting photodynamism and its creators were perhaps few and uncomplicated, the pluralism of scholarly interpretations concerning this historical circumstance evidences just the opposite. The Futurists' desire to very carefully construct and safeguard particular public personae meant that it was actually common that the explanations and even dates which artists attached to their work did not always reflect reality.

⁵⁸ Translation from Christine Poggi, *Inventing Futurism*, 141. Originally published in Gambillo and Fiori, ed., *Archivi del Futurismo*. Giovanni Lista posits that Boccioni felt photographs froze movement and life, and in doing so were detrimental to the representation of dynamism. Rosa Trillo Clough, Paolo Baldacci, and Philippe Daverio also agree that Boccioni believed photodynamic images could only represent movement mechanically and were unable to attain any semblance of kinesis. These arguments accord with Boccioni's original statement in the Sprovieri letter. See Lista, *Futurism & Photography*, 10. Rosa Trillio Clough, *Futurism: The Story of A Modern Art Movement, A New Appraisal* (New York: Philosophical Library, 1961), 214. Baldacci, Paolo and Philippe Daverio, ed, *Futurism, 1911-1918* (New York: Philippe Daverio Gallery, 1988), 12.

Giovanni Lista has proposed numerous reasons for Boccioni's rejection of the Bragaglias in several of his texts on Futurism.⁵⁹ He has discussed photodynamism in relation to Futurist politics, conjecturing that the abstract aesthetic of the images threatened the group's politically motivated desires to produce art that would be highly comprehensible and legible to the public and could therefore serve Italy in the "role of an immediate revolutionary instrument."60 Lista also states that as "cold media," photography "produced a recorded and deferred transmission of the act of creation," which impeded the production of the desired Futurist "action-art." This was more indeed more successfully accomplished through more literal Futurist paintings such as Boccioni's 1915 Charge of the Lancers which clearly encouraged Italian intervention in World War I by combining war iconography with pasted fragments of newspaper headings on the subject or words-in-freedom poems evoking combat (Fig. 15). In a 1982 auction catalogue. Lista also affirms the earlier stated theory that the language of the challenge put forth by Fotodinamismo futurista upset the dynamic of the group and created friction between Bragaglia and the painters "who resented his assuming a spokesman's role for Futurist aesthetics."62

Lista also argues that Boccioni did in fact believe Bragaglia's assertion that photodynamic images revealed the psychic inner nature of the subject; therefore if the Futurist artists appeared as their subjects, the Bragaglias' photographs could potentially

⁵⁹ Lista's most notable and lengthiest discussions of this circumstance can be found in his texts *Futurism* (Lista, *Futurism*, Paris: Terrail, 2001) and *Futurism & Photography*.
⁶⁰ Giovanni Lista, "Futurist Photography," *Art Journal* 4 (1981): 361.

Giovanni Lista, Futurist Priotography, Art Journal 4 (1981). 301.

⁶¹ Lista, "Il futurismo nella fotografia," in *Il futurismo nella fotografia* (Firenze: Fratelli Alinari, Fondazione per la storia della fotografia, 2009), 20. This essay has been translated by Jamie Richards (University of Oregon, Department of Comparative Literature, Ph.D. candidate) for the author.

⁶² Lista, *Italian Futurist Photographs: Auction, Tuesday, November 9, 1982* (New York: Sotheby Parke Bennet Inc., 1982). This publication has no page numbers, but this quote comes from a section with several photodynamic images listed as auctions lots.

undermine their carefully crafted public image as rebellious, pugilistic artists. ⁶³ Because the Futurists seemed to think that photodynamism and the camera in general had the power to reveal the soul of the sitter and expose truths about themselves which they did not want known, they therefore utilized photography nearly exclusively for emblematic purposes. ⁶⁴ Examples of these emblematic images— which were both commissioned and created by the Futurists themselves— are photographs like the anonymous *Boccioni in his studio, in front of the sculpture Head+House+Light*, Mario Nunes Vais' *The Futurist group: Palazzeschi, Papini, Marinetti, Carrà, Boccioni*, and Boccioni's *Io-Noi* (Fig. 16-18). Through these highly constructed, contrived images, the Futurists endeavored to control the way the public conceived them, presenting themselves as a tight-knit collective of young, iconoclastic artists who Marinetti described in his *Founding and Manifesto of Futurism* as "alone, awake, and on our feet, like proud beacons or forward sentries against an army of hostile stars glaring down at us from their celestial encampments." ⁶⁵

In one of Lista's most compelling theories, he argues that the Bragaglias' rejection came about because of French opinions about the camera and the Futurists' desire to compete with the French and earn their respect as artists. Lista asserts that a particular contemporaneously published article by French Cubist painter Fernand Léger

⁶³ Sarah Carey echoes Lista's emphasis on the Futurists' distrust of the camera: "photography produced a profound sense of anxiety amongst the Futurists," which "resulted from the fact that most Futurists felt an overwhelming sense of vulnerability in front of the lens, since they wanted to protect a selected image of themselves and establish an ideal (i.e. not realistic) model of their own identity." Quoted from Carey, "From *fotodinamismo* to *fotomontaggio*", 224 & 226.

⁶⁴ With the exception of the Bragaglia brothers, photography was only used for emblematic and documentary purposes during the first wave of Futurism. Its potential as an artistic medium was disregarded within the movement until its reemergence after the war with Fortunato Depero. Giovanni Lista has an excellent discussion of Depero's unique brand of "photoperformance" in *Futurism & Photography*.

⁶⁵ Filippo T. Marinetti, "The Founding and Manifesto of Futurism", in *Futurist Manifestos*, 19.

forced Boccioni's hand in this issue. ⁶⁶ Léger's derogatory article designated all Futurist paintings as photographic, in that they depend too much on objectivity and realism without approaching the question of form conceptually. Following this harshly negative association with photography, Boccioni needed to snub photodynamism and disavow its connection with the movement in order to compete with the dominant French artists--- Emily Braun characterizes this competition as "blood feuds between French and Italian avant-gardes" ⁶⁷--- and advance the reputation of his work and that of his fellow Futurist painters.

Like Lista, Christine Poggi partially attributes the rejection to pressure from France, specifically from the similarly negative criticism of Futurist art from Roger Allard. Poggi argues that Allard's criticism directly provoked Boccioni to write this statement in a manifesto published in the August 1913 issue of *Lacerba*: "We have always rejected with disgust and scorn even a distant relationship with photography because it is outside art. Photography is valuable in one respect: it reproduces and imitates objectively, and, having perfected this, it has freed the artist from the obligation

⁶⁶ Lista, *Futurism*, 73-75. Lista does not cite the name of Léger's article or publication, which was likely published in 1912. Lista also cites Guillame Apollinaire's criticism of the Futurists at this time as a reason for Boccioni's extreme sensitivity and bellicose nature. Apollinaire wrote matter-of-factly: "The originality of the Futurist school of painting is that it wants to reproduce movement. That is a perfectly legitimate subject of investigation, but French painters solved that problem, insofar as it can be solved, simply ages ago." Lista also does not cite the source of this quotation. Lista, *Futurism*, 66.

⁶⁷ Emily Braun, "Vulgarians at the Gate," in *Boccioni's Materia*, 2.

⁶⁸ Christine Poggi, *Inventing Futurism: The Art and Politics of Artificial Optimism.* Princeton: Princeton University Press, 2009, 311. Roger Allard, a French poet, editor and art critic, was chiefly active in the early 20th century and specialized in criticism about painting. His negative criticism of Futurist painting was published in an article entitled "Les Beaux Arts" in issue 3 of the Parisian journal *Revue Indepéndante* in August 1911 in which he attacked the painters for being too coldly photographic and cinematic in their attempts to fix movement. David Mather and Giovanni Lista also support this theory about the influence of Allard's criticism on Boccioni. See Mather, "Energetic Excess," 202-203, and Lista, *Futurism*, 66.

of reproducing reality exactly."⁶⁹ This declaration clarifies that Boccioni was condemning photography for some other reasons—likely highly motivated by these criticisms from the French art world—beyond what he was saying and writing in public, because these statements about photography are clearly untrue. In the preface of the 2012 catalogue from the Metropolitan Museum of Art's exhibition *Faking It: Manipulated Photography Before Photoshop*, Mia Fineman demonstrates that the view that photography was solely concerned with or only capable of objective reproduction and mimesis is erroneous: "It is a long-held truism that 'the camera does not lie'. Yet […] that statement contains its own share of untruth. While modern technological innovations, such as Adobe's Photoshop software, have accustomed viewers to more obvious levels of image manipulation, the practice of 'doctoring' photographs has in fact existed since the medium was invented."⁷⁰

Several scholars theorize that the Bragaglias' rejection stemmed from the strength of Boccioni's negative feelings about the nature of photography as a mechanical medium which did not permit the artist to be expressive, and should therefore only be used as a tool for the purpose of recording reality with greater objectivity, as it had traditionally been used since its invention by painters like Delacroix. Christine Poggi argues that Boccioni had a negative opinion about all photography, not just the Bragaglias' work; in his opinion, because the camera was a machine it could never possess the intuition of an artist and so it was a dangerous "threat to the creative powers of the artist". Marta Braun agrees that Boccioni believed that the camera's

⁶⁹ Boccioni, "Futurist Dynamism and French Painting," in *Futurist Manifestos*, 107-110. Originally published in *Lacerba*, 1 August 1913.

⁷⁰ Mia Fineman, *Faking It: Manipulated Photography Before Photoshop* (New York: Metropolitan Museum of Art, 2012), preface.

⁷¹ Christine Poggi, *Futurism: An Anthology,* ed. Lawrence Rainey et al. (New Haven: Yale University Press, 2009), 314.

mechanical abilities made it jeopardous to the role of the Futurist artist, but unlike Poggi states that he found it threatening because it actually **could** express dynamism:

The problem did not lie with Bragaglia or with his attempt to render dynamic sensation, but rather with the fact that he used the camera to attain his ends. Bragaglia's camera had brought into existence the residual images of movement that the Futurists were so excited about; but these dynamic traces were meant to be perceivable only to those with heightened perceptual abilities—clairvoyant artists such as the Futurists.⁷²

This reliance on the camera fundamentally altered what Boccioni perceived as the proper role and practice of the artist:

the artist is [...] the sole legitimate mediator between aesthetic experience and the sensory world, because the creative act implies a transformation in which the artist proceeds by intuition through a qualitative process of resistance and duration. Intuition, as the source of knowledge, and duration, as the latent, unconscious, unpredictable experience of the artist-- the artist's subjective contribution-- are irreconcilable with the mechanical determinism of the lens.⁷³

Shortly after the birth of the medium, there was a profusion of photographers who practiced a craft which was seemingly automatic and required little to no skill or human intervention. After all, George Eastman first marketed the Kodak camera with the slogan 'You press the button, we do the rest'. This must have posed a great threat to those like Boccioni who believed in the hallowed cult of the artist, which stemmed back to Romantic ideas about the genius painter or sculptor who possessed a special, unique vision.

Finally, in Lista's most emphatically opinionated theory about the rejection, he asserts that the photodynamic images do successfully achieve the expression of

⁷² Braun, "Photodynamism and Photospiritism," 90.

⁷³ Lista, "The Media Heat Up," 51.

⁷⁴ Tom Gunning has noted, "the [photographic] image was created by a physical process over which human craft exerted no decisive role. Photography was therefore a scientific process, free from […] human discourse." Tom Gunning, "Phantom Images and Modern Manifestations: Spirit Photography, Magic Theatre, Trick Films, and Photography's Uncanny," in *Fugitive Images: From Photography to Video*, ed. Patrice Petro (Bloomington and Indianapolis: Indiana University Press, 1995), 42.

dynamism, which demonstrated to Boccioni at the time that photography could indeed compete with painting and accomplish like pictorial goals. Futurist artistic production (and subsequently later art historical scholarship on Futurism) clearly preserved the traditional hierarchy of genres, privileging painting, sculpture, and to a lesser extent, architecture. Therefore the Bragaglias' "photographic creation began to threaten the specificity, if not the actual justification, of Futurist pictorial dynamism" -- a threat which Boccioni neutralized in October 1913 when he forced them out of the movement. Caroline Tisdall and Angelo Bozzolla have stated eloquently that "so was started or finished another chapter in the long tale of ideological wrangling and jostling for status that has marked the course of twentieth-century painting and photography."

Further Explanations for Rejection

Despite the lack of a single explanation for Boccioni's rejection of the Bragaglias, the very intensity with which Boccioni carried out his campaign and affected this schism

⁷⁵ Lista, *Futurism*, 61.

⁷⁶ Ibid.

⁷⁷ Giovanna Ginex has unearthed a gelatin silver print which Boccioni took of his sister entitled *Amelia Boccioni*, which the artist afterward painted over in bright colors and Divisionist brushstrokes. Ginex states that the style of this portrait—both in the style of the photographed figure and the paint applied to the image—implies that Boccioni might have used photography often as a model and inspiration for his paintings. Ginex argues that Boccioni may have wished to keep this fact unknown since he exalted his medium and the creative genius of the artist independent of machines, thereby echoing Lista's assertion that the Bragaglias' photographs constituted a threat to the primacy of painting as the foremost Futurist art form. Giovanna Ginex, "Snapshots from the Studio of Umberto Boccioni," in *Boccioni's Materia: A Futurist Masterpiece and the Avant-garde in Milan and Paris*, ed. Laura Mattioli Rossi (New York: The Solomon R. Guggenheim Foundation, 2004), 64.

⁷⁸ Caroline Tisdall and Angelo Bozzolla, "Bragaglia's Futurist Photodynamism," *Studio International* 189-190 (1975): 12. This idea is also elaborated by David Mather and Sarah Carey, who like Lista argue that photography did not fit into the Futurist agenda because the majority of the core artists, particularly Boccioni, were highly traditional despite their radical proclamations. See Mather, "Energetic Excess," 181-182 and Carey, "From *fotodinamismo* to *fotomontaggio*," 225.

within his close-knit group makes it clear that he truly believed photodynamism posed a very real threat to him, likely as result of the combination of all of these reasons scholars have proposed.⁷⁹ In addition to the aforementioned fundamental theories concerning Boccioni's rejection of the Bragaglias, there are still more possibilities. Bragaglia never rejected the past, which is evidenced in his taking inspiration from trends from the past like occult photography. 80 This is similar to the reason why Walter Adamson argues that the Futurists and the editorial staff of Lacerba parted ways, resulting in the end of a highly beneficial relationship for the Futurists. Adamson says that this separation was due to the ideologies and principles of the newspaper staff members, which were based fundamentally in the way they respected the past and preserved their local heritage.81 The theory that Bragaglia was an artist who embraced the past is supported by Mario Verdone and Günter Berghaus' argument that the films which he produced later in his career cannot rightly be called Futurist because their narratives are largely melodramatic and old-fashioned, drawing heavily on past cinema for content. 82 Conversely, Marinetti and the Futurist painters shouted a threat to the entirety of the artistic past, ostensibly advocating an indiscriminate expunction of the old: "Come on! set fire to the library shelves! Turn aside the canals to flood the museums! [...] Oh, the joy of seeing the

⁷⁹ His letter to Sprovieri makes it even clearer that he was threatened by photodynamism and felt real pressure to force them out of the group, because he asks Sprovieri in a post-script not to let Bragaglia find out about what he said to him because he likes him as a friend. Sprovieri letter published in Gambillo and Fiori, ed., *Archivi del Futurismo*, 288.

⁸⁰ Occult photography and thought of the late 19th and early 20th centuries was a very important foundational inspiration for photodynamism, which will be the subject of Chapter IV.

⁸¹ Walter Adamson, *Avant-Garde Florence: From Modernism to Fascism* (Cambridge & London, England: Harvard University Press, 1993), 180.

⁸² Verdone and Berghaus, "*Vita futurista and Early Futurist Cinema*," 398. Verdone and Berghaus do, however, characterize Bragaglia's technical innovation with the medium as Futurist, just not his narrative content.

glorious old canvases bobbing adrift on those waters, discoloured and shredded! [...]

Take up your pickaxes, your axes and hammers and wreck, wreck the venerable cities, pitilessly!"⁸³ Bragaglia's comparative preservation of the past in his work and writing, particularly in his interest in occult thought and photography, perhaps provides an additional explanation for the brothers' rejection.

The occult foundation of photodynamism proves that Bragaglia drew from past religious and philosophical sources to develop the theory behind the brothers' Futurist photography. The Bragaglias experimented with photographic techniques like double exposure and superimposition which had been staples of occult photographic practice and were thus linked in the popular imagination to chicanery and anti-scientific thinking. As demonstrated, Boccioni asserted that photography should only be utilized as a tool for objectively recording reality; these occult photographic techniques made for artificial, constructed images which represented anything but objectivity. Additionally, though flirtation with occult thought and imagery was common for Symbolist and avant-garde artists alike, it is nonetheless true that occultism has long been perceived as antithetical to progressive, scientific thinking and true modernity. Perhaps the Bragaglias' self-conscious use of occult techniques in their photography was seen as problematic for these reasons, and provided another motivation for Boccioni's rejection of their work from a movement which was obsessed with being ultra-modern, being futurist.

Marinetti, "The Founding and Manifesto of Futurism", in *Futurist Manifestos*, 23. The dominant view of Futurism's opinion of the past accords with these infamous statements by Marinetti, that they felt for it an intense aversion and desired to bury it forever. Enrico Cesaretti, however, presents a provocative alternative to this pervasive view in his essay "Back to the Future: Temporal Ambivalence in F.T. Marinetti's Writings," in which he argues that they had a more nuanced relationship with the past. See Enrico Cesaretti, "Back to the Future: Temporal Ambivalence in F.T. Marinetti's Writings," in *Italian Modernism: Italian Culture between Decadentism and Avant-Garde*, ed. Luca Somigli and Mario Moroni (Toronto: University of Toronto Press, 2004), 243-266.

Finally, as aforementioned, Bragaglia asserts in his manifesto that photodynamism had something to teach other mediums about the expression of dynamism; two of the Bragaglias' photographs serve as powerful demonstrations of this assertion. Some scholars like Lista have supported the theory that Boccioni was indeed afraid that photography could really express dynamism better than painting, which compromised the supremacy of his medium and threatened the reputation he desired as a pioneering avant-garde painter on the international stage and his position as a leader within his own movement. Indeed, in the opening paragraph of *Fotodinamismo futurista*, Bragaglia states: "There is a realistic, effective dynamism of objects unfolding with real motion- which, for the sake of precision, should be called movementism-- and there is the virtual dynamism of immobile objects, which is of interest to Futurist Painting."84 His distinction between movementism-- or the real motion of actually moving bodies-- and the "virtual dynamism of immobile objects" can be understood as his distinction between the capacities of photography and painting. Whereas photography is able to capture real motion and thus actual modern dynamism, Bragaglia infers that painters are only able to depict objects which cannot actually move and express relationships between them and their surrounding environments by deconstructing, interpenetrating and connecting them with lines in order to imply relationships and **simulate** movement.

This may have been the reason why the Bragaglias' portrait of the painter, Ritratto polifisionomico di Boccioni (Fig. 4), appears to be so stylistically distinct from the other photodynamic images. There is no dramatic blur, no sweep of light in this image which indicates an exaggerated gesture being performed; rather, this image looks like it was achieved as the result of a very different technique, and is likely a collage of several superimposed multi-perspectival images of his face. If this photograph is actually a

⁸⁴ Bragaglia, "Futurist Photodynamism (1911)," 364.

composite of **still** portraits, then it was indeed made in a very different manner than the other photodynamic images, for which a subject was photographed while moving. Their choice to use a different, static technique for an image which greatly stands out from the Bragaglias' other work must have been purposeful, and appears to operate as a metaphorical demonstration of Bragaglia's distinction between the movementism of photodynamism and the "virtual dynamism of immobile objects" which he says is the expressive limit of painters like Boccioni. A comparison between this image and Boccioni's own oeuvre around the time this photograph was made in 1913 seems to support the argument that this particular photograph is purposely not a photodynamic image, and instead represents the work of the Futurism painters. Like Boccioni's work, it is more simultaneous than instantaneous if it was made through a photographic collage technique. The grotesque, monstrous, polymorphous effect which is caused by overlapping Boccioni's facial features indeed recalls Boccioni's many paintings and drawings of his own mother's visage at this time, in which her physiognomy is jarringly deformed, dissembled and reconfigured, resulting in unsettling portraits like Matter (Fig. 19) and Dynamism of a Woman's Head (Fig. 20).

Within the Bragaglias' oeuvre, there is a second photodynamic image which clearly encapsulates Bragaglia's challenge to painting and validates Boccioni's anxiety, though not the extreme action he took against the brothers. The aforementioned photograph *Il pittore futurista Giacomo Balla* functions as a striking visual metaphor that compares the efficacy of the mediums of painting and photography (Fig. 1). Their juxtaposition within this single image invites qualitative comparison between the two. The result is that the expressive capabilities of photodynamism, as represented in the image of Balla, come across as superior to the capacities of painting. Balla's person is

represented as vibrating with energy, "and energy is the ultimate form of motion." Lista supports the interpretation that Balla's painting of segmented dynamism is purposely humorous in his cursory analysis of the work: "*Dynamism of a Dog on a Leash* borrowed the model of chronophotography in a joking, ironic vein, making the painting a sort of pictorial version of the kinetograph." Photodynamism then, compared with Balla's painting, portrays real motion, or movementism, and additionally achieves the more serious and spiritual expression of dynamism in this image.

Additionally, beyond pointing to the difference between photography and painting, *Il pittore futurista Giacomo Balla* shows a marked difference between the Bragaglias' photodynamism and Marey's chronophotography as represented in Balla's painting. The dematerialized photodynamic image of Balla is made mystical by its lack of clarity, sense of time or demarcated physical trajectory, unlike Balla's painted quotation of Marey's technique of reproducing defined successive states of motion.

Boccioni struggled to prove that Futurist painting had nothing to do with photography, and in doing so derided the Bragaglias' photodynamism as chronophotographic and cinematic, but this image visually refutes his claim. If any single image proves

Bragaglia's statements about the true Futurist potential of photodynamism and justifies the theory that it made Boccioni feel threatened, that image is *Il pittore futurista Giacomo Balla*.

⁸⁵ Braun, *Picturing Time*, 278.

⁸⁶ Lista, Futurism, 62.

⁸⁷ Marey's scientific photography will be further discussed in the next chapter.

CHAPTER III

MISREPRESENTED RELATIONSHIPS: PHOTODYNAMISM, SCIENTIFIC MOTION PHOTOGRAPHY AND BALLA

Photodynamism is most closely related to two genres of photography: "scientific" motion photography and occult photography. Conceptually, the photodynamic project exists between the two genres. It shares important affinities with and distinctions from each, but is additionally grounded in the Futurist agenda and theorizations. Historically, the practices of scientific motion photography and occult photography both pre-date and post-date the Bragaglias' experimentation, and the practice of both continues in various forms today, ⁸⁸ while photodynamism had a far shorter life span limited to the Bragaglias' 1911-1913 work and a later period of renewed experimentation by several Futurist photographers in the second interwar phase of the movement. ⁸⁹ Most Futurist scholarship summarily equates photodynamism with Marey's 19th century chronophotographic studies and Balla's paintings, which were chiefly influenced by Marey. ⁹⁰ However, though the photodynamic images are certainly at their most basic

⁸⁸ Various studies of the contemporary appropriation of both genres demonstrate this fact. Examples are: Paul St. George, ed. *Sequences: Contemporary Chronophotography and Experimental Digital Art* (London: Wallflower Press, 2009) and Clément Chéroux, *The Perfect Medium: Photography and the Occult* (New Haven, CT: Yale University Press, 2005).

⁸⁹ Amelia Ishmael has recently argued that photodynamism has had a recent resurgence of interest for several contemporary photographers. Amelia Ishmael, "The Persistence of Photodynamism in Representations of the Expanse of Time," *Montage* 5 (2011), 1-9.

⁹⁰ I believe that this is chiefly because this argument accords with Boccioni's opinion about photodynamism. Most art historical scholarship on Futurism has tended to correspond with Boccioni's views while he was alive- painting is the privileged Futurist art form, the traditional hierarchy of mediums is maintained, and the Bragaglias are ignored in most histories of the movement. Additionally, because Boccioni is privileged as the leading visual artist over the other Futurists, his death is used as a kind of marker in scholarship on the movement. While Futurism did have a second phase after World War I which was highly interesting and certainly more varied and experimental in nature than the first phase, it is generally considered of less importance than Futurism before the war, which I believe is largely due to Boccioni's death.

photographic motion studies which have some scientific aspects due to the mechanical nature of the medium, photodynamism is actually quite distinct from the aims and aesthetic of scientific motion photography and closer to occult photography due to its deeply vitalist foundation.

The Influence of "Scientific" Motion Photography on Photodynamism

Scientific motion photography was pioneered by the chronophotography of Étienne-Jules Marey and the stop-motion photography of Eadweard Muybridge. Marey and Muybridge carried out their photographic experiments roughly concurrently, commencing their most significant motion studies in the 1870s and 1880s respectively. Both of these 19th century fathers of motion photography aimed to assemble corpuses of work that formed a sort of visual classification of the various mechanics of movement. Both photographers systematically broke movement down into highly distinct successive phases, each with the goal that their viewers would be able to analyze and reconstruct the actions depicted minutely, and thereby come to a better understanding of what is involved in the movements of humans and animals which is impossible for the unaided human eye to see.

Edward James Muggeridge, who later changed his name to Eadweard Muybridge, worked as a printer and publisher before becoming a full-time photographer in 1867, initially taking the American frontier landscape as his main subject. In the 1870s, he made a major change in his photographic pursuits, concentrating instead on the movement of animals. For these motion studies which started with an investigation into a horse's gallop, Muybridge used a row of cameras whose shutters were released by a mechanical triggering device. His most iconic series *Animal Locomotion* (1884-

1887) is a vast catalogue, a "typological archive" which focuses on the diverse movements of both humans and animals. Each large plate in this series is comprised of a number of photographs grouped together in a grid formation. Viewed as a whole, each plate shows the full span of the individual physical movements that together comprise one total action, such as a horse's gallop or the acrobatic jump of a nude man, as shown in *Head-spring*, a flying pigeon interfering (Fig. 21). Each photograph in the plate is a still, static image which shows the subject frozen in one single movement that has been instantaneously captured.

While Muybridge's motion photographs are generally classified as scientific and are certainly empirically based, he was foremost an artist whose aesthetic proclivities come through in his motion studies. He often rearranged the groupings of his images within their plates according to his personal aesthetic taste, with the result that frequently images are not presented in a purely sequential order. However, although Muybridge is known to have exercised some creativity with his image presentation, the groupings of his photographs are not far off from their true order, and therefore the viewer is still able to reconstruct the depicted movement through the persistence of the image on the retina. A sense of real time can be simulated by moving the eye quickly in a horizontal

⁹¹ Philip Brookman, *Helios: Eadweard Muybridge in a Time of Change* (Göttingen, Germany and Washington D.C.: Steidl & Corcoran Gallery of Art, 2010), 95. My information on Muybridge is chiefly based on this major exhibition catalogue.

⁹² Marta Braun has written much on this, such as in her catalogue essay "Animal Locomotion" for *Helios: Eadweard Muybridge in a Time of Change* and her recent article "Muybridge, Authorship, Originality," *Early Popular Visual Culture* 11 (1): 41-51. For this reason, I have qualified the label "scientific" motion photography with quotation marks, though Marey's project was indeed scientifically based and executed.

fashion through the rows of frames; this reconstructs the movement of the subject and replicates the movie-like quality of a picture flip book.⁹³

Muybridge places a great emphasis on space in his photographs. His images are nearly always photographed outdoors (as the presence of the bird in the aforementioned plate confirms), and possess a clear foreground and background. The background of Muybridge's images is crucial when considering the empirical nature of his study. It is almost always the same: a large black and white grid bordered on the bottom of the frame by a numbered horizontal ruler, as shown in this plate. This was a device used to mark the distance traveled by the subject and accurately calculate the range of his or her movement. The elements of spatial context, coupled with the presence of a measuring device in the image itself, lends a highly literal sense to Muybridge's scenes and heightens their legibility. By contrast, photodynamic images are significantly devoid of any context and communicate instead an acute sense of disorientation and ambiguity as to time and space.

Étienne-Jules Marey was a French scientist and physiologist. His interest in the mechanics of bodily movement, particularly in the phenomenon of flight, led to his experimentation with a camera. Marey's work diverges from Muybridge's in two key respects. Firstly, as a scientist Marey created his work for purely empirical purposes, and did not have any artistic inclinations to alter the results of his work according to idiosyncratic sensibilities as did Muybridge. Marey instead strove for scientific exactitude. In her seminal study of Marey, Marta Braun asserts: "A specific scientific question led to his becoming a photographer in the first place; his general scientific work set the terms for his photography. The photographs he produced are raw scientific

-

⁹³ I wish to thank Francesca Bongioanni of the Alinari Archives for allowing me the opportunity to view many original Muybridge plates.

data."⁹⁴ David Mather argues that the purpose of Marey's project lay in its link to materialist theories on the science of work and efficiency practices which concern the body as machine:

Marey treated the human body in the same way he treated animals and inorganic processes—as sources of data—that exhibit physical, measurable forces. His biomechanical method, thus, conformed to a basic tenet of mechanistic philosophy: he viewed humans as specialized machines—that is, as composites of physical, material, or mechanistic processes [...] he [reconceptualized] the human body in order to support and extend its productive capacities [and correct] physiological inefficiencies.⁹⁵

Secondly, while each of Muybridge's photographs pictured only a solitary movement of his subjects, Marey devised a method through which he was able to depict a range of consecutive movements within a single frame. Braun distinguishes between the two photographers succinctly: "whereas Muybridge had used multiple cameras to capture the shape of the horse's body at isolated phases of its motion, Marey wanted to give a visible expression to the continuity of movement over equidistant and known intervals, as his graphing machines had done, and to do so within a single image."

Gymnast jumping over a chair (Fig. 22) demonstrates how the physiologist used the camera to enrich his study of the body as a living machine. He strove in his wide, horizontal images to "depict the relationships in time and space of the various body parts" in motion, graphing the movement of his subject in a manner which in this image rather recalls medical graphs like the waves of an electrocardiogram test.

97

-

⁹⁴ Marta Braun, *Picturing Time: The Work of Étienne-Jules Marey (1830-1904)* (Chicago: The University of Chicago Press, 1992), xvii.

⁹⁵ Mather, "Energetic Excess," 127-128. Mather further explains how Marey's chronophotography relates to efficiency studies and labor practices on page 141.

⁹⁶ Braun, *Picturing Time*, xviii. Here Braun is referring to Muybridge's 1878 photographic study of galloping horses.

⁹⁷ Ibid., xvii. This is not an anachronistic comparison because the earliest versions of what we know as EKGs today were created starting in the early 1870s.

Like Marey, the Bragaglias also portrayed movement within a single image. This seems to be the only salient similarity between their two projects, however. Marey's photographs show a single subject from a distance moving along a clear linear trajectory, his body multiplied many times over in closely spaced or overlying frozen poses that reveal the successive phases of his movement. The images are intended to dissect the complex anatomical mechanics involved in the movement of a physical body clearly and minutely, which is why "in Marey's imagery the contours of each overlapping phase are sharp and distinct". 98 Muybridge also focused on the body as a corporeal entity photographed from a distance. His images focus on musculature through depicting an often nude or scantily clad subject engaged in a highly physical, strenuous activity such as jumping, running, and wrestling. Contrastingly, the Bragaglias' photodynamic images are tightly cropped in order to focus on expressions of their subject and purposely dissolve his form, extending it through space and making it something strange and much less intelligible than the figures of Muybridge and Marey.

Just as Bragaglia states that photodynamism portrays two kinds of dynamism—real, exterior movement and inner, psychic motion—the comparison between Muybridge, Marey and the Bragaglias demonstrates that there are also two types of real motion (movementism per Bragaglia) at play in these motion studies. Muybridge and Marey's images clearly depict a sequence of lucidly demarcated, finite linear time during which the subject or subjects travel between a clear point A and point B. This is not what happens in the real motion depicted within the photodynamic images. These images demonstrate a far less straightforward philosophy of the nature of time, which is

⁹⁸ Ibid., 268.

indivisible, has no clear stopping and starting points, and rather has a sense of rhythm and musicality.⁹⁹

A statement made by Ernst Gombrich in an essay entitled "Moment and Movement in Art" is apropos when considering the goals of the scientific motion photography of Muybridge and Marey versus the Bragaglias' intent behind their nearly abstract aesthetic in photodynamism: "the understanding of movement depends on the clarity of meaning but the impression of movement can be enhanced by a lack of geometrical clarity [...] the effect of turbulent movement is enhanced by this partial masking." The Bragaglias' purpose in creating their imagery was not to understand the scientific anatomical process of physical movement by portraying the minute, highly intelligible details involved therein like Muybridge and Marey, but rather to convey the "impression of movement" and the aspects of the human spirit which are revealed by motion. The reason that the Bragaglias' project was so different from Marey's and Muybridge's was that the former was motivated by vitalist principles and the latter studies by positivist philosophies. As David Mather wrote about Marey, "The scientist's analysis divided movement into static positions, completely missing an experiential dimension of activity [...] In effect, biomechanical inscriptions may partially describe the physical effects of invisible processes, but they cannot capture the spontaneous, irreducible forces of the human will". 101 The goal of the Bragaglias was to do just that.

⁹⁹ This stems from Henri Bergson's philosophy of time as *durée* (duration), which was a subjective conceptualization of time as a continuous, indivisible stream which is only understandable experientially. Bergson's impact on the Bragaglias will be discussed in Chapter IV.

¹⁰⁰ Ernst H. Gombrich, "Moment and Movement in Art", *Journal of the Warburg and Courtauld Institutes* 27 (1964): 304. In this excerpt, Gombrich is discussing a very different work of art, but he discusses a wide array of artworks and mediums in his essay in terms of the study of movement, and this quotation remains quite applicable to photodynamism.

¹⁰¹ Mather, "Energetic Excess," 165 & 128.

The Bragaglias' Relationship to Giacomo Balla

Unlike the Bragaglias' photodynamism, Balla's painted work was very much in line with and inspired by Marey's chronophotography. Most Futurist scholarship concerning the movement before the First World War makes some mention of the parallels existing between chronophotography and Balla's painting. This connection was also one made in the period and was a source of strife between Boccioni and Balla, similar to the conflict between Boccioni and the Bragaglias. Balla's photographically inspired painting and the Bragaglias' photodynamism have also been precipitously equated in much scholarship on the movement. However, the Bragaglias' photography evinces more substantial distinctions than similarities when compared to Balla's painting.

Balla was the Futurist artist who most embraced photography early on as a starting point for his creativity, a way to more fully express modern dynamism, and a legitimate art form in its own right. In a sense he was an outlier of the core Milanese group from the beginnings of the movement because he was older, formally trained and possessed a nature given to a wide range of experimentation. He was more receptive than the younger artists to other media and had an intense interest in the optical sciences which informed his iconographic focus within Futurism. His constant use of a photographic aesthetic in his paintings and his posing for the photodynamic portraits *Il pittore futurista Giacomo Balla* (Fig. 1) and *Le due note maestre* (Fig. 23) during this period testifies to his support of the medium and friendship with the Bragaglia brothers.

Like the Bragaglias, Balla's work was denigrated by Boccioni for his seeming dependence on the camera, but a major difference in the outcome of these two cases was that Balla had been Boccioni's teacher in the infancy of his artistic career, and was himself a practitioner of the privileged medium of painting. Boccioni respected and admired the older painter. This admiration arguably diminished somewhat over time as

Boccioni's own star rose and he increasingly needed to compete actively for legitimacy and recognition on an international stage, both for the success of his art and his group's. But certainly Boccioni needed Balla in the beginnings of the Futurist movement, which is evidenced by the fact that he pressed the older, more established artist- who was not a Futurist at the time- to sign the "Technical Manifesto of Futurist Painting" in order to lend the group more legitimacy.

Balla discovered Marey's chronophotography in 1900 at the Paris World's Fair and again at the 1911 Universal Exhibition in Rome, which featured a pavilion that was devoted to the genre of scientific photography and particularly highlighted the work of the French physiologist. ¹⁰² Following Balla's second exposure to Marey's work and his concurrent drafting into the Futurist group, he began producing paintings and drawings which focused on an optical study of motion primarily inspired by chronophotography. Balla's particular utilization of photography embraced a scientific, analytic approach to the study of movement that, like Marey's work, was a positivist study based ultimately in optical reality and motivated by a desire to amplify and augment human vision. Work from this period includes *Dynamism of a Dog on a Leash*, *Girl Running on a Balcony*, and *Rhythm of the Violinist* (Fig. 2, 9 & 24). The style of these early works clearly shows that Balla's mission was in line with Marey's, and that he was approaching the study of human movement with different levels of empiricism as well. For example, *Girl Running on a Balcony* shows his adolescent subject frozen in closely overlapping and repetitive,

¹⁰² Loïe Fuller also had a pavilion in the 1900 Paris World's Fair. Her connection to Futurism and the Bragaglias will be discussed in Chapter V on photodynamism and performance.

parallel sequential states of movement (Fig. 9). ¹⁰³ In studies for this work (Fig. 25- 28), Balla carefully plotted the footfalls of his young subject, in one study labeling them clearly *destra* (right) and *sinistra* (left) (Fig. 26). The impulse to graph movement in order to study it indicates Balla's fundamental understanding of Marey's scientifically motivated project and his positivist roots (Fig. 29). As Ester Coen writes about the series *Iridescent Interpenetrations* which Balla was soon to produce, "Aiming for the infinitesimal, molecular level of perception, Balla's vision was informed by principles of measurement and by empirical research into the representation of light and the separation of the colors of the spectrum [...] What saves these works from empty decorativeness is reality, always the beginning and end of Balla's art." ¹⁰⁴

The work of Balla and the Bragaglias has been aligned, both in the period by Futurist artists and critics like Boccioni and Sprovieri, and subsequently also in the majority of later art historical scholarship because it is widely believed that both of their projects were chronophotographic in nature. It is certainly evident that Balla was deeply influenced by Marey's chronophotography- much more so than the Bragaglias' photodynamism- and so it can be argued that in that respect, Balla's project is actually quite removed from the Bragaglias' photodynamism. The motivating, foundational occult element of photodynamism which made it a project not based solely on opticality make Balla's and the Bragaglias' work fundamentally irreconcilable if viewed simply from this angle.

Dynamism of a Dog on a Leash is not analytic in the same way as Girl Running on a Balcony, and evokes the nature of modern dynamism much more in its encapsulation of the fast-paced world of ladies' fashion. The speedy legs of the woman's dog are certainly highly blurred in comparison with the static nature of the latter image, however the arcs made by its legs can still be segmented into successive stages of movement.

¹⁰⁴ Ester Coen, "Giacomo Balla: The Most Luminous Abstraction," in *Inventing Abstraction, 1910-1925: How a Radical Idea Changed Modern Art*, ed. Leah Dickerman (New York: Museum of Modern Art, 2012), 125.

However, Balla's and the Bragaglias' work both approach abstraction, which is a link between their projects which cannot be ignored. As stated, the abstraction of the Bragaglias' photodynamic images stems from photodynamism's occult foundations. Conversely, Balla's move towards abstraction grew out of very different motivations that were based in the study of optical reality. Christine Poggi makes a compelling case in Inventing Futurism: The Art & Politics of Artificial Optimism that Balla used Marey's chronophotography as a conceptual starting point to gradually move toward abstraction, efforts which reached a culmination in his the aforementioned abstract series Iridescent Interpenetrations (Fig. 30- 33). 105 In Balla's early works, the flying hand of his violinist (Fig. 24) and scurrying legs of his dachshund (Fig. 2) are blurry and somewhat indistinct, though not to the same extreme as the appendages of the Bragaglias' figures. This abstraction in Balla's work is done for the purpose of evoking speed and dexterity. In Girl Running on a Balcony (Fig. 9), Balla's slight abstraction of the figure comes about as a result of his painterly enterprise which is close to that of Neo-Impressionist painters, in that he experiments with dappled brushstrokes and bright color in order to portray the effects of light. Though Balla was still dependent on a photographic aesthetic ultimately based in naturalistic figuration at this time, Poggi demonstrates how Balla's figure becomes highly schematized in his studies for Girl Running on a Balcony (Fig. 25-28), finally reduced to limited geometric signs that symbolize the body (Fig. 28). 106 This progressive breakdown of the figure and the overall naturalism of his work led to Iridescent Interpenetrations, in which luminous color and geometric form have fully supplanted the human figure (Fig. 30-33).

¹⁰⁵ Chapter Four of Poggi's text is incredibly illuminating in this regard. See Poggi, *Inventing Futurism*, 109-149.

¹⁰⁶ Ibid., 121.

Therefore, while the reasons that Balla and the Bragaglias' abstracted their subjects are different, this is an element that surprisingly links their two projects and additionally separates Balla's from Marey's, who as a scientist studying the body in great detail was not at all interested in abstraction. This proves that Balla was not only motivated by an empirical interest in optics, but also by formal artistic experimentation and the expressive evocation of sensorial qualities and phenomena. His artwork therefore conceptually occupies a place in between Marey's scientific work and the Bragaglias' photodynamism. Though Balla's artwork was much more heavily inspired by scientific motion photography, the gradually increasing levels of abstraction in his work demonstrate that it is a mistake to characterize Balla as only having been motivated by chronophotography, just as it is a mistake to do so with photodynamism.

CHAPTER IV

ESOTERIC FOUNDATIONS: PHOTODYNAMISM, OCCULT PHOTOGRAPHY AND RUSSOLO

"When a person gets up, the chair is still full of his soul..."

-Anton Giulio Bragaglia¹⁰⁷

The bulk of Futurist research on photodynamism discusses these images solely in relation to the aforementioned 19th century scientific motion photography and early cinematography. Surprisingly, very few scholars have seriously investigated the influence of occult photography and thought on photodynamism, which is actually of much greater import to the Bragaglias' project than was scientific motion photography. This will be demonstrated through an analysis of the impact of occult photography and thought on the photodynamic images and theory, the influence of Henri Bergson's vitalist philosophy, and the Bragaglias' relationship with a similarly esoteric founding Futurist, Luigi Russolo.

Conceptually, scientific motion photography and occult photography are poles apart. In *Beyond Light and Shadow*, Rolf H. Krauss states that there is a binary classification in the "photography of the invisible," which this thesis carries forth: one type "psychic and spiritistic, the other strictly scientific." Photodynamism has affinities with both types. It is grounded in an empirically scientific study of physical movement, but the movement represented is abstracted and the language used to elaborate the theory behind the work is articulated in terms that reflect the deeply occult beliefs of the

¹⁰⁷ Anton Giulio Bragaglia, quoted in Caroline Tisdall & Angelo Bozzolla, *Futurism* (New York & Toronto: Oxford University Press, 1978), 140. Quoted therein without original citation.

¹⁰⁸ Rolf H. Krauss, *Beyond Light and Shadow: The Role of Photography in Certain Paranormal Phenomena: An Historical Survey.* Munich: Nazraeli Press, 1995.

author. In this way, the photodynamic project works against a positivist philosophy and towards a more intuitive knowledge about the nature of motion, space and time, and so is ultimately more closely related to occult photography and thought than scientific photography. Importantly, although photodynamism shares with these two genres the same obsession with photographing the invisible, it does not aim to do so by achieving visual clarity in the images. Contrastingly, the aim of both scientific motion photographers and occult photographers was ultimate legibility for the viewer, though for very dissimilar reasons.

The Influence of Occult Photography & Thought on Photodynamism

Practitioners of occult photography can generally be divided into two major branches of occult belief: Spiritualism and Animism. This genre of photography was produced in the late 19th and early 20th centuries by proponents of the Spiritualist and Animist religious movements in attempts to envisage lost loved ones again and attain proof of an incorporeal realm existing beyond the physical. The terms "occult" and "spiritualist" are multivalent and rather slippery, but for the purposes of this thesis they can be understood to refer to an esoteric belief in the existence of an immaterial spiritual realm which goes beyond the limitations of rational scientific principles. Like Muybridge and Marey, occult photographers intended their images to be highly comprehensible. Spiritualist photographers needed to achieve or feign a certain level of legibility in order to pass off their 'ghosts' as dead loved ones or recognizable public figures. While Animist photography was sometimes visually perplexing, most Animist imagery

¹⁰⁹ This is largely due to the influence of Bergson's philosophy.

¹¹⁰ This background on Spiritualism and Animism, except when otherwise cited, has been derived chiefly from Clément Chéroux's extensive catalogue for the Metropolitan Museum of Art, *The Perfect Medium: Photography and the Occult*. Clément Chéroux, ed, *The Perfect Medium: Photography and the Occult* (New Haven, CT: Yale University Press, 2005).

(generally termed effluviographs or electrographs) clearly indicated in some way the physical source of the emanations of "vital fluid," which were usually a medium's hands and digits. Louis Darget's thought photographs, for example, which were especially difficult to decipher, were usually labeled with an explanatory caption from the artist, such as his *Fluidic photograph of thought, "Anger" (23 June 1896)* (Fig. 34), which read: "Anger. Plate placed for 10 minutes above the forehead of a very angry person."

Spiritualism¹¹² was predicated on the central dual beliefs that the human spirit could survive the death of the physical body, and that the spirit world could communicate with the living through the agency of mediums. Janet Oppenheim states that driving force behind the movement's wild popularity were "the thousands [of] men and women who searched for some incontrovertible reassurance of fundamental cosmic order and purpose, especially reassurance that life on earth was not the totality of human existence." ¹¹³ It was initially thought that Spiritualist photography provided incontrovertible proof of the existence of a spiritual realm through partial and "full-form materializations" of spirits, which rejoined the living in portraits after being summoned forth by mediums. Many people were highly skeptical of Spiritualism's legitimacy from the start, but became especially so when photography enlisted in its cause in the 1860s. Spirit photography polarized Victorian societies, dividing the public and the intellectual

¹¹¹ Clément Chéroux. The Perfect Medium. 151.

¹¹² Though the foundations of Spiritualism can be traced to the late 18th century European writings of Emanuel Swedenborg and Franz Anton Mesmer, Spiritualism was not popularized until later in the mid-19th century United States, especially in the wake of huge losses from the Civil War. From there it quickly spread to other countries, primarily France and England.

¹¹³ Janet Oppenheim, *The Other World: Spiritualism and Psychical Research in England, 1850-1914* (Cambridge: Cambridge University Press, 1985), 2.

community into either staunchly supportive or highly incredulous camps.¹¹⁴ It has since been proven that Spiritualist photography was produced through charlatan practices; the majority of the images were made by reusing previously exposed photographic plates— a practice commonly known as double exposure— as well as superimposing separately photographed images.¹¹⁵ The fascinating paradox of spirit images was that despite a number of highly publicized trials in the mid-1870s which proved that prominent Spiritualist photographers like William H. Mumler and Édouard Isidore Buguet (Fig. 35 & 36) had produced their photographs entirely through technical trickery, many who had originally believed they had seen their dead loved ones in these portraits refused to abandon their faith in the authenticity of these images.

The term Animism has several complex meanings and historical theories attached to it. 116 It is generally characterized as an old occult belief or worldview that all living natural objects, including humans, animals, and plants, have a soul (*anima*), which is their spiritual essence. Animist and Spiritualist ideologies are fundamentally opposed. Pierre Apraxine and Sophie Schmit have explained the theoretical disjunction between

¹¹⁴ Well-known scientists and writers such as Camille Flammarion, Charles Richet, and Sir Arthur Conan Doyle helped to legitimate this genre of photography, while other diverse institutions and individuals such as the Society for Psychical Research and Harry Houdini endeavored to expose the deception of many Spiritualist photographers, a large number of whom were later forced to publicly admit their cons.

¹¹⁵ Other less typical means included the use of small hand-held devices like William Hope's "ghost stamp," which imprinted phantom-like traces on sensitized plates. Chéroux, *The Perfect Medium: Photography and the Occult*, 74-75.

The name Animism was coined in the 19th century by English anthropologist Edward Tylor to reference "a theory on the origins of religion [...] [concerning] the primordial mistake of primitive people who attributed life and person-like qualities to objects in their environments [...] [people who] did not make the same categorical distinction between nature and culture, since they treated objects as if they possessed the capacity for perception, communication, and agency." This highly problematic Eurocentric theory was based on a clear evolutionary hierarchy and "built on the widespread assumption of the time that primitive people were incapable of assessing the real value and properties of material objects." Anselm Franke, "Much Trouble in the Transportation of Souls, or: The Sudden Disorganization of Boundaries," in *Animism, Volume I*, ed. Anselm Franke (Berlin & New York: Sternberg Press, 2010), 11-17 & 12.

the two in this way: "The spiritualists believed that occult phenomena originated in the beyond (the dead), while the animists thought they resulted from the powers of the mediums (the living)." Therefore, since photodynamism was concerned with the real movements of living men, not ghosts, it was closer to Animist beliefs in this way.

Interestingly, while photography was seen by both Spiritualists and Animists as an essential tool for providing proof of their beliefs, the Animists did not require the intervention of the camera: "Fluids emanating from the mediums- the vital force, the soul, and also thoughts, feelings, and dreams- were directly captured on the photographic plate". The French researchers Hippolyte Baraduc and Louis Darget were among the chief exponents of Animist photographs of fluids, such as Baraduc's *Photograph of the fluidic nimbus of a medium's thumb* (Fig. 37). Aspects of the Bragaglias' photodynamic images and theory demonstrate that they drew from elements of **both** Spiritualist and Animist photography and beliefs, despite the fact that these were opposed occult systems.

Giovanni Lista, Marta Braun and David Mather are the only scholars who have considered the link between the Bragaglias and occult photography and thought. Lista and Braun do not consider this link to amount to much, though Braun's take on this relationship in her essay "Anton Giulio Bragaglia: Photodynamism and Photospiritism" is more probing than Lista's passing reference to the subject. Braun asserts that this

¹¹⁷ Pierre Apraxine and Sophie Schmit, "Photography and the Occult," in *The Perfect Medium: Photography and the Occult*, ed. Clément Chéroux (New Haven, CT: Yale University Press, 2005), 15-16.

¹¹⁸ Ibid., 16.

¹¹⁹ Tom Gunning also briefly mentions the fact that Bragaglia produced spirit photography, but he only states that Bragaglia does not hide the fact that these were manipulated photographs, and like Braun states that Bragaglia meant them mainly as a corrective for spirit imagery produced by others concurrently and in the past. He does not discuss a connection between this imagery and photodynamism. Tom Gunning, "Haunting Images: Ghosts, Photography and the Modern Body," in *The Disembodied Spirit*, ed. Allison Ferris, (Brunswick, ME: Bowdoin College Museum of Art, 2003), 16.

connection to the occult stems from "Bragaglia's belief in the transcendental power of photography," "grounded in the avant-garde's fascination with the invisible." However, Braun primarily confines the direct influence of occult photography on Bragaglia to a very short period in 1913, and cites only nine images as his "photospiritist experiments." She argues that these images constituted Bragaglia's attempt to make more convincing versions of occult photographs. Braun states that Bragaglia produced these experiments from a single self-organized séance in 1913, which he presided over as medium with the knowledge that mediums could not *actually* call forth spirits in material form. Indeed, Braun and Lista both write that for Bragaglia, arranging this séance and producing photographs of it was an "ironically fabricated" joke. 123

However, an analysis of the photodynamic theory and aesthetic evidences that occult photography and thought had a strong, formative influence on the photodynamic project throughout its entire life from 1911 to 1913, rather than being limited to a few farcically conceived experiments and constituting a small, anomalous part of the Bragaglias' photographic oeuvre, as Braun and Lista suggest. Mather agrees with this argument that photodynamism was more seriously related to the occult experimentation, however, he does not analyze this connection in an extended way. The central interests that occult photographers had in picturing the invisible world and making the

¹²⁰ Marta Braun, "Anton Giulio Bragaglia: Photodynamism and Photospiritism," in *Shock Waves: Photography Rocks Representation*, ed. David Dorenbaum et al (Montrèal: Dazibao, 2003), 86 & 94.

¹²¹ Ibid., 86.

¹²² Ibid., 92.

¹²³ Lista, Futurism & Photography, 28.

[&]quot;When the Bragaglias left futurism in the fall of 1913, they simply continued their research into immaterial emanations in a more explicitly occult context. Their images of evanescent substances and otherworldly beings comprised a spiritualist turn that was not inconsistent with the ethereal assumptions of photodynamism, however". Mather, "Energetic Excess," 184.

psychic aspects of life visible were similarly paramount to the Bragaglias, which is clear in the photodynamic images and theory. The theoretical parallels between photodynamism and occult photography demonstrate a link between the two which existed before Anton Giulio Bragaglia conceived of staging that purposely pseudoscientific séance in late 1913, the photographic products of which appear quite stylistically removed from photodynamism.

Figures 38 and 39 are two of the images from Bragaglia's séance, which he reproduced in an article written in 1913 entitled "I fantasmi dei vivi e dei morti". 125 It is important to note that these images were self-consciously produced through a very different technique than the photodynamic images; they were created through the techniques so commonly used by occult photographers, double exposure and superimposed images. This is significant because it indicates that the intention behind each set of images is very distinct. A brief stylistic comparison between figure 38 and the general style of photodynamic images also evidences major differences. The séance photograph contains greater context. The background interior setting is legible, and there are a larger number of figures present than in any photodynamic image. These figures are passive participants and witnesses of the séance. They are unmoving and their features are clearly delineated. The sole figure in this image that is somewhat stylistically comparable to the photodynamic subjects is the so-called spiritual double of

-

This translates to "The Phantoms of the Living and the Dead". The title of this thesis has been adapted from this article's title. My exclusion of "the dead" has been done to emphasize the Bragaglias' core interest in photographing the movement and motion of *living* men. The particular aesthetic of photodynamism, wherein the integrity of form is destroyed by movement and light, makes phantoms of these living subjects. Tom Gunning has written about occult photography: "the ontology of the phantom" is "its mode of existence ambiguously perched between [...] the material and the incorporeal." (Gunning, "To Scan a Ghost: The Ontology of Mediated Vision," 103.) This theorization is highly applicable to the photodynamic images. Additionally, this title underscores the connection between Henri Bergson's occult vitalist philosophies and the Bragaglias' photography, since it is close to the title of a paper given by Bergson in 1913 entitled "Phantasms of the Living' and 'Psychical Research".

the seated middle figure in a trance (Bragaglia himself). This figure rises from the left side of the sitter, turned in profile and formally clad. He is blurry and spectral, qualities which link this etheric double to the photodynamic subjects. *L'uomo che si leva* (Fig. 40) seems to deal particularly with the concept of the spiritual double expounded by Bragaglia's group séance image and by many spirit photographers, as can be seen in William H. Mumler's image entitled *Master Herrod and his double* (Fig. 35). However, photodynamic images contain many more disparities than similarities compared with Bragaglia's séance imagery because these projects were very differently motivated. This does not prove, though, that photodynamism was largely unrelated to occult thought and photography.

Certainly Braun and Lista are correct in saying that Bragaglia's staging of the séance and producing manipulated images of it was somewhat tongue-in-cheek, particularly since Bragaglia qualified the captions of his images in his 1913 article with the word "trucco," which among its several meanings translates to trick, ruse, and scam. However, the undeniable links between the photodynamic aesthetic, manifesto language, and Anton Giulio Bragaglia's later 1913 and 1914 articles on occult theory and photography demonstrates that occult imagery and thought had a strong hold on them, from at least their Futurist beginnings. All of Bragaglia's writings and the brothers' Futurist photographs demonstrate a deep conviction in the existence of spirits of the living and the dead, the inner vibrating soul of every living man, and in the potential for exploring these themes- which were the very conceptual underpinnings of Spiritualism and Animism respectively- through the photodynamic project from its inception.

¹²⁶ Bragaglia's 1914 article was entitled "La fotografia dell'invisibile," which translates to "Photography of the Invisible." His 1913 and 1914 articles were published and reprinted with small additions in several cultural journals: *La Cultura Moderna, Humanitas*, and *La Fotografica Artistica*.

The Influence of Bergson on Photodynamism

Much of the language in *Fotodinamismo futurista* and in Bragaglia's articles on the occult which concerns the spiritual aspects of motion is indebted to the French philosopher Henri Bergson. In addition to the other countless European intellectuals of myriad disciplines who attended his lectures and read his work, Bergson had a substantial influence on the Futurists. Much scholarship has been written about the enormous impact that he had on avant-garde artists in the early 20th century, including the Futurists. Several of Bergson's most central concepts and theories of the *élan vital*, the trace, memory, and time also clearly had a formative effect on Bragaglia's photodynamic theory.¹²⁷

Bragaglia discusses Bergson's philosophy both implicitly and explicitly in his manifesto. He positions photodynamism against cinematography and chronophotography because, rather than breaking movement apart and "shattering" action, photodynamism synthesizes it in a fluid, unbroken trajectory which serves as a visual demonstration of Bergson's theory about time as a form of energy which "flows in a continuous and constant stream." Bragaglia reinforces the centrality of the visual trope of the trajectory constantly in his manifesto; this concept owes directly to the Bergsonian concept of time as ongoing durational flux which cannot be separated, divided or broken down but rather flows like an unceasing current. Additionally, Bergson's concept of the omnipresent *élan vital* is significant to Bragaglia, a fact which is

_

¹²⁷ Bergson's key works which have been consulted, though most have not been directly cited, are *Time and Free Will: An Essay on the Immediate Data of Consciousness* (1889), *Matter and Memory* (1896), *Creative Evolution* (1907), and *Mind-Energy: Lectures and Essays* (1920). The secondary sources on Bergson which have been consulted (although also not all are cited) are: Suzanne Guerlac, *Thinking in Time: An Introduction to Henri Bergson* (Ithaca & London, Cornell University Press, 2006) and John Mullarkey, *The New Bergson* (Manchester: Manchester University Press, 1999).

¹²⁸ Bragaglia, "Futurist Photodynamism (1911)," 369.

demonstrated in his repeated characterization of the photodynamic images as an expression of the "vibration of life," the "spirit of living reality," the "living sensation" of motion, and "a vertiginous lyrical expression of life which vividly invokes the magnificent dynamic feeling with which the universe incessantly vibrates." 129

Bragaglia mentions Bergson once by name in section 28 of *Fotodinamismo futurista*. He quotes: "Bergson has written that, "In the living mobility of things, the mind is concerned with registering their real, or virtual locations, or else it takes note of their departures and arrivals. That is all that matters to human thought, to the extent that it is simply human. To grasp what happens in the intervals in between is more than human." Bragaglia thus relates his concept of "intermovemental states" directly to Bergson's intervals. He implies that photodynamism is the artistic expression that best exemplifies Bergson's theory of motion and time because it is a synthetic vision which "transcends the human condition." Photodynamism does this by showing a view of motion and movement which is not accessible via the naked eye, but can be arrived at through this particular brand of research which is hypersensitive and *both* artistic and scientifically analytic, combining the abilities of the human and mechanical eye.

Bragaglia briefly mentions 19th century English philosopher Herbert Spencer in section 25 of his manifesto in order to provide a philosophical counterpoint to his (and consequently Bergson's) theory of continuous, perpetual motion. Bragaglia refers to Spencer's 1860 masterwork *First Principles of a New System of Philosophy*, specifically citing Spencer's concept of the rhythm of motion in his "Laws of the Knowable".

¹²⁹ Ibid., 365-377.

¹³⁰ Ibid., 376. This quote is accompanied by a citation from editor Lawrence Rainey on page 379, which says "Bragaglia's source for this quotation has not been located." Nevertheless, the fact that Bragaglia guotes Bergson directly in his manifesto is what is significant.

¹³¹ Ibid.

Bragaglia states that Spencer believes motion to be "simple and finite," implicitly setting the English philosopher in direct opposition to Bergson. 132 Bragaglia asserts that photodynamism can expand on and complicate Spencer's view of motion:

[...] every vibration is the rhythm of infinite minor vibrations, since every rhythm is built up of an infinite quantity of vibrations. If human consciousness has hitherto been conceived and considered as movement in its general rhythm, it has fabricated, so to speak, an algebra of movement. This has been considered as simple, as finite (see Spencer, First Principles, "The Rhythm of Motion"). But Photodynamism has revealed and represented it as complex, raising it to the level of an infinitesimal calculation of movement (see our most recent works. e.g. The Carpenter, The Bow, Changing Positions). 133

The Bragaglias' use of a still camera, moving subject, and long exposure produce a trajectory of movement, within which the "intermovemental" fractions of time are represented; because photodynamism is able to portray those microscopic slivers of time which have never before been made visible, he argues that their form of photography is therefore an "infinitesimal calculation of movement". Bragaglia goes on to explain that this calculation is achieved through a process which combines an analytic representation of movement with a synthetic representation. 134 He says this combination thereby improves on Spencer's purely mathematical theory of movement. Indeed, Bragaglia's views must have been contrary to Spencer's on a number of points besides

¹³² Bergson, in fact, disagreed with a number of Spencer's theories himself, chiefly Spencer's theory of evolution. Suzanne Guerlac provides a discussion of this in her book on Bergson, saying that he found in developing his own theories of the true nature of time that "Spencer had produced a theory of evolution that managed to immobilize time," that under Spencer's rubric the quintessential "process of becoming" "had been subsumed by a static mechanistic analysis". Bergson's problems with Spencer's theory of evolution therefore appear quite compatible with Bragaglia's issues with Spencer's theory on the nature of motion as finite. Guerlac, Thinking in Time, 26-28.

¹³³ Bragaglia, "Futurist Photodynamism (1911)," 372.

¹³⁴ Ibid. Bragaglia argues in this same section on algebra that photodynamism is to an extent analytic because points of photodynamic images can be somewhat graphed algebraically through their various curves and axes. However, these images are ultimately synthetic; elements are fused and amalgamated in movement, and therefore any sense of mathematic regularity or decipherability is in the end overcome.

this, as Spiritualist supporter James Coates also wrote in 1911 that Spencer "[dismisses] psychic facts [...] on *a priori* grounds". 135

Although less work has been done on the relationship between Bergson and the Bragaglias than between the philosopher and more well-known Futurists like Boccioni, the occult themes and concerns which were significant to both parties have not often been discussed in scholarship. Bergson's anti-positivist theories, imbued with anthropocentric spirituality, constituted a radical epistemological break with a scientific worldview, especially as concerned the nature of time and matter, since he considered them to be about immeasurable inner psychic experience. In short, Bergson thought these concepts understandable only through human intuition and the inner workings of the human soul (âme) and mind (esprit), rather than by immutable laws explicable through natural external phenomena. His anti-reductive, vitalist philosophy certainly would have been attractive to Bragaglia, who wanted to represent motion as infinitely complex and spiritual rather than simple and scientifically explicable.

Bergson additionally has an interesting relationship to the occult thought and photography thus far discussed. In 1913, he was elected President of the Society for Psychical Research in London, in which capacity he served for the duration of the year. Upon election he delivered a presidential address entitled "Phantasms of the Living' and 'Psychical Research". This paper affirms his vitalist position on the side of the psychical researchers in terms of the work needed to be done on "the science of mind". Though Bergson chiefly talks in generalities of psychic phenomena in this address, mentioning only telepathy and clairvoyance specifically, he comes across as largely critical of modern science for being short sighted and limited in terms of the topics of current

_

¹³⁵ James Coates, *Photographing the Invisible: Practical Studies in Spirit Photography, Spirit Portraiture, and Other Rare but Allied Phenomena* (New York: Arno Press, 1911), 141.

investigation in the field. Bergson says that scientists have thus far studied only what can be measured and asserts that it is a major oversight that what is not quantifiable in terms of standards of mathematics-like "the mental life"- is ignored by modern science. 136 He spoke in this address of the differences between the mental life and the cerebral life¹³⁷, and of what he considers to be the established fact that the soul survives death of the body, which as mentioned is a central Spiritualist tenet.

In his address, Bergson does not speak more concretely about certain phenomena or the work of the society members, and he certainly refrains from identifying with any one branch of occult thought. Suzanne Guerlac notes that he and his followers have since been affiliated with Spiritualism. 138 He likely viewed this association favorably, since it is documented that Bergson was in regular attendance at the séances held by Italian medium Eusapia Palladino in the early 20th century. 139 However, Bergson's philosophy, in addition to its already discussed affinities with photodynamism. does seem to have a particularly close connection to Animism and Animist photography, particularly the fluidic and thought photography of Baraduc, Darget, Adrien Majewski and Hermann Schnauss (Fig. 41 & 42). The goal of these photographers to reveal the vital fluid and force emanating from within the human body was based on a similarly vitalist

¹³⁶ Henri Bergson, *Mind-Energy, Lectures and Essays*, trans. H. Wildon Carr (New York: Henry Holt and Company, 1920), 87.

¹³⁷ Bergson explains the distinction thusly: "[...] the cerebral phenomena are to the mental life just what the gestures of the conductor are to the symphony: they mark out the motor articulations, they do nothing else. In other words, we should find nothing of the higher workings of the mind within the cerebral cortex. Except its sensory function, the brain has no other part than to play, in the full meaning of the term, the mental life." Ibid., 92.

¹³⁸ Guerlac, *Thinking in Time*, 22.

¹³⁹ Chéroux. The Perfect Medium. 249.

¹⁴⁰ The photographs of Majewski and Schnauss are reproduced in *The Perfect Medium* catalogue.

philosophy concerned above all with the soul. Their photography poignantly evokes Bergson's philosophy as a visual expression of the *élan vital*.

In "I fantasmi dei vivi e dei morti," Bragaglia makes statements which legitimate Animist photographs in terms of his own occult theories. Bragaglia mentions Darget by name; he references his thought photography and legitimates his work by affirming that what he calls the "mental body"- or the "will, intelligence, conscience [and] elevated thought" of the soul- is capable of being photographed. Bragaglia does later invalidate Spiritualist photography¹⁴¹ but he certainly affirms Animist photography, which indicates that he did not view all occult photography as farcical, as Lista and Braun argue.

The language used throughout the theoretical section of Bragaglia's "I fantasmi dei vivi e dei morti" evidences a certain link to Bergson's philosophy. This subsequently connects Bragaglia's occult article to *Fotodinamismo futurista* because of the manifesto's same dependence on the French philosopher. The shared language and theoretical basis proves, above all other considerations, that Bragaglia's occult writings and photography cannot be rightly or fully considered a joke, and have a strong relationship to the brothers' Futurist work. Bragaglia's entire theory in the 1913 article is predicated on the soul as an animating force and the presence of the *èlan vital*, without explicitly referencing Bergson's concept. He says that the physical matter of the body is "animated by the autonomous force that is the spirit." He speaks of the human body and soul as "more emotional and instinctive, therefore, not rational"; this accords with

-

¹⁴¹ He does this by both producing his own séance images through the same technical means used by photographers who were earlier indicted such as Mumler and Buguet, and additionally when he refutes the contemporary work of Spiritualists Enrico Imoda and Charles Richet in the closing of this article. See: Anton Giulio Bragaglia, "I Fantasmi dei vivi e dei morti," *La Cultura moderna*. *Natura e Arte* 23 (1913): 763-764. Translated by Jamie Richards.

¹⁴² Anton Giulio Bragaglia, "I Fantasmi dei vivi e dei morti," 756. Translated by Jamie Richards.

Bergson's vitalist position. 143 The body and soul work in concert, but are ultimately independent from each other and able to be divided. He repeats multiple times that the soul vibrates, which is a principle derived from both Bergsonian theory and Futurist theory like Boccioni's. 144 The soul, much stronger than its bodily shell, survives the death of the body and is a "force [that] is indestructible in an absolute sense". 145 This echoes not only Bergsonian precepts but was also expounded by Spiritualists and Animists.

Finally, Bragaglia is speaking of the various evolutions which the soul undergoes during the course of a life cycle when he says "It is not uncommon, during its evolution in the ether, for the soul to appear as exteriorized". 146 In the following paragraph, he states that these exteriorizations can be made by the efforts of a medium, but the quoted statement seems to also be highly applicable to photodynamism as the exteriorization of the soul on film. All of these connections have been cited for the purpose of demonstrating that Bragaglia's so-called short phase of occult experimentation was not a joke on the artist's part. Indeed, that the photodynamic project has a deeply occult foundation and can be more fully understood because of it.

Fotodinamismo futurista arguably demonstrates that Bragaglia was more of an occult bent than most of the other Futurist artists, at least as evidenced through an

¹⁴³ Ihid

¹⁴⁴ This is because Boccioni was also highly influenced by Bergson. For a nice discussion of the relationship between Boccioni and Bergson, see Brian Petrie's article. Brian Petrie, "Boccioni and Bergson," *The Burlington Magazine* 116 (852): 140-147.

¹⁴⁵ Anton Giulio Bragaglia, "I Fantasmi dei vivi e dei morti," 756. Translated by Jamie Richards.

¹⁴⁶ Ibid., 757.

analysis of their manifestos. ¹⁴⁷ As demonstrated in Chapter II, Bragaglia's theoretical principles expounded in his photographic manifesto were most highly related to Boccioni's theories. An analysis of related statements by each artist may be enlightening in regards to an argument for the greater occult bent of Bragaglia. In a statement which defines his theory of simultaneity, Boccioni wrote "Our bodies enter into the very sofas we sit on and the sofas themselves enter into us, in the same way as the passing tram enters into the houses which, in their turn, hurl themselves on the tram and become one with it". ¹⁴⁸ This has a connection with a statement made by Bragaglia because both concern the trace and interpenetration of bodies. Bragaglia wrote, "When a person gets up, the chair is still full of his soul". ¹⁴⁹ These quotes evidence a conceptual difference between the two artists.

As evidenced in Boccioni's quote and its subsequent demonstration in his painting *The Street Enters the House*, he is concerned with a physical, tangible interpenetration of bodies (Fig. 11). He accords no higher significance here to either the human body or to the inanimate objects- sofas, tram, or houses. Contrastingly, Bragaglia's statement, illustrated best in the photograph *L'uomo che si leva* (Fig. 40), accords greater significance to the human being than the object which he acts upon, and above all is concerned with the aura of the soul and not the physical body. His statement expresses the belief that the soul leaves traces in spaces that the bodily shell no longer inhabits, and the belief that photodynamism can capture and visually translate the impact which the soul leaves on its surroundings. He writes in his manifesto of wanting

¹⁴⁷ The most likely exception for this would probably be Luigi Russolo. Russolo, however, was one of the only Futurist artists who never wrote a manifesto concerning his visual artwork, although he did write one about his music entitled *The Art of Noises* (1913). This manifesto does not contain explicitly occult themes, however.

¹⁴⁸ Ester Coen, *Umberto Boccioni* (New York: The Metropolitan Museum of Art, 1988), xxii.

¹⁴⁹ Bragaglia, quoted in Caroline Tisdall & Angelo Bozzolla, *Futurism*, 140.

to show through photodynamism the "inner, sensorial, cerebral and psychic emotions" of their subjects. This clarifies that his intent was not only to photograph the physical body, but significantly to photograph the body and soul, thereby transforming the body into something both material and yet immaterial, akin to spiritual energy.

Photodynamism had rooted affinities with the main tenets of occult Spiritualist belief, Animist belief, and Bergsonian philosophy concerning the existence of the spirit world and the inner souls of men. Its fundamental grounding in and iconographic focus on the human being connects photodynamism certainly to these occult movements and photographs, which were at heart figurative and concerned with how to visualize what was invisible about humans and communicate with the dead. Thus, photodynamism can be more fully understood as having emerged from Bragaglia's conflation of the opposed occult theories of Spiritualism and Animism¹⁵¹, Bergsonian philosophy, and the Futurist theorization of dynamism.

The Bragaglias' Relationship to Luigi Russolo

Luigi Russolo was one of the original members of the circle of Milanese Futurist painters. He helped theorize and sign the "Technical Manifesto of Futurist Painting," and later invented Futurist theories of music and the *intonarumori* instruments. He was not academically trained, but (or perhaps because of this) was highly receptive to the artistic potential of other media, such as photography and music. In addition, next to the Bragaglias, Russolo was certainly the most occult-minded member of the Futurists. Russolo has strong aesthetic and theoretical affinities with the Bragaglias which it is a mistake to overlook, but which have not often been considered in scholarship. These

¹⁵⁰ Bragaglia, *Fotodinamismo futurista*, 45.

¹⁵¹ Bragaglia briefly references Theosophy in "I fantasmi dei vivi e dei morti" as well. However, Theosophy is relatively minor in his theory compared to other branches of occult belief.

can be found not only in a stylistic comparison of Russolo's painting with the Bragaglias' photography, but additionally in the occult thought which underlies all of Russolo's artistic experiments.

In fact, the argument made in this thesis concerning the Bragaglias' relationship to occult thought and photography is quite similar to the tack Luciano Chessa takes in his recent book *Luigi Russolo*, *Futurist: Noise, Visual Arts, and the Occult.* ¹⁵² Chessa's main thesis is that Russolo's deep and fundamental interest in the occult informs his work from the beginning of his Futurist activity, rather than constituting a later anomalous part of his oeuvre. Chessa disagrees with scholars such as Lista who have argued this by finding evidence of occult thought in Russolo's early paintings, music experiments and musical theory. His main thesis in his text is that none of Russolo's creative activity, whether in the visual or aural arts, can be separated from his belief in occult thought. This is a similarity that closely binds Russolo's conceptual creative activity to the photodynamic project.

Not only does Russolo's painting demonstrate an interest in spiritual motion akin to the Bragaglias' photodynamism, but an inscription on the back of one of his drawings shows proof that he supported Bragaglia. Russolo wrote on the verso of his 1918 mixed media drawing *Ballerina + Dynamism*: "FOTOFUTURISTA/ 6-12-1918/ all'amico Anton Giulio Bragaglia/ L. Russolo." (Fig. 43 & 44) In addition to the undisputable fact that his drawing draws on the pictorial language of chronophotography, the product of which is a vibrating ballerina whose movement results in a multiplication of appendages, Russolo's dedication on the verso in support of his friend Bragaglia is also quite

. _ .

¹⁵² Luciano Chessa, *Luigi Russolo, Futurist: Noise, Visual Arts, and the Occult* (Berkeley & Los Angeles: University of California Press, 2012).

¹⁵³ This translates as: "Photofuturist/ 6-12-1918/ to my friend Anton Giulio Bragaglia/ L. Russolo." Drawing and inscription reproduced in Maurizio Fagiolo dell'Arco and Giuseppe Sprovieri, *Futurism, Selected Works and Documents* (Roma: De Luca Editore, 1984), 39-40.

interesting. Firstly, this is a unique appearance of the hybrid term 'fotofuturista'. The very combination of terms shows that Russolo did not find the two incompatible, as did Boccioni. This dedication also shows that Russolo saw a conceptual link between the Bragaglias' photodynamism and his own artistic expression of dynamism; his interest in the Bragaglias' work must have existed before Boccioni forced the Bragaglias out of the Futurist circle, although this drawing is from 1918. A fact which would support this is that Russolo is the subject of one of the Bragaglias' earliest photodynamic images from 1911, *Il fumatore* (Fig. 45). 154 This image fits seamlessly into the style of the photodynamic works and is not an emblematic portrait in the way that the Bragaglias' other portraits of Futurists artists are, such as their portrait of II pittore futurista Giacomo Balla (Fig. 1) or Ritratto polifisionomico di Boccioni (Fig. 4).

Like Balla, Russolo's paintings show the artist utilizing a rather literal chronophotographic aesthetic couched in the Futurist language of dynamism. However, Russolo's work is motivated by underlying occult beliefs, unlike Balla's. Russolo's 1912 painting Plastic Synthesis of a Woman's Movements is a clear demonstration of a chronophotographic aesthetic used to prove occult beliefs; the central, frontal female figure is multiplied by concentric parallel bands emanating from her curvy figure which evidence her aura vibrating throughout space (Fig. 46). Russolo's work differs from the Bragaglias' in the effect of the traces left by the figure moving through his or her environment. His alternatively concentric and linear vibrations echo and emphasize the form of the figure. This serves to increase the sense of the solidity and density of the figure, as in this image where the parallel vibrations follow the contour of her waist and flared skirt. This visual language by which concentric circles communicate the density of

¹⁵⁴ Lynne Warren, ed., *Encyclopedia of Twentieth-Century Photography* (New York: Routledge, 2006), 157.

the pictured objects and their surrounding environment is confirmed in another Russolo painting from 1912 entitled *The Solidity of Fog* (Fig. 10). As the title suggests, in this work the gaseous environment and the figures in it are rendered as opaque and corporeal. The streaky residual traces of the moving figures in the Bragaglias' photodynamism, however, contribute to the overall transparency, permeability and dematerialization of the corporeal form, as evidenced in images like *Cambiando positura* (Fig. 7).

Russolo chiefly believed in the tenets and theories of Theosophy, such as synesthesia, auras and thought-forms (which are the rising and floating disembodied masks in his major painting *The Music*). According to Chessa, "It is not difficult to demonstrate the influence of the occult arts in Russolo's visual work: most of his canvases are laden with symbols of death, skeletons, skulls, globes of fire; supernatural, hallucinatory, and residual images; and synesthetic representations- in short, all the caravanserai of icons typically associated with the occult." These beliefs are certainly evidenced in the visual content and titling of paintings like *The Music* and *Self-Portrait* (with etheric double) (Fig. 47 & 48), along with Russolo's later writings on the subject.

Russolo's occult writings suggest links to Bragaglia. A passage penned by Russolo in his 1938 book *Al di là della materia* shows Russolo ruminating on similar occult matters as Bragaglia did in his own articles twenty years earlier. This excerpt additionally suggests a further interesting link with the elder Bragaglia's later career as a film director: "By continuing the process of magnetizing a subject, once the phase of exteriorization of sensibility has begun, the layers of sensibility around the subject becomes larger and larger in concentric layers that gradually condense in two masses:

¹⁵⁵ Perhaps Bragaglia's relationship with Russolo helps to account for his brief inclusion of Theosophy in his 1913 article "I fantasmi dei vivi e dei morti".

¹⁵⁶ Chessa, Luigi Russolo, Futurist, 80.

one on the left, colored in orange, and one on the right, colored in blue."¹⁵⁷ One of the innovative formal qualities of Bragaglia's 1917 film *Thaïs* was its use of orange and blue tones. Russolo's passage indicates the esoteric symbolism to these colors and reaffirms the importance of occult beliefs in both of these artists' works.

Other similarities between Russolo's painting and the Bragaglias' photography can be readily found. One interesting connection is their interest in the hands of their subjects, as can be seen in images like Russolo's The Music (Fig. 47) and Dattilografa (Fig. 3). In Russolo's painting, the hands of the pianist "are represented in a mad, virtuosic dance along an infinite keyboard." Though the hands in Russolo's painting are not disembodied as they are in the Bragaglias' photograph, they are similarly central objects of focus, engaged in an intense flurry of activity which leads to their multiplication and dematerialization in space. They are forces which animate mechanisms, producing work from them. Fascinatingly, concentration on hands is a visual trope shared by the Bragaglias, the Futurists, Marey and Muybridge, and Spiritualist and Animist photographers. Indeed, this iconographic focus on hands is a kind of bridge between all of these projects. Like *Dattilografa*, the Bragaglias' photograph *Mano in moto* (Fig. 49) shows a similar focus on disembodied hands. The attention which Marey and Muybridge paid to hands in their oeuvres is particularly provocative, since their work almost always focuses on the total body in action, rather than on component parts (Fig. 50 & 51). While Spiritualist photographers did not focus on hands per se, they are always central to their work since hands are integral to the activity of mediums and their séances. As discussed, Animist photographers predominantly focused on the hands and digits. All of these projects appear to concentrate on the hands as the locus for human expressivity

¹⁵⁷ Luigi Russolo, *Al di là della materia* (Milan: Luciano Ferriani editore, 1961), 102-103.

¹⁵⁸ Chessa, *Luigi Russolo*, 100.

and spirituality, which provides a surprising point of connection between the work of these various artists and scientists.

Russolo's photographic aesthetic in his artworks, use of a visual and written vocabulary determined by the occult, appearance in a photodynamic image, coining of the term 'fotofuturista' and dedication of his drawing to Bragaglia ties him to the brothers in deeper ways than have been previously considered, and strengthens the brothers' conceptual and aesthetic bonds with another founding Futurist artist in the first phase of the movement. It is clear from Russolo's adoption of a photographic aesthetic and deep preoccupation with occult beliefs in his work that the Bragaglias' relationship with Russolo was one of their most positive and productive within the Futurist circle both before and after they were expelled from it. Their connection with Russolo, in addition to their relationship to Bergson's philosophy and occult photography and thought, establishes that though Futurist scholarship has either neglected or undervalued this connection, photodynamism had an undeniably occult foundation which shaped it from its beginnings.

CHAPTER V

A LASTING INFLUENCE: PHOTODYNAMISM AND PERFORMANCE

Throughout this thesis, it has been argued that photodynamism was a remarkably layered and complex innovation because it drew from a number of past and contemporary cultural sources. This is really what set the Bragaglias' photography apart from the majority of the other artistic production in the first wave of Futurism. The fascinating relationship between photodynamism and performance further adds to the avant-garde and fresh character of the Bragaglias' photographic project, and has not been adequately explored in scholarship. Performance- particularly film and dance- had a major influence on the Bragaglias before, during, and after their short career as the creators of photodynamism.

Photography and Film

As stated, the Bragaglias were brought up in the film industry, which gave them a background in a new medium unlike any of the other Futurists. Though Bragaglia set photodynamism against cinematography in *Fotodinamismo futurista*, the very technique of photodynamism was cinematic in itself. They directed the action of their subject, who they flooded with bright lighting as if they were on a set. Their subjects were not photographed still at all, but rather performed their exaggerated gestures like actors in front of the camera which recorded the essence of their movements. This suggests that their avant-garde technique stemmed from their early experience at Cines, and this also links photodynamism to Bragaglia's future career as a director. In a sense, the cinematic technique the Bragaglias used to create their images made photodynamism highly compatible with the Futurism program that called for "an intimate connection between art

and life" and subsequently theorized performance as a necessary "expressive form in which the artist himself is involved, suppressing any instrumental mediation". The Bragaglias had a high level of direct involvement in the making of their art because beyond simply operating their camera, they directed their subject. Thus, they minimized the determinism of their instrument, established an intimate relationship with their subjects and became a participant in their performance, eliminating a clear distinction between art and life.

Bragaglia's films are generally classified as the first Futurist films and are also considered to be among the first efforts in avant-garde film. However, as previously mentioned, some scholars such as Mario Verdone and Günter Berghaus take issue with this due to the passé melodramatic narrative content of the films, which they distinguish from Bragaglia's use of undeniably innovative technique. According to these scholars, Bragaglia's films are "old-fashioned not in their visual quality, but because of the theatrical and literary traditions they draw on." ¹⁶⁰ Unfortunately, *Thaïs* (1917) is the only film of his which is extant. This film is a fascinating study in contrasts between its trite love story and striking visuals. The boldly graphic geometric backdrops for the film were designed by fellow Futurist artist Enrico Prampolini (Fig. 52). *Thaïs*' filmic elements show Bragaglia's technical expertise and creativity within the medium, such as dissolve effects, the aforementioned use of blue and orange tones, and fragmentary captions taken from Charles Baudelaire which together "evoke a claustrophobic atmosphere of emotional obsession" (Fig. 53 & 54). ¹⁶¹ This innovative film proves that Bragaglia's

_

¹⁵⁹ Lista, "The Media Heat Up," 51.

¹⁶⁰ Mario Verdone and Günter Berghaus, "Vita futurista and Early Futurist Cinema", in *International Futurism in Arts and Literature*, ed. Günter Berghaus (Berlin and New York: de Gruyter, 2000), 398.

¹⁶¹ Richard Humphreys, *Futurism* (Cambridge: Cambridge University Press, 1999), 45.

directorial techniques were as pioneering and avant-garde in their time as his photodynamic technique was several years earlier before the war.

Photodynamism and Dance

A poignant connection exists between photodynamism and dance. Though Bragaglia did not write about dance until later in his career and never mentioned it in connection with photodynamism, the later careers of both brothers testify to their enduring interest in theater and dance in various capacities. The elder Bragaglia wrote extensively on both subjects, and placed female dancers in leading roles in his films, such as his casting the dancer Thaïs Galitsky and the Russian ballerina Ileana Leonidoff in *Thaïs*. The younger Bragaglia made a number of still photographic portraits of dancers, for example a gelatin silver print circa 1920 entitled *Dancer* (Fig. 55).

Photodynamism and dance are most highly connected in the abstract Symbolist dance of American artist Loïe Fuller.¹⁶² Fuller's influence on the Futurist movement has been well discussed by Patrizia Veroli in her essay "Loie Fuller's *Serpentine Dance* and Futurism: Electricity, Technological Imagination and the Myth of the Machine," but although Veroli states her goal of analyzing Fuller's influence on early Futurism, she neglects to mention the Bragaglias.¹⁶³ In fact, she chiefly discusses connections to

the flowing silhouettes of Art Nouveau and in the serpentine dances of Loïe Fuller, for example". Mather does not discuss this correlation in any more detail than this, however. Mather, "Energetic Excess," 145.

¹⁶² I would like to thank Sherwin Simmons for first suggesting this connection to me. David Mather has also recently connected photodynamism with Fuller: "When avant-garde artists, such as Balla, Duchamp, Kupka, and the Bragaglias, appropriated elements of [Marey's] biomechanical method just before World War I, they were not simply mimicking the visual distortions of moving bodies. That type of semi-abstracted figure had been already widely seen twenty years earlier in the flowing silhouettes of Art Nouveau and in the serpentine dances of Loïe Fuller, for example".

¹⁶³ Patrizia Veroli, "Loie Fuller's Serpentine Dance and Futurism: Electricity, Technological Imagination and the Myth of the Machine," in *Futurism & the Technological Imagination*, ed. Günter Berghaus (Amsterdam: Rodopi, 2009), 125-138.

artworks made in the second post-war wave of Futurism rather than the first. 164

Nevertheless, the manner in which Veroli characterizes Fuller's dances is equally applicable to the photodynamic images. Veroli describes her dances as a "dematerialization of physicality," "temporal flux," "an artwork made of smoke" (like the Bragaglias' similarly vaporous images), and "an unfolding of natural phenomena in the form of a kinetic drama, offering proof of the possibility of an extended body in the pursuit of its own transformation." These descriptions are strikingly evocative of the photodynamic style and theory.

As aforementioned, Bragaglia began working for his father at the Cines studio in 1906, the year the company was established. Between 1906 and 1907 while he was a director's assistant there, the studio produced a six minute black and white hand-colored silent film entitled *Le Farfalle* which was based on Fuller's butterfly dance. While very scanty information exists about the crew responsible for the various aspects of this short film, it is likely because of the timing that some members of the Bragaglia family were involved in its making. Furthermore, just as Bragaglia's theory and the resulting photodynamic images were strongly related to occult thought and photography, so was

_

¹⁶⁴ Veroli primarily makes connections between Fuller's dance and the art of Depero, Balla, and Prampolini. Other Futurists, particularly Gino Severini, also did work on dance; perhaps the most well-known of these pre-war painted works is Severini's glittery *Blue Dancer* of 1912. Severini uses the iconography of dance literally and consciously references it in his titles. He explicitly referenced Fuller in his 1914 work *Danza Serpentina*, which is a words-in-freedom collage inspired by Fuller's whirling, arcing movements. Additionally, Russolo took on this subject matter in a chronophotographic fashion in his 1918 drawing *Ballerina+Dynamism*. The Bragaglias, however, reference Fuller's dance on an arguably more complex level than Severini or Russolo.

¹⁶⁵ Veroli, "Loie Fuller's Serpentine Dance and Futurism," 125-138.

Fuller's dance:

Fuller's Parisian public was very aware of the association of her performances with the occult. She would embrace the taste and expectations of her public by giving her dances suggestive titles such as Le Feu de la vie (The Fire of Life, 1901), L'Esprit que se revèle (The Disclosure of the Spirit, 1909) and Le Passage des âmes (The Passing of the Souls, 1910). In addition, she posed for some photographers and had herself portrayed as an emanation of luminous fluids. 166

Just as it can be argued that Fuller's dances influenced various forms of modern art like photography, a consideration of the nature of her dances indicates that she may have also been reciprocally inspired by the mediums of photography and film. Tom Gunning has described the "transparent nature" of film as "a filter of light, a caster of shadows, a weaver of phantoms." This strikingly conjures Fuller's whirling, flickering, light-filled performances, and suggests that there was a strong *a priori* conceptual link between her dance and the film mediums. Additionally, there was a mechanical component to Fuller's dances-- in her making herself a hybrid body-machine by the use of sticks, and in her use of advanced electrical light effects-- which is not often emphasized due to their organic, biomorphic aesthetic, but which likens her work to the mechanical mediums of photography and film.

The most convincing argument for this connection, though, is a comparison of the visual language of the photodynamic images and Fuller's dances (Fig. 56 & 57).

There is a softness to both Fuller's dances and the photographers' images, in which constant, rhythmic, arcing movements dematerialize into blurry abstract waves which obscure the body, making it rather formless and amorphous. The form of the performers in each image becomes transparent, imparting a sensation of velocity that seemingly

¹⁶⁶ Ibid., 141.

¹⁶⁷ Gunning, "To Scan a Ghost," 98.

evokes both ephemerality and "the illusion of perpetual movement". A vital energy exudes from the body that produces this motion. Time is ambiguous in the photodynamic images and in Fuller's dances, and evokes Bergson's vitalist philosophies of time as rhythmic, unceasing duration, a mode of becoming in which each state succeeds another, develops into another, or overlaps with another in a temporal way". See Loïe Fuller during a repetition (Fig. 57) is strikingly akin to photodynamic images, particularly L'uomo che si leva (Fig. 40). In the image of Fuller, a spectral, permeable version of her body appears to rise ethereally in vaporous wisps of light as she dances. Like the multiplied faces of the Bragaglias' subjects, Fuller's visage is doubled in her trajectory of movement. The link between Fuller's dance and the Bragaglias' photodynamism further cements the argument that the brothers drew from myriad contemporary interdisciplinary sources in their attempt to produce an aesthetic and deeply philosophical expression of dynamic motion.

Photodynamism's Place in the History of Photography

Despite Boccioni's claims in 1913, photodynamism is unlike scientific photography in important theoretical and stylistic ways. It is also stylistically distinct from occult photography, though as demonstrated it shares underlying theoretical commonalities with that genre because of the connection of both to systems of occult belief. As Gerardo Regnani argues, "Presumably, it was this mixture of pseudo-scientific and rationalist interests that led [Bragaglia], with the help of his brother Arturo, to the creation of photographs that could evoke aspects of both the tangible and ethereal

¹⁶⁸ Todd Sabelli, "Photography, Futurism and the Representation of Violence," *Carte Italiane* 13 (1994): 55.

¹⁶⁹ Guerlac, *Thinking in Time*, 91.

world."¹⁷⁰ Perhaps the reason that photodynamism should be understood as different from these two genres- though it certainly drew on elements of both- is to be attributed to its avant-garde, nearly abstract aesthetic.¹⁷¹ Contrastingly, clarity and visibility were the goals of the practitioners of chronophotography and occult photography. Recognition of the additional connection between performance and photodynamism further complicates its easy categorization within photographic history and reinforces its avant-garde character. Photodynamism's fundamentally artistic ethos-- manifested in its abstracted aesthetic and its mission to convey the "spirit of living reality"¹⁷² of human motion as externalized by physical movement-- is what sets the Bragaglias' photography apart from the genres of scientific motion and occult photography.

After Photodynamism

Christiana Taylor wrote in her book *Futurism: Politics, Painting and Performance*:

Historians are agreed that the vital pre-war years were the most important in terms of Futurist innovation and development both artistically and politically. The political and artistic development of Futurism after 1918 was related to the line of development begun by the Foundation Manifesto of 1909, but was inevitably transformed by Fascism [...] It was only in the areas of music and theatre that Futurism continued to exert a strong influence on other artistic developments.¹⁷³

¹⁷⁰ Gerardo Regnani, "Futurism and Photography: Between Scientific Inquiry and Aesthetic Imagination," in *Futurism & the Technological Imagination*, ed. Günter Berghaus (Amsterdam: Rodopi, 2009), 181.

¹⁷¹ The 2012 Museum of Modern Art catalogue for their major exhibition "Inventing Abstraction, 1910-1925: How a Radical Idea Changed Modern Art," placed the Bragaglias' image *Changing Positions* in a strikingly prominent position as the **firs**t image to appear in the catalogue opposite the title page. This indicates that Leah Dickerman and her staff note the Bragaglias among pioneers of the abstract aesthetic in modern art. Leah Dickerman, ed., *Inventing Abstraction*, 1910-1925: How a Radical Idea Changed Modern Art (New York: The Museum of Modern Art, 2012).

¹⁷² Bragaglia, "Futurist Photodynamism (1911)," 366.

¹⁷³ Christiana J. Taylor, *Futurism: Politics, Painting and Performance* (Ann Arbor, MI: UMI Research Press, 1979), 26-27.

This statement holds true for the Bragaglias' careers after 1913. ¹⁷⁴ Following their rejection from the Futurist circle in October 1913, they continued in their photographic partnership for less than a year before parting ways. Anton Giulio Bragaglia began his foray into other creative disciplines, and around 1915 Arturo Bragaglia volunteered for service in World War I and departed for the front along with other Futurists such as Boccioni and Marinetti.

After the younger Bragaglia returned from his service in the war, he resumed practicing photography. He chiefly produced conventional portraits of local Italian celebrities, images of dance, and photodynamic works within the context of the second post-war wave of Futurism. His photodynamic images, such as *Ritratto fotodinamico di una donna* (Fig. 58) and *Ritratto polifisionomico* (Fig. 59), were no longer avant-garde experiments in the sense that the pre-war photodynamic images were, because those stemmed from an original theory, aesthetic and technique. Other photographers in Europe such as Man Ray and Lázló Moholy-Nagy were now doing the avant-garde work in the medium.

Arturo Bragaglia's interwar photodynamic images were of an entirely different visual language than the Bragaglias' pre-war images. By contrast to the photodynamic images produced between 1911 and 1913, Arturo Bragaglia's later photographs are much less abstract. Form is no longer dissolved as it was in the early Futurist work. These new qualities are seen, for example, in comparing Arturo Bragaglia's 1930 photograph *Ritratto polifisionomico* with the 1913 photograph *Ritratto polifisionomico di Boccioni* (Fig. 59 & 4). The 1930 portrait indeed treats similar themes of movement and differing psychic states of mind, but does so in such a well-defined manner that the man

⁻

¹⁷⁴ The following biographical information on the Bragaglias' post-1913 careers is derived from Lista's *Futurism and Photography*.

represented looks more like a crystalline three-headed being compared with the dematerialized, abstracted portrait of Boccioni. Although the language of the titles of these two photographs demonstrates that the younger Bragaglia was still operating within the same theoretical framework as he had with his elder brother less than twenty years earlier, the visual language of this new form of photodynamism has undergone a striking change from the subject being dematerialized, vague, and spectral to sharply defined. Arturo Bragaglia's post-war photodynamic images were well received and emulated amongst young Futurist photographers such as Wanda Wulz (Fig. 60). The topic of the difference between pre-war and post-war photodynamic images in terms of style and critical reception is one that needs further exploration in scholarship.

Arturo Bragaglia pursued photography for the remainder of his career, both as an artist and an educator. He worked chiefly as a portraitist for celebrities of the theater and film industry, largely by photographing performances which occurred in his brother's venue Teatro degli Indipendenti; his photodynamic images are few in number. Beginning in 1925, Arturo taught photography in academic institutions. He was a member of the Mostra Fotografica Italiana and the Federazione dei Fotografi. He opened various photography studios and became the director of the photography department at the Cinecittà in Rome. In 1942 he became a professor of Photographic Optics at Rome's Centro Sperimentale di Cinematografia.

Anton Giulio Bragaglia virtually abandoned his photographic pursuits after 1914, and instead went on to have a prolific career in film and writing. From the time of his exclusion from the Futurist circle onward, Bragaglia focused his creative efforts entirely on film and writing, authoring more than twenty inventive theoretical texts about various

topics including film, mime, dance, and the theater. 175 He founded a film company called Novissima Film Roma in 1916 and proceeded to direct four films and one short: Perfido incanto (1916), Thaïs (1917), Il mio cadavere (1917), Un dramma nell'Olimpo (1917), and Vele ammainate (1931). In 1918 Bragaglia opened the Casa d'Arte Bragaglia in Rome, which he operated until it closed in 1933. This building was comprised of a photography studio for his younger brother, rooms for exhibition space, and a theater. Casa d'Arte Bragaglia not only exhibited Futurist works, but frequently showcased art by Dadaists and prominent artists from other European avant-garde movements such as Klimt and De Chirico. The house's exhibition count totaled nearly 300 shows. In 1922, Bragaglia founded the Teatro degli Indipendenti, which quickly became the foremost Italian venue for international avant-garde theater, showcasing the work of Pirandello, Soffici, O'Neill, Schnitzler, Apollinaire, Settimelli, Corra, and Marinetti. Together with Prampolini, Depero, Balla and Marchi, Bragaglia created and theorized Futurist Theater. which was often staged at his venue. In conjunction with his literary and film work, the cultural venues which Bragaglia founded show him to be an artist and theoretician of farreaching and widely inclusive intellect, who operated outside of the strict ideological confines set by most members of the original Futurist circle throughout his career.

Bragaglia died in Rome on July 15, 1960. His younger brother died shortly afterward in Rome on January 21, 1962. Both artists left an indelible legacy to later Futurist artists, especially photographers, filmmakers, and performance artists. Bragaglia pioneered Futurist avant-garde film, and founded significant venues that gave contemporary artists, actors, writers and directors an invaluable forum for exhibiting and performing their work. The brothers' photographic experimentation influenced the development of Futurist and other avant-garde techniques in creating anti-naturalist

__

¹⁷⁵ All of these texts have yet to be translated from the original Italian.

portraits, abstract photography, photo-collage, photo-montage, and photo-plastics.¹⁷⁶
This was evidenced in 1930 by a photographic manifesto co-authored by Marinetti and the photographer Tato. Their "Manifesto of Futurist Photography" opens by acknowledging a major conceptual debt to Bragaglia's photodynamism.

The Bragaglia brothers truly opened up possibilities for subsequent Italian Futurist photographers and other European avant-garde photographers in the 20th century. The theory and aesthetic of photodynamism profoundly influenced not only later Futurist photographers such as Wulz, but also artists of other foreign avant-garde movements, particularly Rayonnists, Suprematists, and Vorticists. Alvin Langdon Coburn, who belonged to the Vorticist group for a time, was perhaps the most wellknown photographer of these avant-gardes influenced by photodynamism. Coburn's vortographs, such as his 1917 portrait Ezra Pound, evidence a creative adaptation of photodynamism combined with effects of Cubist scaffolding and fractured planes which creates a dizzying three-dimensional kaleidoscopic sense of movement reverberating in waves from the center of the image (Fig.61). Outside of the historical confines of modernism, recent scholars and exhibition curators such as Amelia Ishmael and Adam Weinberg have asserted that photodynamism's experimentation with notions of time has had a substantial impact on contemporary photographers, such as Ralph Eugene Meatyard, Francesca Woodman, and Atta Kim. Ishmael contends that "Countless more examples could be included in this trajectory to show the complex lineage Photodynamic concepts have instigated as they continue to influence and inspire discourses building throughout contemporary art."177 Though the Bragaglias' work has been relegated to a position of relative historical obscurity within Futurism and European modernism due to

¹⁷⁶ Lista, "Futurist Photography," 360-364.

¹⁷⁷ Ishmael, "The Persistence of Photodynamism," 9.

their early rejection by Boccioni, their influence in photography, film, and the theater was vast.

APPENDIX

FIGURES

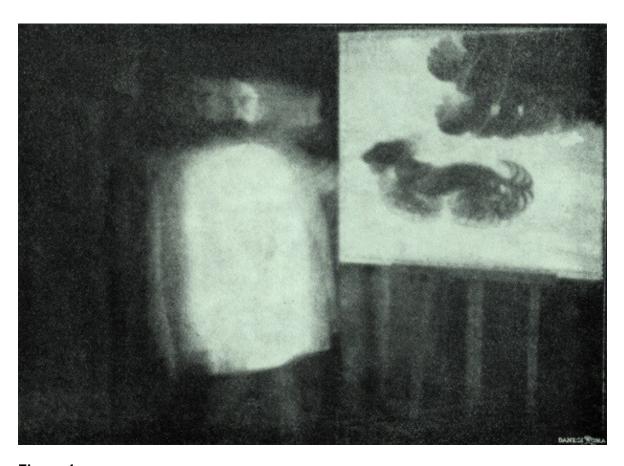


Figure 1

Anton Giulio & Arturo Bragaglia, *Il pittore futurista Giacomo Balla* [The Futurist Painter Giacomo Balla], gelatin silver print, 1912



Figure 2Giacomo Balla, *Dynamism of a Dog on a Leash*, oil on canvas, 1912

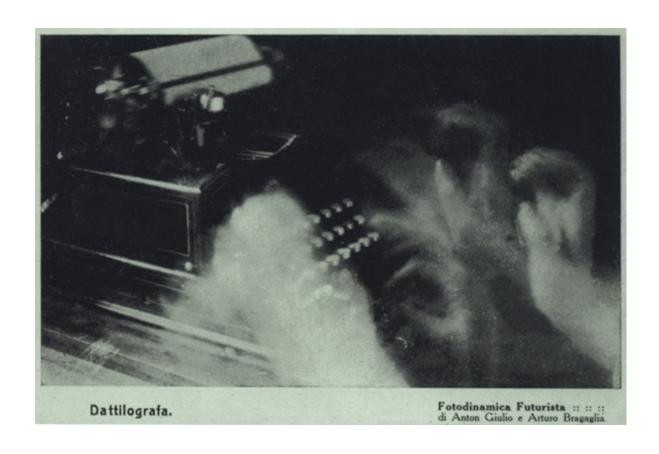


Figure 3

Anton Giulio & Arturo Bragaglia, *Dattilografa* [Typist], gelatin silver print, 1911

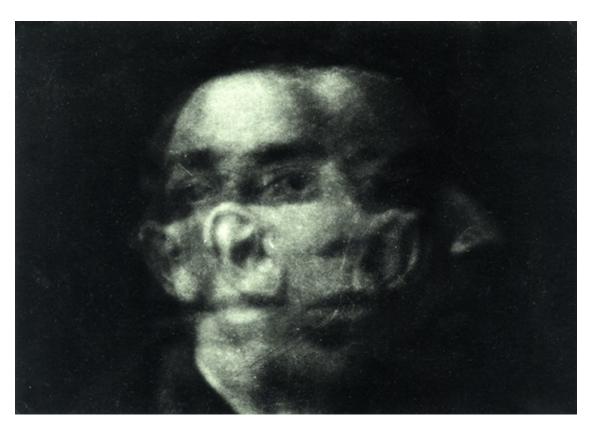


Figure 4Anton Giulio & Arturo Bragaglia, *Ritratto polifisionomico di Boccioni* [Polyphysiognomic Portrait of Boccioni], gelatin silver print, 1913

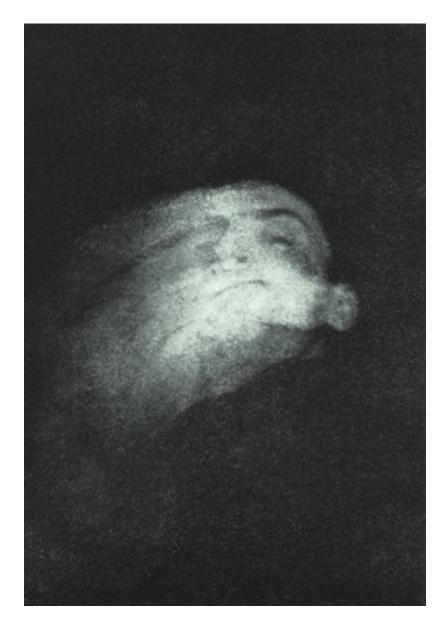


Figure 5

Anton Giulio & Arturo Bragaglia, *Un gesto del capo* [A Gesture of the Head], gelatin silver print, 1911



Figure 6Anton Giulio & Arturo Bragaglia, *L'inchino* [The Bow], gelatin silver print, 1911



Figure 7Anton Giulio & Arturo Bragaglia, *Cambiando Positura* [Changing Position], gelatin silver print, 1911

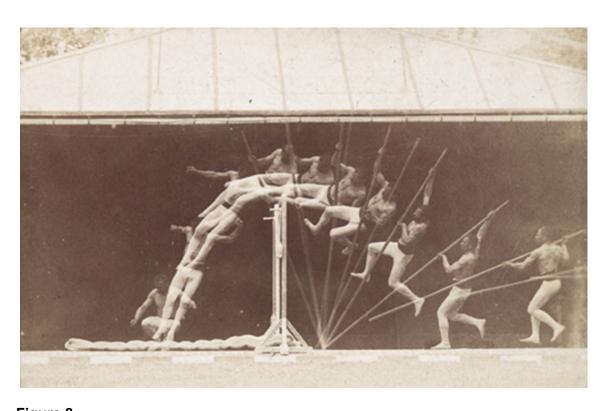


Figure 8Étienne-Jules Marey, *Chronophotographic Study of Man Pole Vaulting*, photograph, 1890-1891

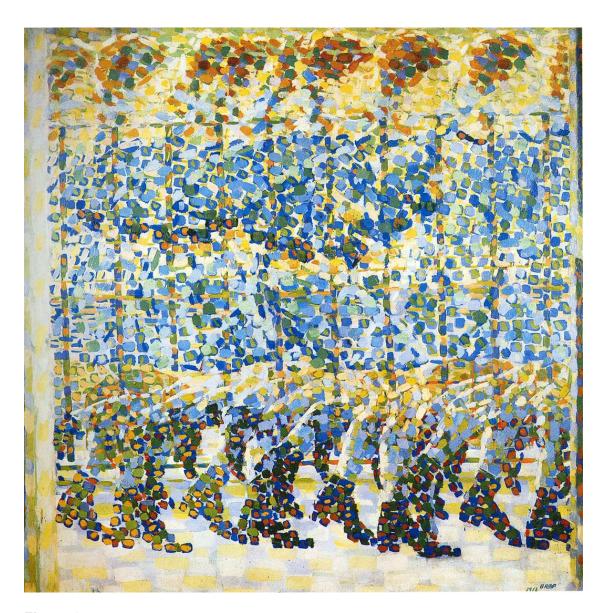


Figure 9
Giacomo Balla, *Girl Running on a Balcony,* oil on canvas, 1912

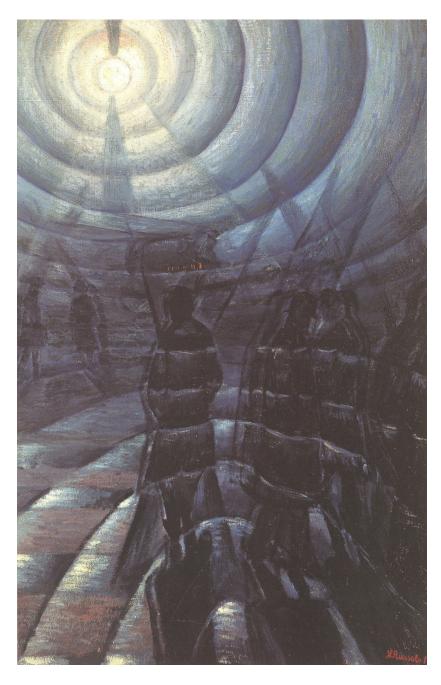


Figure 10

Luigi Russolo, *The Solidity of Fog*, oil on canvas, 1912



Figure 11
Umberto Boccioni, *The Street Enters the House*, oil on canvas, 1911



Figure 12Umberto Boccioni, *Simultaneous Visions*, oil on canvas, 1911



Figure 13Carlo Carrà, *The Red Horseman*, oil on canvas, 1913



Figure 14Umberto Boccioni, *Dynamism of a Soccer Player*, oil on canvas, 1911

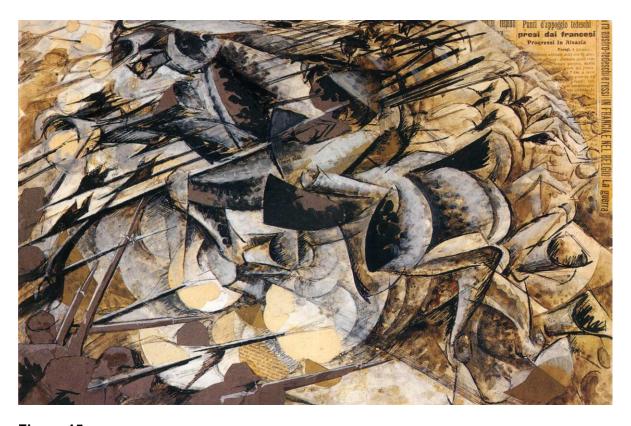


Figure 15
Umberto Boccioni, *The Charge of the Lancers*, collage and tempera on cardboard, 1915



Figure 16

Anonymous, *Boccioni in his studio, in front of the sculpture 'Head+House+Light'*, gelatin silver print, 1913



Figure 17

Mario Nunes Vais, *The Futurist group: Palazzeschi, Papini, Marinetti, Carrà, Boccioni*, gelatin silver print from original glass plate, 1913



Figure 18Umberto Boccioni, *Io-noi* [I-We], gelatin silver print, 1905-1907



Figure 19Umberto Boccioni, *Matter*, oil on canvas, 1912

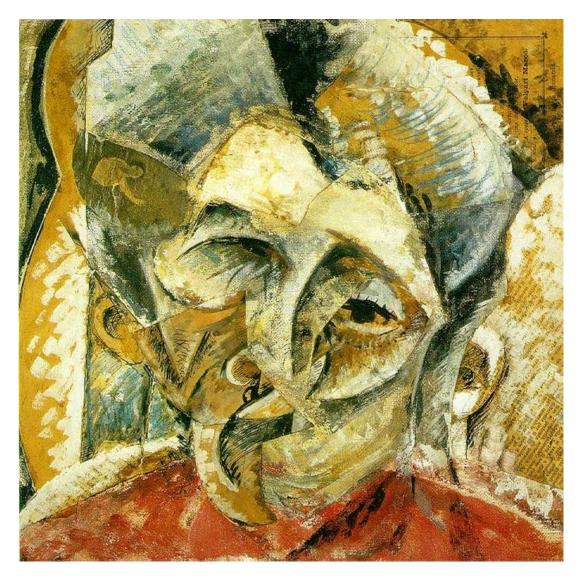


Figure 20
Umberto Boccioni, *Dynamism of a Woman's Head*, pencil, tempera, pen, and collage on canvas, 1914

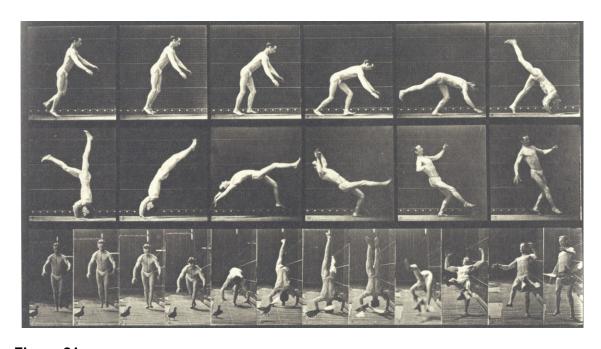


Figure 21Eadweard Muybridge, *Head-spring, a flying pigeon interfering*, plate 365 from photographic series *Animal Locomotion*, collotype, 1887



Figure 22 Étienne-Jules Marey, *Gymnast jumping over a chair*, photograph, 1883



Figure 23
Anton Giulio & Arturo Bragaglia, *Le due note maestre* [The Two Master Notes], gelatin silver print, 1911

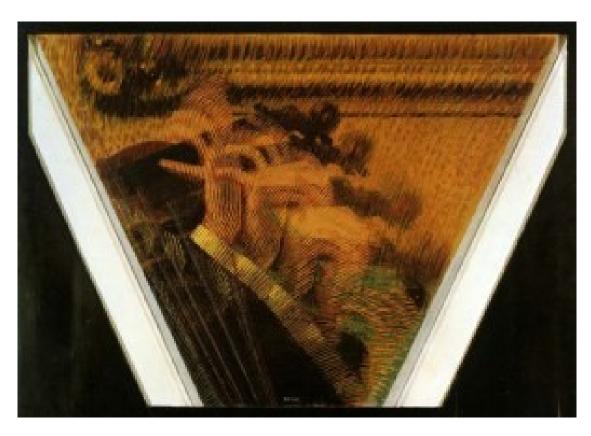


Figure 24Giacomo Balla, *Rhythm of the Violinist*, oil on canvas, 1912



Figure 25
Giacomo Balla, *Sketch of Girl Running on a Balcony*, pencil and ink on paper, 1912

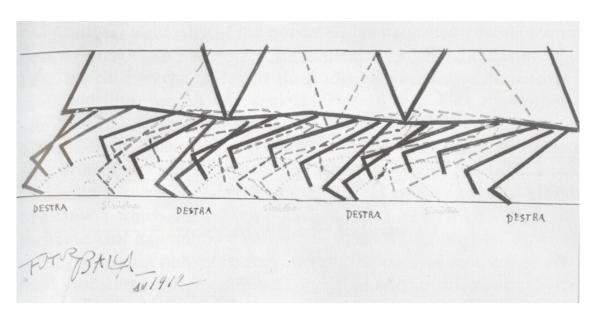


Figure 26
Giacomo Balla, *Sketch of Girl Running on a Balcony*, pencil, pen and red ink on paper, 1912

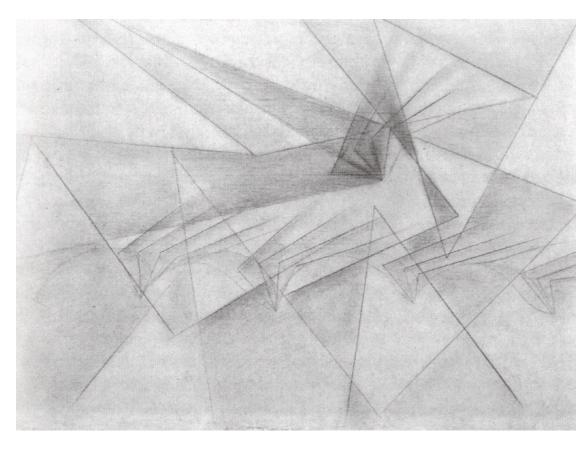


Figure 27Giacomo Balla, *Sketch of Girl Running on a Balcony*, pencil on paper, 1912

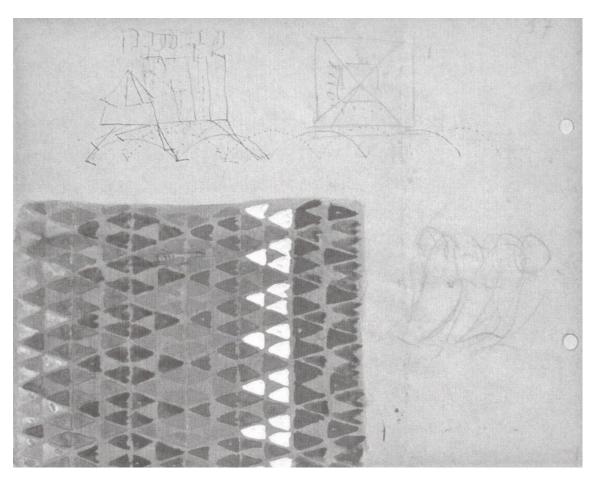


Figure 28
Giacomo Balla, Sketch for Iridescent Interpenetrations with Girl Running, pencil, ink and watercolor, 1912

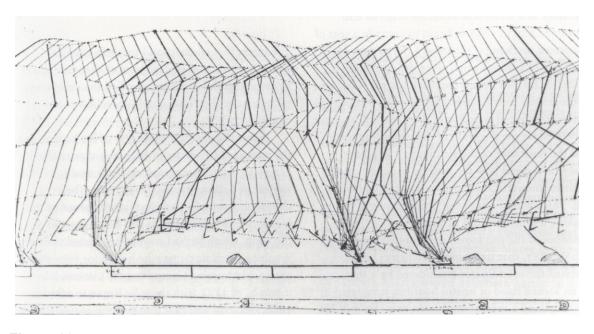


Figure 29

C. Pagès, *Movement*, Diagram of the right legs of a horse at a walking pace, used for Marey's experiments, 1886



Figure 30
Giacomo Balla, *Iridescent Interpenetrations No.* 7, oil on canvas, with the artist's original frame, 1912

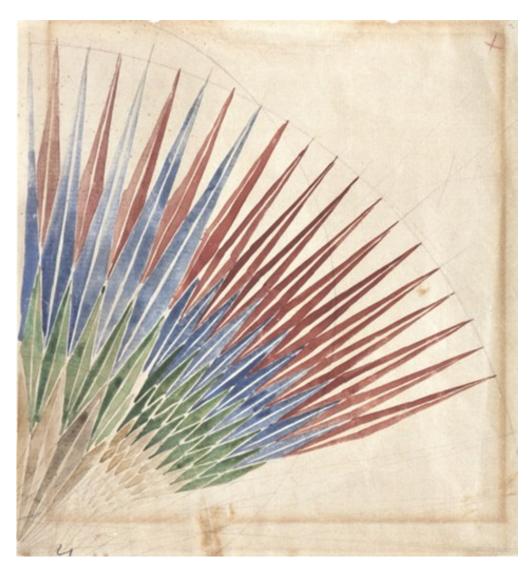


Figure 31Giacomo Balla, *Iridescent Interpenetrations* (*from the Düsseldorf notebooks*), pencil and watercolor on paper, 1912

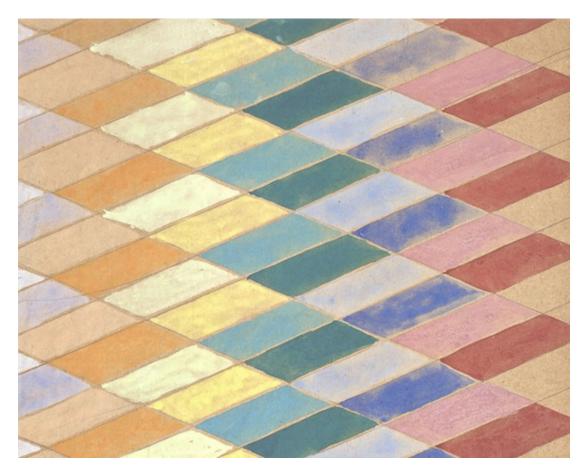


Figure 32Giacomo Balla, Study for *Iridescent Interpenetration*, pencil and watercolor on paper, 1912



Figure 33Giacomo Balla, Study for *Iridescent Interpenetrations No. 2*, pencil and watercolor on paper, 1912



Figure 34

Louis Darget, Fluidic photograph of thought, "Anger" (23 June 1896), gelatin silver print, 1896



Figure 35William H. Mumler, *Master Herrod and his double*, albumen silver print, c. 1870, albumen silver print



Figure 36 Édouard Isidore Buguet, *Spirit Photograph Portrait of Camille Flammarion*, photograph, 1874



Figure 37Hippolyte Baraduc, *Photograph of the fluidic nimbus of a medium's thumb*, gelatin silver print, 1893



Figure 38

Anton Giulio Bragaglia, *In mezzo il trasparente corpo astrale di un soggetto sdoppiato, si va condensando poco a poco presso il proprio doppio in trance (Trucco di fot. Spiritica)*[In the middle a transparent astral body of a doubled subject, that is condensing little by little near its own double in trance (Trick Spiritualist photograph)], gelatin silver print, 1913



Figure 39

Anton Giulio Bragaglia, *Le mani del fantasma penzolano presso il soggetto (Trucco di fot. Spiritica)* [The hands of a phantom dangling near the subject (Trick Spiritualist photograph)], gelatin silver print, 1913



Figure 40Anton Giulio & Arturo Bragaglia, *L'uomo che si leva* [The Man who Rises], gelatin silver print, 1912



Figure 41Adrien Majewski, *Hand of Miss Majewski (digital effluvia),* gelatin silver print, ca. 1898



Figure 42Hermann Schnauss, *Electrograph of a hand*, albumen print, 1900

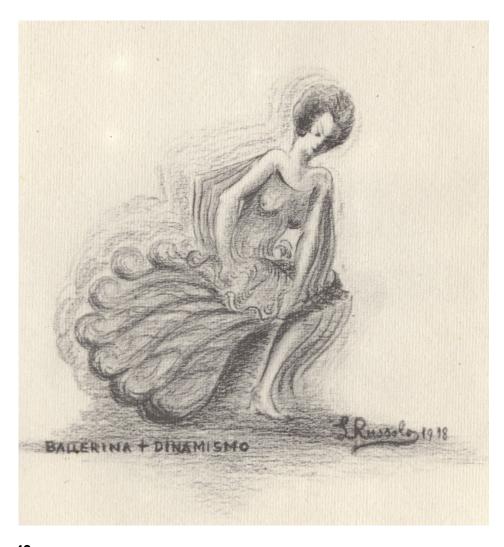


Figure 43Luigi Russolo, *Ballerina + Dynamism*, mixed media on cardboard, 1918

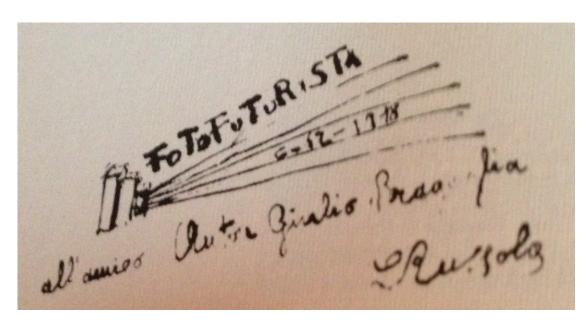


Figure 44

Luigi Russolo, Verso of *Ballerina + Dynamism*, mixed media on cardboard, 1918



Figure 45
Anton Giulio & Arturo Bragaglia, *Il fumatore* [The Smoker], gelatin silver print, 1911

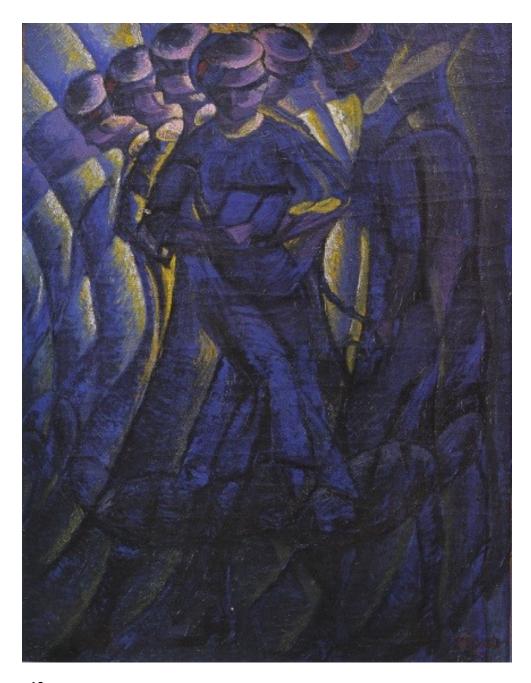


Figure 46Luigi Russolo, *Plastic Synthesis of a Woman's Movements*, oil on canvas, 1912

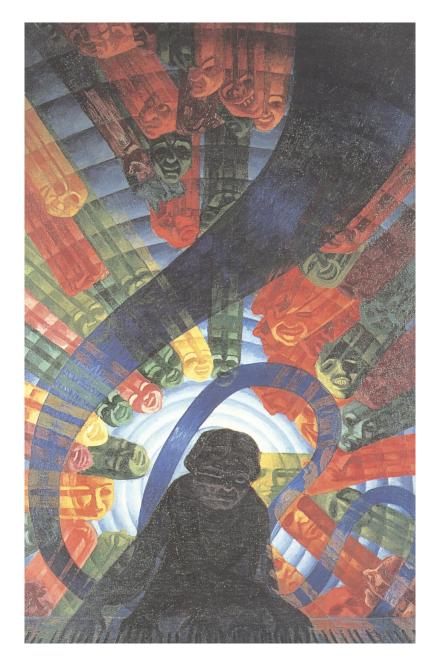


Figure 47Luigi Russolo, *The Music*, oil on canvas, 1911-1912

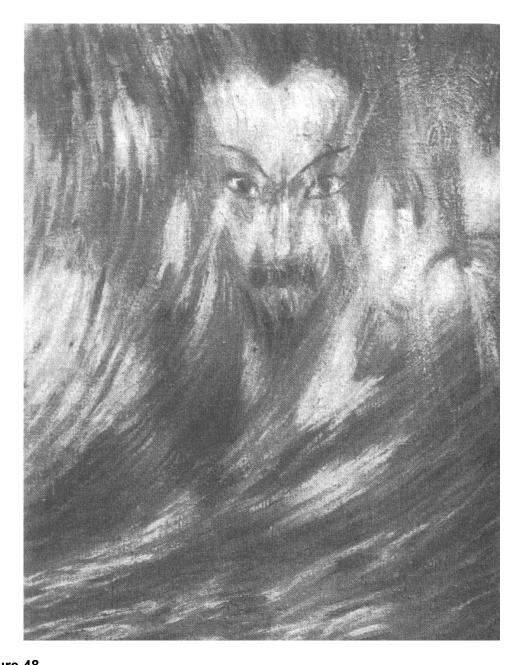


Figure 48

Luigi Russolo, *Self-Portrait (with etheric double)*, oil on canvas, ca. 1910

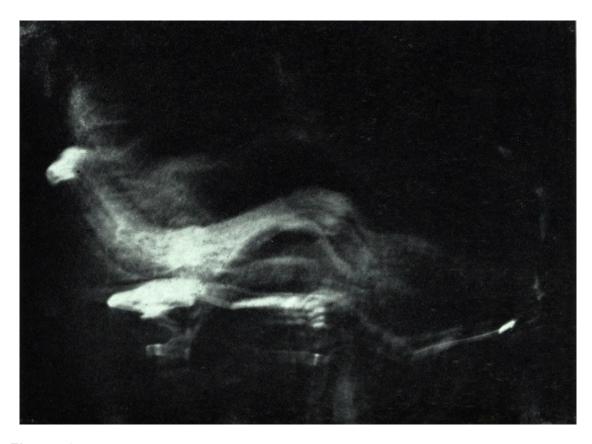
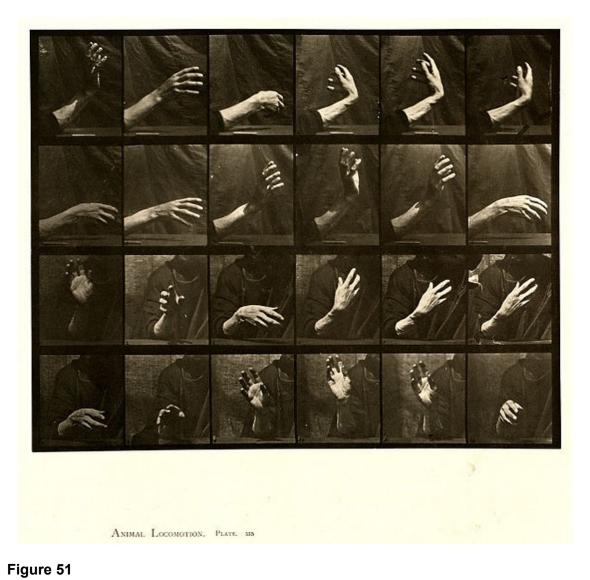


Figure 49

Anton Giulio & Arturo Bragaglia, *Mano in moto (Hand in Motion,* gelatin silver print, 1911



Figure 50Étienne- Jules Marey, *Movements of a hand*, gravure made from one of Marey's first films, 1888



Eadweard Muybridge, *Movement of the hand, beating time*, Plate 535 from the series *Animal Locomotion*, collotype, 1887



Figure 52

Anton Giulio Bragaglia, *Thaïs: Thaïs Galitzsky su sfondi decorati da Enrico Prampolini*[Thaïs Galitzsky, backgrounds decorated by Enrico Prampolini], film still, 1917



Figure 53
Anton Giulio Bragaglia, *Thaïs: Scena finale del suicidio* [Thaïs: Final Suicide Scene], film still, 1917



Figure 54Anton Giulio Bragaglia, *Thaïs: Scena finale del suicidio* [Final Suicide Scene], film still, 1917



Arturo Bragaglia, *Dancer*, gelatin silver print, c. 1920



Figure 56Harry C. Ellis, *Loïe Fuller dans son atelier de Passy* [Loïe Fuller in her studio in Passy], photograph, ca. 1910

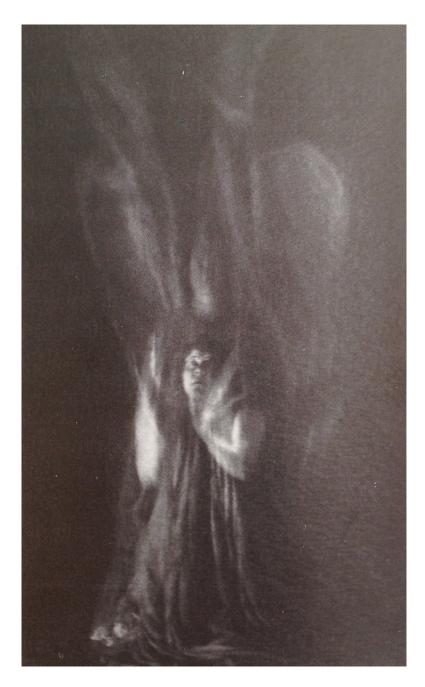


Figure 57Unknown, *Loïe Fuller lors d'une répétition* [Loïe Fuller during a repetition], photograph, 1898



Figure 58Arturo Bragaglia, *Ritratto fotodinamico di una donna* [Photodynamic Portrait of a Woman], gelatin silver print, ca. 1924



Figure 59Arturo Bragaglia, *Ritratto polifisionomico* [Polyphysiognomic Portrait], gelatin silver print, 1930



Figure 60Wanda Wulz, *Gymnastic Exercise*, reproduction on glossy paper, 1932

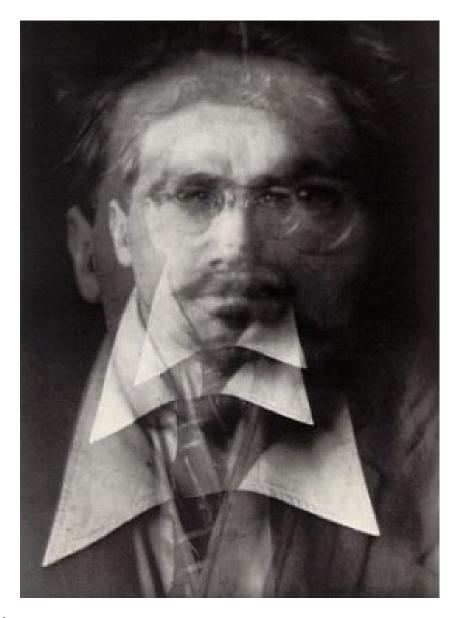


Figure 61Alvin Langdon Coburn, *Ezra Pound*, photograph, 1917

REFERENCES CITED

Adamson, Walter. Avant-Garde Florence: From Modernism to Fascism. Cambridge, MA & London, England: Harvard University Press, 1993. "Modernism and Fascism: The Politics of Culture in Italy, 1903-1922." The American Historical Review 2 (1990): 359-390. Antliff, Mark. Inventing Bergson: Cultural Politics and the Parisian Avant-Garde. Princeton: Princeton University Press, 1993. Apollonio, Umbro, ed. Futurist Manifestos. New York: The Viking Press, 1973. Baldacci, Paolo and Philippe Daverio, ed. Futurism, 1911-1918, New York; Philippe Daverio Gallery, 1988. Benjamin, Walter. "The Work of Art in the Age of Mechanical Reproduction." In Illuminations, edited by Hannah Arendt, 217-251. New York: Schocken Books, 1968. Berghaus, Günter, ed. International Yearbook of Futurism Studies. Berlin: De Gruyter, 2011. Bergson, Henri. Mind-Energy, Lectures and Essays. Translated by H. Wildon Carr. New York: Henry Holt and Company, 1920. Boccioni, Umberto, Carlo Carrà, Luigi Russolo, Giacomo Balla, and Gino Severini. "Prefazione al catologo della prima esposizione di pittura futurista." In Pittura scultura futurise (Dinamismo plastico), Umberto Boccioni. Milan: Edizioni Futuriste di "Poesia," 1914. Braun, Marta. "Muybridge, Authorship, Originality." Early Popular Visual Culture 11 (1): 41-51. . Picturing Time: The Work of Etienne-Jules Marey (1830-1904). Chicago: University of Chicago Press, 1992. Bragaglia, Anton Giulio. Fotodinamismo Futurista. Torino: Giulio Einaudi, 1970. . "I Fantasmi dei vivi e dei morti". La Cultura moderna, Natura e Arte 23 (1913): 756-764. Broglio, Mario, ed. Valori plastici. Roma: Archivi d'arte del XX secolo, 1918.

Carey, Sarah. "From *fotodinamismo* to *fotomontaggio*: The Legacy of Futurism's Photography." *Carte Italiane* 6 (2010): 221-237.

2010.

Brookman, Philip and Marta Braun, ed. *Helios: Eadweard Muybridge in a Time of Change*. Göttingen, Germany and Washington D.C.: Steidl & Corcoran Gallery of Art,

Chéroux, Clément, ed. *The Perfect Medium: Photography and the Occult*. New Haven, CT: Yale University Press, 2005.

Chessa, Luciano. *Luigi Russolo, Futurist: Noise, Visual Arts, and the Occult.* Berkeley & Los Angeles: University of California Press, 2012.

Clough, Rosa Trillio. *Futurism: The Story of A Modern Art Movement, A New Appraisal*. New York: Philosophical Library, 1961.

Coates, James. Photographing the Invisible: Practical Studies in Spirit Photography, Spirit Portraiture, and Other Rare but Allied Phenomena. New York: Arno Press, 1911.

Coen, Ester, ed. *Umberto Boccioni*. New York: The Metropolitan Museum of Art, 1988.

Cox, Robert. *Body and Soul: A Sympathetic History of American Spiritualism*. Charlottesville & London: University of Virginia Press, 2003.

dell'Arco, Maurizio Fagiolo and Giuseppe Sprovieri, ed. *Futurism, Selected Works and Documents*. Roma: De Luca Editore, 1984.

Dickerman, Leah, ed. *Inventing Abstraction, 1910-1925: How a Radical Idea Changed Modern Art.* New York: The Museum of Modern Art, 2012.

Dorazio, Virginia Dortch. *Giacomo Balla: An Album of his Life and Work.* New York: Wittenborn and Company, 1969.

Dorenbaum, David, France Choinière, and Vincent Lavoie, ed. *Shock Waves: Photography Rocks Representation*. Montrèal: Dazibao, 2003.

Franke, Anselm. Animism, Volume I. Berlin & New York: Sternberg Press, 2010.

Gambillo, Maria Drudi and Teresa Fiori, ed. *Archivi del Futurismo*. Volume Primo e Secondo. Roma: De Luca Editore, 1958 & 1962.

Gombrich, Ernst H. "Moment and Movement in Art." *Journal of the Warburg and Courtauld Institutes* 27 (1964): 293-306.

Guerlac, Suzanne. *Thinking in Time: An Introduction to Henri Bergson*. Ithaca & London, Cornell University Press, 2006.

Gunning, Tom. "Phantom Images and Modern Manifestations: Spirit Photography, Magic Theatre, Trick Films, and Photography's Uncanny." In *Fugitive Images: From Photography to Video*, edited by Patrice Petro, 42-71. Bloomington and Indianapolis: Indiana University Press, 1995.

Gunning, Tom. "Haunting Images: Ghosts, Photography and the Modern Body." In The Disembodied Spirit, edited by Allison Ferris. Brunswick, ME: Bowdoin College Museum of Art, 2003. _ "To Scan a Ghost: The Ontology of Mediated Vision." Grey Room 26 Humphreys, Richard. Futurism. Cambridge: Cambridge University Press, 1999. Ishmael, Amelia. "The Persistence of Photodynamism in Representations of the Expanse of Time." Montage 5 (2011): 1-9. Krauss, Rolf H. Beyond Light and Shadow: The Role of Photography in Certain Paranormal Phenomena: An Historical Survey. Munich: Nazraeli Press, 1995. Lista, Giovanni. Il futurismo nella fotografia. Firenze: Fratelli Alinari, Fondazione per la storia della fotografia, 2009. _. Italian Futurist Photographs: Auction, Tuesday, November 9, 1982. New York: Sotheby Parke Bernet Inc., 1982. _____. Futurism. Paris: Terrail, 2001. . Futurism & Photography. New York: Merrell Publishers Limited, 2001. . "Futurist Photography." Art Journal 41 (1981): 358-364. . "The Media Heat Up: Cinema and Photography in Futurism." In Vertigo: A Century of Multimedia Art from Futurism to the Web, edited by Germano Celant and Gianfranco Maraniello, 49-54. Milano: Skira, 2008. Marinetti, F. T. and Tato. "La Fotografia Futurista: Manifesto". Futurismo 22, 1931. Martin, Marianne W. Futurist Art and Theory 1909-1915. Oxford: Clarendon Press, 1968. Mather, David S. "Energetic Excess: The Visual Structure of Movement in Early Italian Futurism, 1910-1915." PhD diss., University of California, San Diego, 2011. Museum of Modern Art. Press Release. Tuesday, May 30, 1961. http://www.moma.org/docs/press_archives/2843/releases/MOMA_1961_0058_54.pdf?2 010 Papini, Giovanni and Ardegno Soffici, ed. Lacerba. Firenze: Vallecchi, 1913-1915. Petrie, Brian. "Boccioni and Bergson." The Burlington Magazine 116 (852): 140-147. Phillips, Christopher, ed. Photography in the Modern Era: European Documents and

Critical Writings, 1913-1940. New York: Metropolitan Museum of Art, 1989.

Poggi, Christine. In Defiance of Painting: Cubism, Futurism, and the Invention of Collage. New Haven: Yale University Press, 1992. . Inventing Futurism: The Art and Politics of Artificial Optimism. Princeton: Princeton University Press, 2009. Rainey, Lawrence, Christine Poggi and Laura Wittman, ed. Futurism: An Anthology. New Haven: Yale University Press, 2009. Rainey, Lawrence S. "Futurist Photodynamism (1911)." Modernism/Modernity 15 (2008): 363-379. Regnani, Gerardo. "Futurism and Photography: Between Scientific Inquiry and Aesthetic Imagination." In Futurism & the Technological Imagination, edited by Günter Berghaus. 177-199. Amsterdam: Rodopi, 2009. Rexer, Lyle. The Edge of Vision: The Rise of Abstraction in Photography. New York: Aperture, 2009. Rossi, Laura Mattiolo, ed. Boccioni's Materia: A Futurist Masterpiece and the Avant-Garde in Milan and Paris. New York: The Solomon R. Guggenheim Foundation, 2004. Russolo, Luigi. Al di là della materia. Milan: Luciano Ferriani editore, 1961. Sabelli, Todd. "Photography, Futurism and the Representation of Violence." Carte Italiane 13 (1994): 53-62. Somigli, Luca and Mario Moroni. Italian Modernism: Italian Culture between Decadentism and Avant-Garde. Toronto: University of Toronto Press, 2004. Spencer, Herbert. First Principles of a New System of Philosophy. New York: D. Appleton & Co., 1882. St. George, Paul, ed. Seguences: Contemporary Chronophotography and Experimental Digital Art. London: Wallflower Press, 2009. Taylor, Christiana J. Futurism: Politics, Painting and Performance. Ann Arbor, MI: UMI Research Press, 1979. Taylor, Joshua C. Futurism. New York: The Museum of Modern Art, 1961.

Tisdall, Caroline and Angelo Bozzolla. "Bragaglia's Futurist Photodynamism." *Studio*

International 189-190 (1975): 12-16.

Tucker, Jennifer. "Photography as Witness, Detective, and Impostor: Visual Representation in Victorian Science." In *Victorian Science in Context*, edited by Bernard Lightman, 378-408. Chicago and London: University of Chicago Press, 1997.

. Futurism. New York & Toronto: Oxford University Press, 1978.

Veroli, Patrizia. "Loie Fuller's Serpentine Dance and Futurism: Electricity, Technological Imagination and the Myth of the Machine." In *Futurism & the Technological Imagination*, edited by Günter Berghaus, 125-147. Amsterdam: Rodopi, 2009.

Warren, Lynne, ed. *Encyclopedia of Twentieth-Century Photography.* New York: Routledge, 2006.