THE EYE & THE ARM: PROSTHETICS & VISUAL CULTURE IN FRANCE, 1915–1925

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A thesis submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Art in the Graduate School.

Chapel Hill
2015

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ABSTRACT

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This thesis traces three moments in the changing conceptions of the prosthetic in the visual cultures of postwar France: first, the medical photographs of Jules Amar, wartime director of the French laboratory for military prostheses and professional education, second, the Purist paintings of Fernand Léger produced in the years following the conclusion of World War I, and third, the Dada objects of Man Ray created under the dual influence of Paris Dada and emergent Surrealism. Though these cultural producers worked in different media and from distinct ideological perspectives, each engages the “prosthetic” as a key element for his visualizations of a radically re-organized (or, in Man Ray’s case, dis-organized) postwar society. These images demonstrate the conceptual abstraction of the prosthetic between 1915, when “prosthetic” referred almost exclusively to a material artifact, and 1925, by which point “prosthetic” encompassed to both the material artifact, as well as a discursive framework.
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Introduction

Among concepts that have entered academic discourse in the last century, few terms have proven quite so flexible as “prosthetic.” Typically used as a means of conceptualizing the relationships between the body and its artificial extensions, the term has attached itself, albeit with significant variation in meaning, to disciplines as varied as psychoanalysis, industrial design, medicine, marketing, and media theory.¹ Yet the prosthetic’s present ubiquity in cultural analysis runs the risk of masking its histories. Like the divide between the body and its extensions, theories of the prosthesis are replete with distinctions and deconstructions, mediated by the middle ground of the “artificial substitute.”² Though “prosthetic” entered the English language in the sixteenth century as “the addition of a letter or syllable to a word,” by the turn of the twentieth century, it referred almost exclusively to the art of making artificial limbs, as well as the limbs themselves.³ This thesis examines how the prosthetic was re-conceptualized in the first decades of the twentieth century, as it passed from a rather narrow description of a specific class of medical objects to a potent metaphor of cultural analysis, and, specifically, how the visual cultures of postwar France participated in this history.


³ Ibid.
Consider, for example, a graph [Figure 1] of the relative frequency of “prosthetic” in publications since 1800. Though used infrequently during the first twenty years of the twentieth century, the term saw an explosion of popularity in the 1920s, climbing steadily throughout subsequent decades before peaking in the 1980s. Though this graph is necessarily inexact and slanted towards English-language texts, it nonetheless marks the moment at which the prosthetic began to take on a life of its own. At first, it is tempting to link the prosthetic’s rise in popularity to the material culture of World War I, when artificial limbs were distributed to wounded veterans in unprecedented numbers. Yet its spike in usage takes place not during wartime, but almost a decade later. The visibility of prosthetic limbs alone is not enough to explain the term’s rise in importance.

Still, I propose that there is an essential link between these two events. As Sarah Jain has argued, prostheses are “discursive frameworks, as well as material artifacts.” Though not equivalent, these two categories are nonetheless mutually illuminating; the former

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4 This graph was produced using Google’s Ngram service, which tracks the relative frequency with which a keyword appears in a given year’s publications, using the keyword “prosthetic” in the English corpus between 1800 and 2000 with a level smoothing of 2. The service should not be considered definitive: however, it is useful for providing a general sense of the relative popularity of a given term over time, as has been my purpose in including it here.

encompasses, but is not limited to, the latter, while the latter is arguably the clearest manifestation of the former. In the context of postwar Europe, the sudden and widespread appearance of prosthetics (the material artifact) provoked reflection on the former (the discursive framework), which quickly became a category of analysis in its own right.

This thesis traces three moments in this process in the visual cultures of postwar France: first, the medical photographs of Jules Amar, wartime director of the French laboratory for military prostheses and professional education, second, the Purist paintings of Fernand Léger produced in the years following the conclusion of World War I, and third, the Dada objects of Man Ray created under the dual influence of Paris Dada and emergent Surrealism. I do not take these three sets of cultural productions to be the sole examples of this process. Rather, these three sets of images demonstrate the changing conceptualization of the prosthetic between 1915, when it was almost exclusively understood as a material artifact, and 1925, by which point it included both the discursive framework and the material artifact. Accordingly, I have arranged my visual evidence both chronologically and in order of increasing “abstraction”: Amar’s prostheses are artificial limbs, while the Dada objects of Man Ray must be understood as prostheses in a more conceptual sense.

A feature common to each of the three case studies, both in the images themselves and my interpretation of them, is an awareness of an apparent loss of “function,” whether for wounded veterans (Amar), industrial laborers (Léger), or the artwork itself (Man Ray). In every case, the “loss” was brought on or made apparent by the social, economic, and cultural upheavals of World War I. Though this trio of cultural producers worked in a variety of media and from very different ideological perspectives, each engages the “prosthetic” as a key element for his visualizations of a radically re-organized (or, in Man Ray’s case, dis-organized) postwar society. In examining the prosthetic as its implications expanded beyond a specific class of medical devices, Bill Brown’s “thing theory” offers a fruitful model: while “objects” possess a
readily definable function, “things” do not. In Brown’s revisionist interpretation of Heidegger, “objects” become “things” when they can no longer fulfill their socially-conditioned function and thus provoke the subject into confronting the “thingness” of the apparently “useless” object. This encounter leads the subject to either restore the “thing’s” “objecthood,” discard the “thing,” or repair it such that the original function is restored.

Given that the “purposes” of an object are socially-defined, it is possible to say that there are both “legitimate” and “illegitimate” purposes for an object, leading to debates the “proper” function of a given object. This is true not only of inanimate objects, but also of human beings, at least in the sense that Brown describes. A quick survey of primary sources dealing with the wounded veteran reveals that wounded veterans were often thought of as “useless,” if only for purposes of alarmism. Writing in The New York Times, Virginia Graham Fair, an American Francophile and wife of the industrialist William Vanderbilt II, echoed a common sentiment in a 1916 report on the American Ambulance (Hospital) in Neuilly-sur-Seine:

As these men come to the Ambulance, and as they would remain for the rest of their lives if their wounds were simply left to heal, they are objects of indescribable repulsiveness both to themselves and to everyone who sees them . . . but how wonderful it is to feel that through our help, these beings who come to use as useless wreckage, helpless, objects merely of pity and aversion, are given back to France as men again.7

Much of the recent art historical literature on World War I in France is devoted to the so-called “return to order” that took place during and after the conflict, when conservative politicians triumphed domestically, advocating for the return of “traditional” values as a counterpoint to the excesses and disruptions of war.8 Culturally, the “return to order” was visible

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in the widespread abandonment of critical artistic practices by avant-garde artists in favor of conservative values of order, discipline, and restraint. Socially, as many authors have argued, the disruption of traditional gender relations during the war led to attempts to reestablish the “proper” places for men and women. Common to both this artistic and social conservatism is an overarching emphasis on the proper “place” and “function” of objects, both animate and inanimate, within the real or imagined society of France.

Speaking to a gathering of French medical professionals and government officials at the Conférence faite pour les Oeuvres de Mutilés at the Palais de la Mutualité in January 1916, Jules Amar, then the director of the laboratoire de prothèse militaire et du travail professionnel, described at length the importance of prosthetic limbs and their place in the fantasies of personal and national rehabilitation.

. . . The hour has arrived, I believe, to organize the work of the wounded, such that each man can take his true place in the social machine, and contribute to it to the best of his ability, and, in this way, march towards prosperity.10

France was, in these years, a kind of “social machine,” one that would supposedly work best when all its parts were in their “proper” place. Yet if any object has a defined “place” rooted in function alone, then the object is susceptible to both displacement and replacement. Enter the prosthesis: that which replaces what has been lost, be it limbs, laborers, or even works of art. As such, the prosthesis—as an object, a concept, and an image—provides a critical means of examining the interpenetrating discourses of rehabilitation, industrial management, and artistic practice in wartime and postwar France.


10 Jules Amar, “La prothèse et le travail des mutilés” (Paris: H. Dunod and E. Pinat, 1916), 4. The conference took place on January 12, 1916 and the proceedings were published later that year under the title of Amar’s keynote lecture.
1. Hommes Complets

In the vast body of literature dedicated to the conflict, the First World War has entrenched itself as the *Materialschlacht*: the war of the machine. Historians have long noted the crucial role that technology played in exponentially increasing the lethality of war. Between technological “advancements” like smokeless gunpowder, flamethrowers, and chemical weapons, the role, to say nothing of the agency, of the individual soldier was increasingly subordinated to his technological extensions. The struggle to comprehend the *matériel* of modern warfare is a recurrent motif in the memoirs, diaries, and letters who those who served at the front.\(^{11}\) Yet not every soldier saw technology as demonic: while some inevitably remained horrified by the machine ascendant, others found new potentials in, and even affection for, the devices of industrial warfare.\(^{12}\)

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To be sure, a heightened awareness of human beings’ increasing dependence upon technology was not limited to the militaries of combatant nations. Signs of the increasingly porous distinction between man and machine were numerous in the early years of the twentieth century, but perhaps nowhere were such ambiguities felt more acutely than they were with respect to artificial limbs, which were produced and distributed in record numbers during and after World War I. And yet, like soldiers’ own understandings of their technological extensions, the prosthetic, and, more broadly, the image of the man-machine hybrid, was open to interpretation by cultural producers on both sides of the conflict. The image of the machine-man was, for some, a fearful reminder of the destruction brought about by World War I. In Berlin Dadaist Otto Dix’s caustic drypoint print *Kriegskrüppel* (1920) [Figure 2], for example, the artist depicts a quartet of maimed soldiers, whose bodies have become as mechanized as the war that claimed their flesh. For others, most famously the Futurists, the man-machine hybrid was a potent image upon which cultural producers could rehearse their utopian fantasies of rehabilitation and industrialization.¹³

This heterogeneity of viewpoints indicates that prosthetic limbs were privileged sites for the negotiation of intersecting discourses of masculinity, rehabilitation and industrialization in the context of the First World War. This section examines a selection of photographs taken in order to illustrate two publications on the topic of prosthetics written by the French labor expert Jules Amar (1879-1935): “La prothèse et le travail des mutilés” (1916) and *Organisation physiologique du travail* (1918).¹⁴ As the wartime director of the Laboratoire de prothèse militaire et du travail professionnel, it was Amar’s responsibility to oversee the development and implementation of a systematic program of rehabilitation and re-education for wounded

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veterans that would ensure their successful reentry into civilian life. The crux of Amar’s approach to rehabilitation lay in potential benefits of prosthetic re-memberment. Through the use of artificial limbs, Amar sincerely believed that veterans could regain their dignity as *hommes complets*. “La prothèse” and *Organisation* describe Amar’s comprehensive approach to prosthetic-aided rehabilitation, in addition to providing insight into the author’s beliefs about the social importance of work for the French man.

My argument centers on what Hal Foster has called the “double logic of the prosthesis,” a concept that points towards prosthetics’ paradoxical status as an addition to the body that simultaneously registers a subtraction from it. Though Amar’s writings have been the subject of analysis by a number of scholars, most notably Roxanne Panchasi, many readings of *Organisation* and “La prothèse” treat the photography contained therein as merely illustrative of the process Amar describes in his texts. Yet such a reading is incomplete, for it overlooks the prescriptive role these photographs play in the context of Amar’s plan for rehabilitation. Above all, the photography of *Organisation* and “La prothèse” is intended to establish the “normalcy,” both biologically and socially, of life after prosthetic re-memberment. The “success” of Amar’s photographs, I argue, depends upon the degree to which they are capable of neutralizing this paradox. That is, the photographs of *Organisation* and “La prothèse” do not cast the prosthetic limb as either an enhancement or a detriment to the body. Rather, these images attempt to “normalize” their existence as part of the body—no more, and no less. Moreover, through Amar’s implicit opinions on “normality” as both a biological condition and a social status, these photographs offer a means of examining the discourses of socio-political rehabilitation after the war, especially that of the reestablishment of traditional gender roles and the reconstruction of the ruined French economy.

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As Roxanne Panchasi has argued, “the scarred and mutilated body of the disabled soldier [was] a privileged site in the fantasy of national recuperation in France.” The reconstruction of the wounded soldier functioned as one way of imagining the reconstruction of a nation ravaged by war. To be sure, prosthetic limbs were but one aspect of this discourse of rehabilitation, but they were nevertheless a highly visible and privileged sign. By one count, over 41,000 men in France had their limbs amputated during the war, the majority of whom (69%) lost one leg, while a smaller percentage, 28%, lost one arm. The remaining three percent lost two or more limbs. The act of treating wounded veterans was more than a medical procedure: it was also understood to restore a soldier’s “manhood,” a concept embroiled in ideas about productivity and the normativity of the organically “whole” masculine body. Though prosthetics had been produced in limited numbers in Europe since antiquity, World War I proved to be a laboratory in which researchers could experiment with new materials and designs to meet the needs of veterans who had lost their limbs at the front.

In France, this task belonged to Jules Amar, a French labor expert and professor who, in September 1914, was appointed director of the laboratoire de prothèse militaire et du travail professionnel, a position he would hold until the cessation of hostilities in November 1918. Prior to the war, Amar, along with an established group of French and German scientists, had been engaged in the scientific study of the body as governed by the principles of

17 Ibid., 113.

18 Joanna Bourke, Dismembering the Male: Men’s Bodies, Britain, and the Great War (London: Reaktion Books, 1996), 33. In addition to these, Bourke estimates that another 272,000 men suffered injuries of the arms or legs that did not require amputation. 60,500 were wounded in the head or eyes, and 89,000 sustained other serious damage to their bodies.

19 Mary Guyatt, “Better Legs: Artificial Limbs for British Veterans of the First World War,” Journal of Design History 4 (Technology and the Body, 2001): 307-325. Guyatt examines the various advancements in material and design of prosthetic limbs, especially the transition from primarily wood-based, static prosthetics to metallic artificial limbs with joints capable of simulating, however poorly, the function of elbows and knees.

thermodynamics. For Amar and his contemporaries, the body was a vital system of energy capable of being measured and, more important, optimized to improve its productive capacities. For Amar, this work was not simply economic. As Anson Rabinbach notes, the science of labor and the study of the body in Europe in the final years of the nineteenth century was tied inexorably to the “social ethic of energy conservation.”

Shortly before the outbreak of World War I, European scientists of labor were introduced to Taylorism, a system for the rationalization of production laid out by the American Frederick Taylor in a series of publications leading up to his 1911 book, *The Principles of Scientific Management.* As a nominally science-based approach to the maximization of productivity, Taylorism advocated the division of production into small, simple tasks and the standardization of industrial manufacturing. Though some (not unfairly) opposed Taylorism as a system that ultimately benefited management and not the laborers themselves, Taylorism was received enthusiastically in France by university-trained scientists such as Amar, who both contributed to and reflected a growing interest in the rational management of the body. While Taylorism was far from ubiquitous in France by August 1914, its ideas were nonetheless in heavy circulation there largely due to the efforts of men like Amar.

Amar’s interest in Taylorism carried over to his work in his Laboratoire, which was founded in 1914 and funded by the French Academy of Sciences. Amar had been involved with the French Ministry of War since 1908, when he was contracted to perform scientific studies on the effects of fatigue. The subsequent appointment to the laboratoire was a natural next step,

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22 Ibid.


both for the Ministry of War and for Amar himself. Indeed, the war, as Rabinbach has argued, proved an excellent laboratory for the science of work and the application of “ergonomics at the front.”

Under the guise of national defense, Amar could continue his advocacy for Taylorism by associating it with interests of national security and the rehabilitation of veterans. Moreover, Taylorism could be associated with French nationalism due to its clear delineation between the working and managerial classes.

The first significant publication of the laboratoire came in January 1916, when Amar presented the lecture “La prothèse et le travail des mutilés” at the Conférence faite pour les Oeuvres des Mutilés at the Palais de la Mutualité in Paris. In his opening remarks, Amar declares that “the hour has arrived, I believe, to organize the work of the wounded, such that each man can take his true place in the social machine, and contribute to it to the best of his ability, and, in this way, march towards prosperity.” Work, unsurprisingly, lay at the center of Amar’s account of the situation in which wounded veterans found themselves: “making rational use of human capacities, even when they are reduced . . . [is of critical importance to] the material and moral future of many thousands of French families.”

Amar buttresses his account with the claim that 80 percent of the wounded could return to work in some capacity, along with patriotic, though unsubstantiated, anecdotes of the eagerness with which amputated veterans approached their new bodily and social circumstances. Conflating physiological and psychological dignity, Amar insists in “La prothèse” that the restoration of wounded veterans as “hommes complets” was as simple as “restoring” what limbs had been lost and putting the mutilé back to work. Amar would revisit this conclusion in greater detail in Organisation.

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26 Discussed in, Beale, The Modernist Enterprise, 73.
27 Jules Amar, La prothèse et le travail des mutilés.
29 Ibid.
physiologique du travail (1917), a “complete” examination of the process and benefits of prosthetic re-memberment.

And yet, even as prosthetic limbs functioned as a privileged sign for the discourse of rehabilitation, they were also a reminder of the horrors of the all-too-recent past. Paradoxically, the prosthetic limb attested to technology’s capacity both to heal and to destroy bodies. The unprecedented visibility of prosthetic limbs, after all, was a response to the new kinds of violence visited upon soldiers’ bodies by new machines of warfare. In Dismembering the Male, Bourke notes that the unprecedented severity of injuries during the war was largely the result of “effective instruments of dismemberment, such as artillery fire, hand grenades, and small arms.”30 Yet hand grenades, small arms, and sighted weapons are, ironically, every bit as much “prostheses” as mechanical limbs are. As Ryan Bishop and John Phillips have argued, from “World War I to the present, the story of military technology has been one of prosthetic extension.” 31 This irony points to the long double life the prosthetic has enjoyed as both a concept and a specific class of objects, including medical devices like artificial limbs (the colloquial use of the term), but also objects like weapon sights and small arms.

These two aspects of the prosthetic—the object and the concept—are not equivalent. They emerged and developed separately. Even so, the prosthetic-as-object and prosthetic-as-

30 Bourke, Dismembering the Male, 34. Bourke also notes that firearm technology was only partially responsible for the horrifying quantity and severity of injuries. The dank, swampy conditions in the trenches of Flanders made treatment of wounded men substantially more challenging than in previous wars.

31 Ryan Bishop and John Phillips, “Sighted Weapons and Modernist Opacity: Aesthetics, Poetics, Prosthetics,” Boundary 29 2 (Summer 2002): 159. The notion that weapons are a “subtraction” from the body is not readily apparent. However, there are a number of ways of conceptualizing how weapons do, in fact, register this subtraction. In directing soldiers’ attention towards the technological representations of the world (as in, for example, the heads up display of an Apache helicopter), soldiers’ attention is directed further away from the material world and the bodily experience of that world. In short, the more we watch, the less we see. In a similar vein, prosthetic enhancement of the body necessarily points towards a shortcoming in the fully organic body. In this way, the alternative and additional subjectivities made possible by prosthetics point towards something that is incapable of being experienced by a human unaltered by prosthetic technology. Finally, and most simply, as offensive technologies meant to increase humans’ capacities to maim and kill one another, these kinds of prosthetics threaten the “subtraction” of the body (albeit other bodies) in very literal ways.
concept can be brought together in mutually illuminating ways, for, in many ways, prosthetic limbs make visible many aspects of the prosthetic-as-concept. Though the term is derived from the Greek “pro” (“to add”) and “tithenai” (“to place”), the prosthetic differs fundamentally from other kinds of synthesis in that it is always preceded by loss. In the case of artificial limbs, this loss is the trauma of dismemberment, the violation of the body as a “complete” form. The prosthetic limb, in theory if not always in practice, is meant to counter this consequences of dismemberment by replicating the value of the lost limb, and in doing so, return the body to its normative “whole” state.\textsuperscript{32}

Yet loss is not so easily forgotten, and the very moment at which the prosthetic appears to offer a solution to the “body in pieces” is precisely the moment when the organic body begins to appear irrelevant. As Bill Brown has argued, “the very success of mechanized industry and the growth of scientific management had disintegrated the body at the site of production.”\textsuperscript{33} Human labor was reduced, materially and analytically, to the operation of individual body parts; workers were balkanized into the parts of their sum. With respect to re-memberment, the prosthetic thus poses the question, “what good is a body if its functions are replicable (or even enhanceable) by machines?”

To twenty-first century scholars, the notion that the body and its technological extensions are not so discrete might seem obvious. Yet that dichotomy was far more rigid in the early years of the twentieth century, when the body was understood to be a naturally given whole, whereas the machine was an autonomous agent. The prosthetically re-membered man-machine hybrids that began to appear in industry and all forms of cultural production as a result

\textsuperscript{32} Charles R. Garoian, “Verge of Collapse: The Pros/thesis of Art Research,” \textit{International Review of Qualitative Research} Vol. 3, No 1. (Spring 2010): 89-102. Garoian’s article provides an overview of the utopian myth of wholeness and normality in the human body. Though Garoian is ultimately interested in using the metaphor of the prosthetic (and the interconnectivity it implies) to disrupt and extend beyond the dialectical closure of thesis, antithesis, and synthesis, the article is useful for historicizing the discursive character of wholeness as bodily normality under cultural modernity.

of the war provoked a profound challenge to the prevailing discourse that treated the body and the machine as separate entities.

The photography of Organisation physiologique du travail and Prothèse et le Travail des Mutilés should thus be understood in the context of this paradox, even as it attempts to neutralize that paradox. For in order for Amar’s prosthetic program to be “successful,” re-membered veterans needed to be persuaded that their new “limb” was neither an addition—which is to admit that it was prefigured by the trauma of “loss”—nor the consequence of a subtraction, which is to admit the apparent irrelevance of the organic body. Instead, the photography contained in Amar’s texts attempt to sidestep the double logic of the prosthesis entirely and claim that the prosthetically re-membered body is itself a “homme complet.”

The fantasy of a prosthetically “enhanced” body as a “whole body” is not so different from one historical function of prostheses: a means of restoring “normalcy” to the damaged body. Like all disabilities, amputation must be understood as both a medical condition and a social status, and if disability is itself socially conditioned, then “normalcy” (understood, conventionally, as the absence of “disability”) is equally contingent upon its social circumstance. In characterizing bodily and social normality in Europe around the end of World War I, it is useful to refer to Sigmund Freud’s Beyond the Pleasure Principle, which was written during and (at least in part) in response to that war.34 In Beyond the Pleasure Principle, Freud describes how “the terrible war that has just ended has given rise to a great number of ‘traumatic neuroses . . . brought about by mechanical force,’” the symptoms of which include “general enfeeblement,” “hysteria,” and “the general disturbance of mental faculties.”35 Though Freud does not explicitly gender his account of bodily normalcy in Beyond the Pleasure Principle, we should note that his language implicitly refers to male bodies, through his allusions both to victims of the “terrible

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war” (i.e. soldiers) and to their psychological symptoms (“enfeeblement” and “hysteria,” both of which would have been understood as “feminine”).\textsuperscript{36} In describing the psychological basis of these neuroses, Freud builds on his conception of the “bodily ego” previously laid out in the pre-war essay, “On Narcissism.”\textsuperscript{37} The ego, Freud posits, emerges out of an image of its own body (or at least from a libidinal investment in that image). This “narcissistic” phase precedes any attachment to things in the world, as the body is the first love of the nascent subject. Critically, however, if the bodily image is violated (as in a body violated by trauma), the subject cannot cohere as a whole image and, as a result, its relations to external objects will be disrupted. Full subjectivity, from this perspective, depends upon the normative “wholeness” of the body.

It’s not hard to imagine how such a conception of the bodily ego would appeal to someone like Amar, who was invested in restoring not only the physiological “normalcy” of the wounded veteran’s body, but also his psychological “normalcy:” being a \textit{homme complet} was more than having a “whole” body. Though Freud is ultimately concerned with the psychological consequences of dismemberment, Amar effectively performs an associative inversion of this logic: if a compromised body means compromised subjectivity, then only an uncompromised body can have uncompromised subjectivity. Thus, for Amar, the reestablishment of psychological “normalcy” was as simple as re-establishing physiological “normalcy,” a task to which prosthetic limbs were perfectly suited. Prosthetics, under this logic, could be understood as liberating—or, more accurately, liberating insofar as they restored what “freedom” had been lost. Indeed, the “liberating” potential of prosthetic rememberment was fully realized at the exact moment of its complete “disappearance,” if not always visually than at least functionally.

\textsuperscript{36} Kaja Silverman examines extends Freud’s gendered logic in her book \textit{Male Subjectivity at the Margins} (New York: Routledge, 1992). In her post-Lacanian view, the mutilated soldier was a key signifier for the challenge to male authority in and beyond wartime. Though her immediate primary source material is cinematic representations of male amputees in post-World War II America, the general form of her argument is highly applicable to postwar France. For Silverman, moments of historical trauma, like war, disrupt the relationship of the male subject to the phallus; the disabled soldier embodies this uncertainty.

Accordingly, the photographs of *Organisation physiologique du travail* and “Prothèse et le Travail des Mutilés” may be grouped into one of three categories of functionality: evaluation, labor, and leisure. Evaluation has been the subject of analysis by Roxanne Panchasi, who notes that the first phase of Amar’s rationalist approach to re-education of amputees involved a determination of the functional value of whatever remained of the lost limb, a process to which the “evaluative photographs” testify.  

38 One photograph [Figure 3], for example, demonstrates a method by which the power of a leg stump is quantified through the assistance of a treadmill that measures torque.

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38 Roxanne Panchasi, “Reconstructions,” 109-140.
In *Organisation*, Amar groups artificial limbs into one of two not-entirely-distinct categories. In the first were mechanical limbs that ended in a “universal tool,” to which one could affix a variety of industrial tools [Figure 4 & 5]. In Amar’s view, prosthetic limbs of this type could be distributed to lower- and middle-class veterans who were likely to work in either factories or in agriculture.\(^{39}\) In contrast, upper-class veterans destined for careers in offices were offered a prosthetic arm that ended not in a “universal tool” but in a “mechanical hand” [Figure 6 & 7] that would allow them to write and type.\(^ {40}\) This class (in both senses of the word) of prosthetic had the added benefit of looking like an organic arm, itself a kind of “function” insofar as we understand some of the function of an arm to be its appearance as an arm.

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\(^{39}\) Panchasi briefly discusses class and prostheses in, Ibid., 124-128.

\(^{40}\) Ibid.
In either case, the photographs of *Organisation* and “La prothèse” document men actively engaged in labor using their prosthetic arm. It is telling that the types of work depicted—hammering and typing—are not in themselves novel forms of labor, but ones that would be familiar to viewers. Though prosthetic re-memberment could in fact permit certain activities—the handling of extremely hot objects, for example—that would be impossible (or at least more challenging) for a purely organic body, the photographs in *Organisation* and “La prothèse” do not draw attention to such activities. Far from revolutionizing labor, prosthetics, for Amar, are meant to integrate themselves, as invisibly as possible, into already extant forms of labor. His concern is not the development of new forms of labor, but the preservation and restitution of old ones.

Figure 6

Figure 7
Moreover, while these images do attest to “normal” labor, they are also meant to portray the normalcy of labor. Insofar as labor was understood to be a normative condition for men in postwar France, one purpose of prosthetic re-memberment was to return to men their ability to labor as men. This basic sentiment is repeated throughout the modest body of literature on prosthetics and professional re-education during and after the first World War. *Les blessés de Guerre: Prothèse et rééducation professionnelle*, published in 1919 by l’Office national et les comités départementaux le fonctionnement des œuvres, is typical of these publications. In its preface, Paul Razous defends his program of professional re-education in economic terms:

> My only desire is that this modest volume will help give our maimed veterans a satisfactory financial situation, which will provide moral support to the thousands of heroes who gave their flesh and blood for France.⁴¹

Amar, for his part, was more concerned with the importance of labor for the psychological well-being of men. Indeed, most of *Organisation* is dedicated to an extensive explanation of why professional re-education is utterly essential for the dignity of the individual soldier, as well as the “health” of the nation. In his chapters “L’Art de travailler” and “La Nécessité d’employer les blessés,” Amar frames his argument for professional reeducation as a re-establishment of the “normalcy” of masculine experience.⁴²

As was the case in wartime, the male body is called upon to serve the interests of the country. Given the association of artificial limbs with both the “masculine” spaces of military and industrial labor, prosthetics were a key point of contact between the intersecting discourses of masculinity and rehabilitation in postwar France. From 1914 to 1918 and thereafter, gender

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⁴¹ Paul Razous, *Les Blessés de Guerre: Prothèse et Rééducation Professionnelle* (Paris: Berger-Levrault, 1919). There is no shortage of literature on reéducation and prostheses published in France during and after the war. To Amar and Razous’ volume, one could add J. Gourdon’s *La Reprise du Travail par les Amputés et Estropiés de Guerre* (Paris: Bordeaux, 1918) or André Tournade’s *La Rééducation Professionnelle des Utilés de la Guerre: Rôle du Service de Santé* (L. Fournier: Paris, 1917), both of which espouse the same basic argument of the importance, both personal and political, of labor. Amar’s volume is, to my knowledge, unique among these for its inclusion of images, photographic or otherwise.

was primary signifier for the social disruptions of war. \textsuperscript{43} Likewise, in postwar France, gender was no less important in re-establishing traditional social hierarchies. As Mary Louise Roberts writes, the “debate concerning gender identity became a primary way to embrace, resist, or reconcile oneself to changes associated with the war.” \textsuperscript{44} One aspect of this disruption had been the entrance of French women into the masculine space of the labor market in unprecedented numbers. Thus, putting men back to work also served to stabilize traditional roles that had been disturbed by the demands of wartime production.

Following the war, a central feature of the re-establishment of traditional gender roles was putting men back into jobs that had recently been performed by women (and, by extension, directing women towards more “appropriate” domestic labor)—that is, men needed to regain, or be put back in, their “proper” place. Prosthetically re-membered men, who had seen their masculinity doubly compromised—the loss of at least one limb (thus invoking the castration complex), as well as the apparent loss of the ability to labor as men—were therefore a potent symbol of this widespread re-entrenchment of traditional gender roles in France following the conclusion of the war.

Representations of leisure also play a leading role in \textit{Organisation} and “La prothèse.” As Peter Burke has famously argued, the invention of labor-leisure dichotomy and was a critical feature of the culture of industrialized economies. \textsuperscript{45} In both \textit{Organisation} and “La prothèse,” Amar is careful to include a number of photographs of prosthetically re-membered men engaged in various types of leisurely activities, from the physically strenuous to the artistically stimulating. Through the aid of an artificial limb, wounded veterans could once more play the

\textsuperscript{43} There is a significant body of literature on the topic of gender and wartime France. See, for example, Daniel Sherman, \textit{The Construction of Memory in Interwar France} (Chicago: University of Chicago Press, 1999): 8, 67.


\textsuperscript{45} Peter Burke, “The Invention of Leisure in Early Modern Europe,” \textit{Past and Present} No. 146 (February 1995): 135-150.
violin or ride a horse [Figures 8 & 9], both of which are held up as emblematic of leisure following prosthetic re-memberment. As was the case with labor, the “leisure” photographs of Organisation and “La prothèse” document activities that would be familiar to viewers, prosthetically re-membered or not. Once again, the images serve to re-establish “normalcy.” For Amar, the prosthetic is not intended to allow new kinds of experience. Rather, it is meant to restore “normative” experiences, whether of leisure or labor, that had been lost.

Popular imagery of prosthetics in mass market publications largely reproduced the normalizing character of the photographs contained in Organisation and “La prothèse.” As Katherine Feo has argued, there was no avoiding the common sight of the artificial limb during and after World War I, especially in France. Despite being a tangible reminder of the trauma of war, though, artificial limbs could be held up as signs of pride and images of sacrifice.46 In La

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46 Katherine Feo, “Invisibility: Memory, Masks, and the Great War,” Journal of Design History Vol. 20 No. 1 (2007): 17-27. Feo argues that facial prosthetics, while undeniably related to artificial limbs, ultimately pointed towards a very different set of problems. As Feo argues, facial disfigurement was seen as the “worst loss of all,” for in addition to the violation of the bodily whole, it also constituted a perceived loss of the subject’s humanity. For Feo, this accounts, in part, for the comparative lack of visibility of facial prosthetics in England following the war. Though large numbers of men had had their faces disfigured during the war, they were a less common sight in urban centers. Indeed, many chose self-imposed exiles.
Guerre mondiale, a daily that ran from September 1914 until December 1917, photographs of prosthetically re-membered veterans were published with some frequency. In the March 30, 1916 edition, a six panel spread [Figure 10] dedicated to a newly patented artificial hand informs readers of the various activities one can undertake using the prosthetic hand—holding a hat, using a fork, and playing cards, for example. Once again, it is worth noting the continued emphasis on the quotidian. In the October 16, 1915 issue, for example, the daily ran a photo spread [Figure 11] dedicated to la maison Oscar-Hélène, an estate outside of Paris at which wounded veterans could be rehabilitated. In one photograph, a group of men play volleyball in open air, one of whom, Mr. Riemenschneider, is identified as having had his arms replaced with mechanical prostheses. And, finally, in the April 13, 1918 edition of Le Monde Illustré, a photograph [Figure 12] depicts a group of veterans actively engaged in their reeducation. As the caption reads, “a school for hairdressing where for our glorious war wounded are learning a new skill that will allow them to improve their lot.”

Figure 10


La rééducation des mutilés de guerre : Une école de coiffure où nos glorieux mutilés apprennent un nouveau métier qui leur permettra d’améliorer leur sort.
While it is highly unlikely that the photographs published in *La Guerre mondiale* and *L'Illustration* were consciously modeled on the conventions laid out by Amar in *Organisation* and “La prothèse,” their similarity indicates the overwhelming discursive force of rehabilitation in France during and after the war, which informed both popular and “scientific” representations of prosthetic limbs. In every case, such imagery served to highlight the potential for a “normal” life after prosthetic re-memberment. Yet this belief was ultimately a fantasy. As Feo notes, pretending that prosthetics “made pre-war life a possibility in the post-war period seems to imply blithe optimism about the permanent consequences of disfigurement.”48 Feo likewise refers to what she calls the design “lag” of medical technology in this period.49 While it is true that the prosthesis was a contradictory sign that could attest to both the positive and negative aspects of technological advancement, it would be wrong to characterize that paradox as symmetrical. Technology’s capacity to disfigure far outstripped its capacity to adequately respond to that disfigurement.

What Amar was constructing, in other words, was a fictive vision of a prosthetic utopia in which the “experience” of the prosthetically re-membered veteran was not demonstrably different from that of man in possession of a “whole” organic body. Yet prosthetic limbs, no matter how functional, inevitably registered bodily difference. There could, therefore, never be bodily “normalcy” for the prosthetically re-membered, for life is ultimately more than leisure and labor, and a body is more than the sum of its parts. The Taylorist utopia (or, depending on one’s perspective, dystopia) Amar envisioned could, perhaps, reify a society in which prosthetic re-memberment did not register bodily difference, yet, in 1918, France was very far from becoming such a society. As Rabinbach has argued, while World War I might have hastened the adoption of some Taylorist principles, Taylorism was far from ubiquitous in France. And as long as the “normative” body was a whole, organic body, Amar’s photographic and textual tactics of

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48 Feo, “Invisibility,” 25.

49 Ibid., 17.
“reconceptualizing” normalcy were never quite capable of realizing their author’s ambitious intentions.

In *Organisation* and “La prothèse,” photography is one means of masking the prosthetic difference, yet even before these texts, that difference (i.e. “abnormality”) is ultimately impossible to avoid. Take, for example, one of the first photographs in *Organisation* [Figure 13], a lineup of prosthetic limbs prior to being affixed to the amputee. Its caption—“models of artificial legs in wood (center) and in leather (left and right)—is soberingly descriptive.\(^{50}\) The most striking formal feature of the image, though, is the series of menacing shadows cast against the wall by the artificial legs in the harsh light of the studio. As Amelia Jones notes of Dada photography, “the shadow marks a fascination with the fragility and transience of corporeality, then, a fascination with death.”\(^{51}\) And while far from being a work of Dadaist photography, the shadows of *Figure 93* nevertheless appear to articulate the very condition of the subject of the photograph. For what is a prosthetic if not a “shadow” of something loss, a

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sign of the fragility and transience of corporeality itself?

Like the prosthetic, the shadow is both an image and a concept. Here, though, it serves to disrupt the fictive overcoming of prosthetic difference that Amar’s “normalizing” photography attempts to construct. In this way, this image is, in Freudian terms, uncanny—what has been repressed by “rationality” in order to preserve the illusory boundaries of lived experience returns to disrupt that boundary. Freud’s examples of uncanny objects or events—“dismembered limbs, a severed head, a hand cut off the wrist . . . feet which dance by themselves”—blur the subject’s ability to establish clear distinctions between the real and the imagined, the animate and the inanimate. Both dismembered and prosthetic limbs could thus provoke “uncanny” feelings in subjects—the inanimate made animate is no less “uncanny” than the animate made inanimate.

Prosthetics, though extant prior to World War I, became increasingly visible as a result of the unparalleled levels of violence visited upon soldiers. Yet despite its traumatic associations, cultural attitudes towards prosthetic limbs were far from monolithic. For some, it was an uncanny reminder of the horrors of industrialized combat and a symbol of the disruptions of war. Yet for others, including Jules Amar, the prosthetic was a means of responding to and overcoming those same disruptions. Prosthetic limbs could point towards a process through which wounded veterans could once again be made *hommes complets*, restoring productivity capacities and masculinities that had been castrated by the trauma of dismemberment. The photographs contained within Amar’s most important publications point towards the crucial role artificial limbs might play in fantasies of rehabilitation. In this way, the mutilated body of the wounded veteran became a prosthetic for the nation. Restoring “normal” masculine embodied experience to soldiers who had seen their limbs claimed by the insatiable violence of World War I was, in other words, a synecdoche for the restoration of “normalcy” to a nation ravaged by war. In short, the prosthetic put the man back into place.

II: Purism and Prostheses

In a recent essay on Fernand Léger's postwar painting, Christopher Green writes of the artist's “multiplicative vision” for the postwar generation to which Léger belonged.\footnote{Christopher Green, “Fernand Léger’s Multiplicative Vision for a ‘Postwar Generation,’’” in Cubism: The Leonard Lauder Collection (New York: Metropolitan Museum of Art, 2014): 202-230.} Referencing Léger’s famous La Ville (1920) \footnote{Ibid.} [Figure 14], in which a pair of grey, anonymous walkers are dwarfed by the dynamic brilliance of the city they inhabit, Green writes that the figures may simultaneously be read as “new masters of the city, who would use the machine to construct a postwar modernity” and representatives of a “postwar humanity subject to the machine, whose faith in the benefits of machine production is no longer impervious to doubt.”\footnote{Ibid.}
In some ways, Green’s reading of La Ville is typical of the expansive literature on Léger’s postwar painting, the object of considerable debate largely on account of the complexity of the artistic and cultural politics Léger’s paintings negotiate.\textsuperscript{55} Never completely at ease with either Cubism or Purism, oscillating between abstraction and the subject, simultaneously embroiled in yet distanced from the politics of the moment, Léger’s postwar painting has defied simple explanations and has been subject to wildly different interpretations, in contemporary criticism as well as in the expansive art historical literature on the subject. Léger’s friend Maurice Raynal said of La Ville, “[it] does not so much allude to nature’s dynamism, but [is] a veritable transposition of the world’s activity.”\textsuperscript{56} At the same time, the poet Yvan Goll described La Ville as a “monstrous entity striding towards us.”\textsuperscript{57}

The heterogeneity of critical and scholarly views suggests that Léger’s own

\textsuperscript{55} Léger’s La Ville itself has been the subject of a recent exhibition, Léger: Modern Art and the Metropolis, organized by the Philadelphia Museum of Art. The five essays contained in its catalogue address La Ville, alternatingly, in the context of Léger’s brand of “realism,” architecture, the cinema, advertising, and urban space. The collection attest both to the well developed state of literature on Léger’s postwar painting, as well as the heterogeneity of method and opinion among its commentators. Scholars, it seems, have possessed an equally “multiplicative vision.”


perspective cannot be reduced to a simple binary of acceptance or rejection of modernity. Rather, this chapter argues for a kind of qualified enthusiasm, a “multiplicative vision” of modernity as simultaneously exciting and alienating, producing spectacles of unprecedented brilliance even as the humans who inhabited them became increasingly dull in comparison. This view, however, was developed over a period of several years, as is evidenced by the occupational portraits Léger produced in the aftermath of the war, especially *The Mechanic* (1920) [Figure 15]. Above all, this body of work articulates a vision of simultaneous individuality and collectivism. Prosthetics play an important role in advancing this seemingly contradictory position, which may be examined through Léger’s postwar artistic trajectory, as the artist divested himself from the Cubists and subsequently took up with the Purists, as well as the theories of scientific management that were circulating in France during the early 1920s. The logic of the prosthesis functions in two ways in these portraits: first, through their Taylorist-influenced representation of the body as an amalgamation of functional components, and, second, in their presentation of the laborer himself as a prosthesis of the machine.

Léger’s relationship to the various postwar avant-gardes and the *rappel à l’ordre* more generally was often more professional than personal: though the artist’s commitment to synthetic forms of painting was enough to earn him membership among the cubists who showed at Galérie L’Effort Moderne, he nevertheless remained distanced from them in crucial ways.\(^{58}\) Likewise, though Léger began exhibiting with the Purists in 1921, his embrace of that movement was somewhat half-hearted. To some degree, Léger’s qualified self-association with postwar artistic avant-gardes mirrors his relationships to his brothers in arms on the front: though Léger frequently spoke admiringly of his comrades, his willingness to use their imaged bodies for

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\(^{58}\) Christopher Green offers a convincing account of the various factions and enemies of postwar Cubism, as well as Léger’s movement through them, in *Cubism and its Enemies: Modern Movements and Reaction in French Art, 1916-1928* (New Haven: Yale University Press, 1987), as well as his *Léger and the Avant Garde* (New Haven: Yale University Press, 1976).
artistic experimentation in his wartime drawings indicates the artist’s distance from them as well.\(^{59}\)

The fluidity of Léger’s professional network has led to significant debate over the nature of Léger’s postwar work, especially with respect to its relationship to the art that Léger produced while serving in the French army. Though Green has previously argued for a clear delineation of Léger’s pre-and postwar painting based on a binary opposition of “intelligence, abstraction, and death” in war against “sensibility, things, and life” in peace, there is good reason to believe that there was both continuity and discontinuity between these bodies of work.\(^{60}\) Daniel Sherman has rightly observed that Léger, even at the height of the conflict [Figure 15], never quite abandoned Cubism and, indeed, that Léger’s entire career was characterized

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by the oscillation between abstract pictorial forms and readily identifiable subjects.\textsuperscript{61} Crucially, both before, during, and after the war, Léger never saw his dual interest in abstraction and “realism” as necessarily opposed: on the contrary, abstract forms represented a means of engaging more fully with the “real.”\textsuperscript{62} Moreover, despite his experiences as a sapper on the front, Léger retained his enthusiasm for the machine as both a concept and object of aesthetic inspiration.

At the same time, Léger saw himself as fundamentally changed by his experience as a soldier. If he survived the war, as he wrote to his friend Louis Poughon in April 1915, he would become “one of the great postwar generation,” having found a new sense of his place among the “whole of the French people” as a result of serving with workers and peasants on the front.\textsuperscript{63} Still, by the time of Léger’s first postwar show at Galerie L’Effort Moderne in February 1919, Léger had largely devoted himself to peacetime subjects, simultaneously producing drawings and paintings of tugboats, acrobats, mechanics, domestic scenes, dog walkers, and industrial laborers.\textsuperscript{64} Though Léger’s abrupt transition to peacetime subjects has been attributed to the artist’s desire to distance himself from patriotic zealots, there was, in fact, surprisingly little triumphalist art in Paris after the war.\textsuperscript{65} As such, it is likely that Léger was demonstrating his faith in the postwar generation that emerged from the conflagration of World War I.


\textsuperscript{63} Léger to Louis Poughon, Argonne, April 12, 1915, in Derouet 1990, 35, letter 12.


\textsuperscript{65} In 1921, for example, the critic Arsène Alexandre commented that there were only four or five war paintings in the painting section of the Salon des Artistes Français. Arsène Alexandre, “Les Salons de 1921: Le Salon des Artistes Français,” Le Figaro 29, April 1921. More broadly, see, Philippe Dagen, Le silence des peintres: Les artistes face à la grande guerre (Paris: Fayard, 1996), and, Claire Maingon, L’âge critique des salons: 1914-1925: L’école française, la tradition et l’art moderne (Rouen: Publications de l’Université de Rouen et du Havre, 2014).
Léger’s transition from wartime to peacetime work largely took place in the artist’s working and reworking of a drawing of his *Portrait de Philippon* [Figure 17], one of the poilus with whom Léger served in the Champagne region. Green has explored the process by which the imaged body of Léger’s friend dematerialized and abstracted over several versions and eventually formed the basis for the painting, *The Typographer* [Figure 18]. Though the effacement of this particular poilu has been read as one example of a clear delineation between Léger’s wartime and postwar work, one may also read this series as literally working through soldiers’ transition from military to civilian life. Léger’s choice to depict a typographer, a profession that, like the modern soldier, depends upon the machine, is also significant: the occupation was viewed as a specifically “modern” subject of particular importance to artists as a worker capable of disseminating copy to hundreds or thousands of readers. As Fredrich Kittler once quipped, the typewriter is the prosthesis of an absent speaker.

Yet, in other ways, there is good reason to believe that Léger’s embrace of postwar society was not as wholehearted as some authors have argued, or at least, that his enthusiasm was tempered over the course of two years. Consider Léger’s *La Ville*, the artist’s submission to the 1920 Salon des Indépendants. A testament to the bustling pace, dynamism, and vibrancy of urban life, the painting is reminiscent of *papier collé* on account of its synthesis of geometric elements into a largely harmonious whole. Indeed, the individual elements of *La Ville* appear as if they might have been picked up from the wreckage of war and re-assembled into something useful. Léger builds his city through a taut, geometric composition that uses areas of flat, unmolded colors to produce a sense of cosmopolitan dynamism. Plumes of smoke, telephone poles, the silhouette of mannequins, and other signs of modern urbanism populate Léger’s bustling metropolis.

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Still, what is one to make of the two men descending the staircase set prominently in the foreground between two bands of primary color? They neither appear equivalent to the “machine men” of Léger's 1914 *Escaliers* paintings [Figure 19], nor do they seem to be the sort of mechanized man, purified by war, the Futurists had envisioned. Green has read them as men of the postwar generation in which Léger had placed his faith: “modern,” unsentimental, resistant to the conservative, national rhetoric of the Right, and open to positive responses from viewers. Yet it is a challenge to read them as anything other than what they are: faceless, anonymous, their eyes downcast, uninteresting in comparison to the exuberant city they inhabit. Léger may have intended to capture the vibrancy of postwar Paris, yet it’s hard not to read some degree of alienation of the individual into the canvas.

Precisely this simultaneous presence of alienation and liberation, the interplay of the collective and the individual, characterizes the “multiplicative vision” at play in Léger's occupational portraits. Indeed, the tension between collectivism and the individual was a crucial aspect of discourses of rehabilitation in France following the first world war. Increasingly, and as Jackie Clark has compellingly argued, social and industrial

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68 Green, “Out of War,” 52.
organization was viewed by economic and political elites as a means of addressing the social, economic, and political ills of France during the interwar period.\textsuperscript{69} This sentiment coincided with the widespread adoption of Taylorist and Fordist theories of scientific management, which, though present in Europe since the end of the nineteenth century, had found new life during and after World War I on the basis of their supposed ability to enact rational, constructive solutions that would counter the disruptions of war.\textsuperscript{70} By the 1920s, such theories had reshaped French industry in various fields, including labor productivity, technological efficiency, and corporate organization.

The influence of industrial organization and, more generally, collective forms of production, is perhaps nowhere more palpable than in Purism. Unburdened by nostalgia for the return to prewar normality, the Purists, led by Le Corbusier (né Charles-Édouard Jeanneret-Gris) and Amédée Ozenfant, obsessively stressed logic and precision as the guiding principles of a new, rationally-organized society, qualities that were embodied, above all, by the machine. Nowhere was their admiration for technology and its social benefits more apparent than in the opening sentence of \textit{Après le cubisme}, published in advance of the first Purist exhibition in December of 1918: “the War is over, everything organizes, everything is clarified and purified; factories rise already, nothing remains as it was before the War.”\textsuperscript{71} As its polemical title suggests, the Purists saw Cubism in all its forms as an outdated movement that had fractured into individual idioms, the disunity of which mirrored the chaos of the war that had just ended. Purism, by contrast, offered unity, reason, and collectivity fitting for the wounded, but victorious, nation.


\textsuperscript{70} Mary McLeod, “Architecture or Revolution: Taylorism, Technocracy, and Social Change.” \textit{Art Journal} 43 2 (Summer, 1983): 132-147.

Purism has long been understood in the context of the widespread artistic and social rappel à l’ordré that took place in France during and after World War I. As Kenneth Silver has shown, Purism brilliantly exploited the rhetoric of “order,” “the classical,” and the “new spirit” to legitimize the movement’s aesthetic production. At once “classical” and forward-thinking, the Purists were able to cast technology not as a demon of modernity but as a crucial element of the reconstruction of the nation. “With positivist certainties came political clarity,” writes Christopher Green, noting the apparent ease with which the Purists were able to integrate the machine into the reconstructive politics of postwar France. The movement’s advocacy of rational principles, logic, and precision appeared the perfect antidote to a country ravaged by war. It also comes as little surprise, then, that the Purists admired theories of scientific management and industrial organization. In a 1918 essay, Ozenfant and Le Corbusier praised Taylorism for its ability to replace “instinct [and] groping” with “scientific principles of analysis, organization, and classification.”

Even before he began exhibiting with the Purists in February of 1921, Léger shared much of the movement’s fascination with and admiration for the machine. Between 1918 and 1925, Léger published several essays on the machine aesthetic, including his 1925 “L’esthétique de la machine: l’ordre géométrique et le vrai.” Léger’s technophilism extended, to some degree, to Purism’s avowed support of Taylorism as an organizing principle of industrial production: Léger wrote to Léonce Rosenberg in 1924 of the admiration he and Le Corbusier shared for the “dynamism” of big business. Léger’s frequent, though far from exclusive, depiction of

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72 McLeod, “Architecture or Revolution: Taylorism, Technocracy, and Social Change.”
73 Christopher Green, Art in France, 1900-1940 (New Haven: Yale University Press, 2001), 156.
74 Quoted in Ibid., 156-157.
75 Fernand Léger, “L’esthétique de la machine, l’ordre géométrique et le vrai,” in Fonctions de la peinture, 63.
76 Ibid., 157.
industrial subjects between 1918 and 1925, further underlines Léger’s own fascination with machines that the war had done little to stifle. Like Purists, Léger saw machines as a crucial and positive aspect of a reconstructed postwar society.

It was in this social and artistic context that Léger painted *The Mechanic*. On first glance, it vividly demonstrates Léger’s and, more generally, Purism’s positive outlook on the machine. The subject dominates the composition: his torso faces outwards towards the viewer, while his head gazes sideways, parallel to the picture plane. The pose—the head turned 90 degrees away from the body—is, organically speaking, impossible. Yet there is something uncanny about the assembly of the mechanic’s body, as if each element had been built separately and fastened together (as they literally are in 1921’s *Mother and Child*). Their apparent independence suggests that they are capable of functioning both independently and as a whole; each has its own function that contributes, but is not equivalent to, the function of the complete body.

Slight gradients of gray and silver in the mechanic’s flesh suggest that his body might be built from more than skin and bone. Most telling, though, is Léger’s handling of the paint at the body’s joints: the slightest hint of gray as the hand meets the arm emphasizes the distinction between the two elements of the body. Because of Léger’s treatment of hands and forearms as discrete entities, the painting exudes a sense of replicability and standardization. One has the sense that were something to happen to an arm or a hand, another could simply be manufactured and replace whatever appendage had been lost.

To be sure, the mechanical qualities of the mechanic’s appendages are almost certainly not literal evocations of artificial limbs, although Léger must have been familiar with such devices on a personal level through his service in the war. Moreover, Léger later used artificial limbs in his film *Ballet Mécanique* (for which Man Ray, whose own interest in the prosthetic will be discussed in chapter three, was the principal photographer). Though the mechanic’s hand bears at least some resemblance to the popular mechanical hand available for purchase at the
time, its form is somewhat too general to conclusively associate it with any particular model of prosthetic hand. What gives the mechanics imaged limbs their prosthetic quality, then, is not a specific visual reference, but their clear representation of the Taylorist body: an atomized group of individuated parts, standardized and interchangeable, each defined solely in terms of its clockwork potential. From this perspective, in which a prosthetic limb is conceptually identical to an organic limb in terms of function, there is no distinction between an organic limb and a prosthetic limb, a conclusion that is underlined in *The Mechanic* by the ambiguity of the subject’s limbs, which appear both organic and mechanical.

On this view, all functional prostheses are limbs. Conversely, all limbs are prostheses—but for what? As discussed in chapter one, Taylorism and prosthetics were a natural pairing due to the former’s ability to construe limbs, both artificial and organic, solely in terms of their clockwork essence. Fordism, too, quickly integrated artificial limbs into its theory. In his 1923 autobiography, *My Life and Work*, Henry Ford echoes Marx’s theory of material social systems and compares the assembly line to an extension of the laborer’s body.77 Conversely, we might note, this view casts the laborer as an extension of the machine’s “body.” Ford explicitly notes that recent advances in industrial design led to machines that required little physical effort from their operators, who could then include “the slightest, weakest sort of men, or older women and children” as well as “legless men, one-legged men, one-armed men, and blind men.”78 Though wounded veterans were far more visible in France by virtue of its higher rate of injury coupled with its smaller population, Ford nevertheless makes clear that he has veterans in mind when discussing the plight of the disabled worker.

Though scholars have debated the setting of *The Mechanic*, it is generally accepted that the painting’s subject is inside a factory, and the abstract forms behind him allude to assembly lines, conveyor belts, and other devices commonly found in the industrial workplace, as well as


78 Ibid.
a number of other laborers. Keeping in mind Ford’s dictum that the worker is a prosthesis of the machine, this mechanic is not simply a professional worker at home in the world of machines. He is also named by his function within that system of production. Indeed, even among the professions that do not have any explicit connection to industrial labor, Léger never identifies his subjects by anything other than their occupation.

Still, it is obvious in The Mechanic that the subject is not an assembly line worker like the two ethereal figures behind and to the right of him, whose bodies are formed by the bulbous and ephemeral puffs of smoke rising from the mechanic’s cigarette (ghosts in the machine, indeed!). Not only does the mechanic’s full-figured-ness underline his distinctness from the assembly line laborers, but his own costume, a tubular, black sleeveless shirt, is not the standard blue smock that would have been worn by factory laborers across France at this moment. How should the mechanic be read and situated within the structure of labor in the factory?

In his 1962 Bodies and Machines, the literary critic Mark Seltzer argues that Taylorism not only radically altered the process of work by making it more “efficient,” but also generated new forms of labor, namely, an ascendant managerial class. Seltzer contends that “the real innovation of Taylorization becomes visible in the incorporation of the representation of the work process into the work process itself—or, better, the incorporation of the representation of the work process as the work process itself.” In short, the representation of labor through graphs, charts, diagrams, and flow charts, became a form of labor in and of itself: manual laborers were imaged in these equations by their managers.

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79 See, for example, Green, Cubism and its Enemies, 122.

80 Diana Crane, Fashion and its Social Agendas: Class, Gender, and Identity in Clothing (Chicago: University of Chicago Press, 2000), 89. The “blue smock” first became popular in the 19th century, when indigo dye was comparatively inexpensive and workers sought a garment that would protect their clothes from the grit and grime of industrial production. The standard model contained four front pockets, which allowed workers to carry multiple hand tools.

81 Mark Seltzer, Bodies and Machines (New York: Routledge, 1992).

82 Ibid., 159.
In 1916, Henri Fayol, one of France’s leading labor scientists, published *Administration industrielle et générale*, which quickly became one of the most influential works on industrial organization in the postwar period. Indebted to Taylorism but with somewhat different aims, Fayol’s volume was dedicated to principles of efficient administration in order to reduce “soldiering,” the perceived problem of laborers working at less than expected capacities. Fayol’s solution, which was ubiquitous in factories across France in the interwar period, was to take control of the labor process away from workers and foremen and give it to a new class of “engineer organizers,” who were capable of both managing labor in the factory and working with the machines themselves. Because the mechanic exhibits mastery over the machine and other men, it is not unreasonable to identify his profession as one of the “engineer-organizers” that Fayol envisioned and subsequently became a key part of the industrial class structure in France after the war.

Whether or not *The Mechanic* is an “engineer-organizer” in the sense that Fayol described, it’s clear that Léger was attuned to the changes taking place in industrial organization in these years. Some forms labor was becoming more specialized, and the divide between skilled and unskilled was increasingly apparent; Léger’s mechanic exhibits no pictorial or spatial relationship to his co-workers, save the puff of smoke that binds the mechanic to his less skilled colleagues, linking foreground to background and subject to object. Moreover, *The Mechanic* alludes, if somewhat ambiguously, to the new visuality of labor under Taylorism, the so-called “representation of work as work,” as Selzter puts it. The precise bands and interpenetrating planes of color in *The Mechanic* are rightly read as allusions to the mechanical interiors of large factories: yet it seems equally likely that their form could allude to the graphs, charts, and diagrams that were increasingly popular tools for the “organization” and optimization of labor in

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84 An overview of Fayol’s work may be found in Clark, *France in the Age of Organization*, 14-16.

85 Ibid.
these years. Moreover, they might alternately read as allusions to the diagrams and schematics that mechanics would need to fix or operate industrial machinery.

Still, despite the allusions to labor, productivity, Taylorism, and new ideas about industrial efficiency that might be found in *The Mechanic*, it is crucial to note that, at the moment of Léger’s depiction of his subject, the mechanic is not engaged in any obviously productive task. Though supposedly a testament to the specialized laborer, equivalent to and contiguous with an industrial utopia whose body itself mirrors the machines and methods of modern industry, Léger retains a dose of individualism, or, at least, allows his subject to retain an identity outside of his titular profession. Though smoking could have been permitted in factories, depending on the nature of the goods being manufactured, Léger depicts the mechanic at a moment when he is not engaged in any obviously productive task—his left hand clenches his cigarette, while his right hand rests against his left arm. Likewise, though his tattoo alludes to another profession—as a dockworker, a merchant marine, or, perhaps, a veteran of the French Navy—a tattoo functions as a demonstration of the subject’s control over the appearance of his own body.

Indeed, given that the tattoo was not present in the 1918 version of *The Mechanic* [Figure 20], one could justifiably read the second version of the
painting as re-asserting, to some degree, the “human,” a conclusion mirrored (or not) by the less obviously metallic skin tone of the second version. Léger underlines this through his handling of the tattoo; while its applications is far from expressionist, it is nonetheless possible to sense at least some of the hand of the artist present in the work, particularly when compared to the sharp lines of the diagrammatic and industrial workplace his body inhabits.

This ambiguity presages at least some of Léger’s tension with the Purists and the artist’s eventual defection from the movement in 1925. In the catalogue to the 1971 exhibition Léger and Cubist Paris, John Golding notes that Léger did not share Ozenfant’s and Jeanneret’s specific emphasis on mathematics and was rather indifferent to the mystique of the number. Moreover, as Golding puts it, “[Léger] was a popular artist . . . and he sensed that [Purism] was an elitist position and that there was something a little cold and inhuman about their art.”

Though clearly influenced by Taylorism, and at least somewhat sympathetic to its more positive goals, Léger nevertheless retains a place for non-industrial forms of labor, and, indeed, entertainment, even if he couches them in terms of large-scale social organization—a “multiplicative vision” of a rehabilitated France in the years after the Great War.

In Léger’s postwar body of painting, the prosthetic, both as an object and a concept, plays a role in acknowledging the simultaneous potential of the machine as a device possessed of both empowering potentials and restrictive limits. Léger’s prosthesis are not the literal artificial limbs of Jules Amar, though Léger’s limbs share some visual similarity with the most popular models of prostheses available in the early 1920s. More importantly, they allude to the functionalist conception of the body articulated in works such as Organisation and “La Prothèse,” which was an conceptual precondition for Amar’s vision for the role prosthetic limbs would play in postwar France. At the same time, Léger’s The Mechanic also demonstrates one

way in which the concept of the prosthetic was being abstracted at this time: following the idea that the worker is a prosthesis of the industrial machine, Léger’s *The Mechanic* demonstrates that the distinction between laborer and machine was less distinct than ever before. Of course, that division was still intimately related to the laborer’s body. It would fall to others to complete the prosthetic’s transformation from material artifact to discursive framework.
III. Man Ray’s Prosthetic Dada

“Anything can take the place of a poem,” exclaimed Louis Aragon in the spring of 1923, two years after the first of Paris Dada’s Friday night cabarets in what would arguably become the movement’s final home. Poetry, of course, had been a crucial component of Dada aesthetics from its inception as a movement of studied incoherence. Whether it was Hugo Ball reading sound poetry in the Cabaret Voltaire in Zurich or Richard Huelsenbeck performing his own chance-based “bruitist poems” in Berlin, the public reading of poetry, played a major role in defining Dada to both its practitioners and its audience. Yet Ball’s “sound poetry,” Tzara’s “simultaneous poetry,” and Huelsenbeck’s “bruitist poetry,” all entailed, to some degree, a conscious act of “creation.” The poets of Paris Dada, by contrast, did not “create” poetry so much as they coopted it, by reading art reviews, newspaper clippings, and, most famously, a parliamentary address. In contrast to the more obviously political aims of Berlin Dada, Paris Dada was more concerned with radicalizing the creative act by spontaneously introducing whatever was anonymous, and mundane into artistic production.

In his essay on Paris in the catalogue to the 2006-2007 exhibition Dada, Witkowsky briefly glosses Aragon’s famous dictum, noting that “new verse, art reviews, and Tzara’s reading

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87 Louis Aragon, *Projet d’histoire littéraire contemporaine*, ed. Marc Dachy (Paris, 1994), 65. The topic of Dada’s “demise” is the object of considerable debate, both at the time of its apparent occurrence and in the literature dedicated to the movement. In the most common formulation, initially espoused by Michel Sanouillet in his groundbreaking *Dada à Paris* (discussed below), Paris Dada is inexorably tied to the rise of Surrealism in Paris in the early 1920s. Of course, all movements, to some degree, are always already in transition: even Breton, from his perch atop the Surrealists, presciently admitted that “Dada and Surrealism—even if the latter was still latent—must be considered correlative, like two waves that cover each other by turns.” André Breton, *Conversations: The Autobiography of Surrealism*, trans. Mark Polizzotti (New York: Paragon House, 1993). For more on the “breakdown” of Paris Dada, see: Matthew Witkowsky, “Dada Breton,” *October* 105 (Summer, 2003): 125-136, and Elmer Peterson’s introduction to the edited volume *Paris Dada: The Barbarians Storm the Gates* (New York: G K Hall, 2001).

88 For more on the performance of Dada poetry across, see Matthew Biro, “Raoul Haussmann’s Revolutionary Media: Dada Performance, Photomontage, and the Cyborg” in his *The Dada Cyborg* (Minneapolis: University of Minnesota Press, 2011): 105-152.
of a parliamentary address . . . were all to be considered truly modern poetry.”

Witkovsky points toward one way in which Dada redefined what could constitute a work of art or poetry, but his observation (admittedly made in passing) could go further. Aragon’s point was not that uninteresting bits of printed media were poems as such, but that they were being read and performed in the place of—instead of—both Dada poetry and more conventional forms of poetry. The distinction between these two positions—that is, what is considered modern poetry and what takes the place of poetry—is fairly subtle, but it has significant implications for the ways in which Dada defined and situated itself against the cultural institutions its creative productions mocked.

If a supposedly “mundane” piece of text can take the place of poetry, it follows that whatever text is taking the place of a poem is not, in fact, poetry. Recall Duchamp’s (only somewhat) rhetorical question posed some years earlier: “Can one makes works which are not works of art?”

Aragon poses the parallel question, can one makes poems that are not poetry? To be sure, the Dadaists, in their irreverence, were committed to mocking the traditional ideal of poetry by raising supposedly uninteresting texts to the “elevated” condition of poetry. Yet, in other ways, they were also sensitive and responsive to poetry’s social function, even if their attentiveness to its social uses ultimately served their critique. In order for “anything” to take poetry’s place, it follows that poetry had a “place” to begin with—in this case, on the stages of cabarets across Paris.

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90 From the notes assembled in À l'infinitif (The White Box), reprinted in Duchamp du signe, ed. Michel Sanouillet and Elmer Peterson (Paris: Flammarion, 1975), 105.

91 Breton himself offers a brief (if selective) overview of Dada history, including Dada poetry and performance, in his 1921 essay “Les ‘Enfers artificiels.’ Ouverture de la ‘Saison Dada 1921.’” As he describes, “it was at the Littérature matinée of Friday, January 23, 1920, when Tristan Tzara, in Paris since the night before, broke with established custom: having announced that he would read one of his poems, he instead read a political article to the accompaniment of an electric bell loud enough to drown
Yet what, exactly, made poetry so easy to replace for the practitioners of Paris Dada? In some ways, the content of what was taking the place of poetry mattered far less than the fact that it was taking a poem’s place. Mundane forms of printed media were poetry because they functioned as if they were poetry. In short, the ease with which anything could take the place of poetry resulted from an apparent emphasis on its socially-validated function. I propose that it was, above all, this barren epistemological régime of all-encompassing functionalism that the Paris Dadaists situated themselves against. In a society in which metal could take the place of flesh by replicating the function of flesh, is it so hard to believe that nothing was secure so long as all things were viewed in terms of their possible function?

Aragon, in other words, envisioned these found texts as a kind of “prosthesis” for the poems whose place they took. Though poetry had traditionally been considered a “private art,” the public performance of poems was an essential element of Dada practice. Yet the “found poetry” theorized by Aragon was read instead of earlier forms of Dada poetry. In a sense, appropriation was taking the place of creation—quotidian words took the place of conjured phrases. That Aragon himself never described found poetry as a prosthesis does not change the fact that the logic that informs his statement is prosthetic logic. Artificial limbs, of course, were never understood as one to one replacements for organic limbs. As Amar reminds us, their purpose is to “make up for a function lost or greatly reduced.” In similar terms, Aragon’s radical claim thus constitutes a form of prosthetic logic, yet one that mocks the entire notion of the prosthetic as it was understood in postwar France. If “anything” can conceivably fulfill one culturally validated function for poetry, how valuable was that designation to begin with?

Man Ray’s Readymade sculptures produced under the influence of Paris Dada and emergent Surrealism reproduce the basic logic of this prosthetic critique, yet with “sculpture”

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rather than “poetry” as the target of their derision. Sculpture, as W.J.T Mitchell writes, “does not project virtual space; it occupies a real site, obtruding on it or changing it.” From this perspective, sculpture is the artistic embodiment of not only space, but place. Writing of this distinction, Heidegger contended that sculptures “themselves are places and do not merely belong to place.” Yet in either case, the characteristics of place, whether embodied or occupied, are vulnerable to substitution and prosthetic replacement.

Before turning to Man Ray’s Readymades, it is crucial to establish what, exactly, was at stake for Man Ray, Louis Aragon, and the rest of the artists and writers associated, however loosely, with Paris Dada. Despite the clear connections between Paris Dada and political philosophies of anarchy, scholars, until relatively recently, have characterized the movement largely in terms of its iconoclasm, rather than its specific anarchist politics. As Michel Sanouillet writes in his foundational study *Dada in Paris*:

In any case, nothing transpired in the Dadaist documents of the epoch other than a coldly flaunted disdain for all political games and players. This indifference, surprising enough considering the vehement revolutionary and pacifist proclamations of the young dadaists, distinguishes very nearly the Parisian movement from its Germanic counterparts, all of whose activities were determined by the political events that marked the end of the war of 1914-1918 in Germany. It equally differentiates Dada from Surrealism, one of whose constants would be precisely this need for intervention in public affairs.

Sanouillet’s apolitical reading of Paris Dada has been referenced and reproduced across much of the body of literature on the movement. Christopher Green, in his *Cubism and its Enemies*, devotes a chapter to Paris Dada, but concentrates exclusively on its readily definable proto-Surrealist elements and largely ignores the admittedly thorny question of its political

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dimensions. In his own study of Dada, Richard Sheppard maintains that Paris Dada was resolutely apolitical, noting that despite its practitioners’ willingness to agitate and provoke, they were nevertheless “unconcerned to base [their provocations] upon a metaphysics, unwilling to define the aims of their revolt and disdainful of practical politics and political thinking.”

Though recent scholarship on the points of contact between the various modernisms, counter-modernisms, and cultural politics in postwar France has transformed our understanding of postwar French art and culture, these historiographical advances have largely left Paris Dada behind. For the most part, the movement languishes either as an amorphous moment in the pre-history of Surrealism in France or as a rowdy, but ill-defined, counterpart to the more revolutionary Berlin Dada. Yet Theresa Papanikolas rightly insists in her 1999 dissertation that, despite the lack of a clearly identifiable political agenda, Paris Dada was far from “apolitical.” It is true that the political commitments of Paris Dada did not align with any specific political movement. Still, as Papanikolas argues, it is equally true that philosophies of anarcho-individualism circulated and flourished in Paris Dada circles, and the entire movement was based upon a unitary vision of social transformation and upheaval that would ennoble and activate the “individual.” These associations help explain the frequent references to and

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99 Ibid, 3. The “enoblement” and “activiaton” of the individual was, of course, not limited to Paris Dada. Indeed, it was a crucial component of Tzara’s 1918 “Dada Manifesto.” As he writes, “let each man proclaim: there is a great, negative work of destruction to be accomplished. We must sweep and clean. Affirm the cleanliness of the individual after the state of madness, aggressive complete madness of a world abandon to the heads of bandits, who rend one another and destroy the centuries.” Tristan Tzara, “Dada
conscious, if somewhat tongue in cheek, emulation of, the principles and events of the French Revolution by the members of Paris Dada.¹⁰⁰

Still, even without accepting that Paris Dada was wholly dependent upon a specific set of Nietzschean philosophers, it is quite obvious that a virulent strain of individualism runs through Dada, leading its practitioners to oppose any form of control over the individual as a sovereign being. Among self-avowed advocates of political anarchy, even anarcho-communism was seen as too constricting an ideology on the basis of its need for collective organization. And if even anarcho-communism was to be opposed on this basis, then virtually all systems of organization deserved even more vigorous opposition. Paris Dada’s ideological enemies included pre-war forms of social and political hegemony, but also and especially the various constructivist and reconstructivist agendas that were imagined in the wake of the war, including the “rationalist” Taylorism of Amar and the Purist utopia of Ozenfant and Jeanneret. In short, the cultural politics of Paris Dada resisted the supposed anti-individualism of modern life and its neat arrangement of autonomous bodies into their “proper” place in the socially-validated capitalist network.

In the literature on Paris Dada, the movement’s resistance to all forms of organized power has often and rightly been understood in terms of its formal innovation.¹⁰¹ By contrast, I wish to locate Paris Dada’s individualist cultural resistance not only in formal innovation, but also in formal intervention. Because “intervention” must always be performed on something, it represents both a disruption of the object-as-form and the socially-conditioned purpose of that

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¹⁰⁰ In his essay on Paris Dada, Witkovsky catalogues some of these allusions, both implicit and explicit: “Paris Dada,” 349-70.

object. And though intervention into an object does not necessarily usurp its intended function (“modding” an object, for example, often makes a given object perform its intended task more effectively), a common feature of artworks produced under the aegis of Paris Dada is interventions that directly contradict the commercially-conditioned purpose of a given object.

Though the market and commercially produced products played at least some role in each of Dada’s adopted locales, the market was especially important for Paris Dada. Under Tzara’s direction, “Dada” was attached to various forms of artistic production—Dadapoem and Dadaphoto, for example—consciously emulating and mocking the techniques for branding being used in the commercial sphere. Indeed, Man Ray, like Marcel Duchamp, was particularly interested in engaging products found in the market place, or, at least the flea market, and often applied a “trademark” symbol along with his signature on his work. His actions were not lost on his colleagues in Paris Dada, who associated Man Ray’s frequent allusions to commercialism with his distinct “Americanism,” the same “Americanism” that was coming to dominate French discourses of industrial management.

The Readymades of Duchamp and Man Ray have long been understood in terms of their challenge to traditional notions of the work of art by replacing ontology with contextualization. Inexorably, the beholder is imbricated in both the “being” and “meaning” of the work of art, disrupting the fictive boundary between art and life. Yet, as Helen Molesworth convincingly

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105 The literature on the Readymade is vast. For the Readymade in relation to structural linguistics, consider: Rosalind Krauss, “Notes on the Index,” in *The Originality of the Avant Garde and Other Modernist Myths* (Cambridge: MIT Press 1985: 196-220. Other standard readings include Benjamin
argues, the Readymades are also a kind of anti-Taylorist gesture, or at least representations of a perverse form of Taylorism.\textsuperscript{106} They resist the rationalization of domestic and “professional” work by refusing the distinction between those discourses. As Molesworth writes,

\begin{quote}
The antifunctionality [of the Readymades] is not solely about their stymied use and exchange value as commodities but has a more literal component. They are antifunctional as in antiwork: they resist their intended, mandated, standardized use . . . they resist the working subject, offering instead the involuntary, distracted subject of play.\textsuperscript{107}
\end{quote}

Though Molesworth is largely concerned with Duchamp’s Readymades, her interpretation is equally applicable to Man Ray’s \textit{Cadeau} (1921) [Figure 21]. In a well-known Dada vignette (though one of dubious authenticity), on the afternoon of his first solo exhibition in Paris in February 1921, Man Ray, with the assistance of the composer Erik Satie, impulsively purchased an iron, brass tacks, and glue. Man Ray then assembled the object in the gallery, using glue to affix fourteen tacks to the bottom side of the iron and propping the object up such that its row of metallic “teeth” confronted the viewer. Though Man Ray had planned to invite his friends to draw lots for the work, which they ironically christened \textit{Cadeau}, the object was stolen sometime in the course of the

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\textit{Figure 21}
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evening’s events.108

Most interpretations of *Cadeau* have centered on three aspects of the work: its frank and violent eroticism, a common feature of Man Ray’s artistic output throughout his career; the work’s relationship to Man Ray’s biography (Man Ray’s father was a tailor); and the gendered labor to which the piece alludes.109 In a frequently cited quote, Man Ray is reported to have said, “You can tear a dress to ribbons with [Cadeau]. I did it once, and asked a beautiful 18-year-old colored girl to wear it as she danced. Her body showed through as she moved around, like a bronze in movement.”110 To be sure, the often uncomfortable sexual politics of Man Ray and his contemporaries are a crucial intellectual context for *Cadeau*. Without discounting Man Ray’s allusions to sexual violence or domesticated, “feminine” labor, however, I wish to focus my inquiry on the work’s deliberate manifestation of non-functionality—or, more accurately, its anti-functionality, a tactic Man Ray likely inherited from Duchamp.111 More than simply stripping the iron of its ability to fulfill the task for which it was designed and manufactured, Man Ray’s formal intervention into the object aggressively contradicts the iron’s intended usage, tearing apart the very fabric it was meant to smooth. For a tailor, it would be a poor gift indeed.

Still, among commentators who have come to this conclusion, it is a common and somewhat uncritical trope to refer to *Cadeau* as “functionless” or some variant thereof. And while someone wishing to iron a shirt would certainly find *Cadeau* a useless piece of metal, Man Ray imagined a very specific function for *Cadeau*: as an object that was to be included in his first

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108 In a different version of this story, *Cadeau* acquired its title from Ray, who intended to gift the work to gallery owner and poet Philippe Soupault, who was instrumental in organizing the debut exhibition. See: Neil Baldwin, *Man Ray: American Artist* (New York: Da Capo Press, 2000), 89–92.


solo exhibition in his newly adopted home town—that is, as a sculpture. Exhibition value, of course, only constitutes one of the many possible functions for sculpture, yet given the proximity of Cadeau’s creation to Man Ray’s exhibition, it is hard to argue that its immediate exhibition was not the artist’s intention. In much the same way that Aragon claimed that “anything can take the place of a poem,” including (and especially) things that are surely not poems, Cadeau demonstrates that “anything” can take the place of a sculpture, thus mocking any definition of sculpture that focuses on sculpture’s “place” and “function.” In terms of Brown’s thing theory, the violation of the iron’s commercially defined “objecthood” makes Cadeau into a “thing” only with respect to the particular subject-object relationship that its commercial function entails. Yet in the context of the commercial art gallery, Cadeau has had bestowed upon it a separate objecthood attendant on the (literally) definitive powers of a different subject, Man Ray himself. The piece elegantly thematizes the ways in which objects have a definable place and value with respect to the system in which they are situated and understood. The transient nature of “sculpture” that is exposed by Cadeau therefore mocks not only the work of art itself, but also the patters and forms of social and cultural practice that conditioned and received the work.

The version of Cadeau that was supposedly stolen between the time of its assembly and the close of Man Ray’s exhibition was the first of many created or authorized by Man Ray over the course of his career. In 1972, for example, Galleria II Fauno in Turin, with Man Ray’s permission and assistance, produced an saleable “edition” of eleven copies of Cadeau. In the process of preparing for the edition, Man Ray assembled five copies of Cadeau, most of which constitute the various Cadeaus now housed in museum collections. Yet finding the exact make and model of the flat iron that Man Ray had used in his 1921 original proved impossible. Indeed, acquiring five copies of any one make and model of iron in use in France between the wars proved impossible. As a consequence of this scarcity, the five preparatory versions, the eleven in Galleria II Fauno’s editioned set, and the other one-off versions Man Ray assembled throughout his career all make use of different “raw materials,” resulting in significant variation from
version to version. Man Ray likewise used metal and brass tacks in alternation, while the type of glue as well as its application required adjustment on a case-by-case basis depending on the construction and material of the tacks and the iron onto which they were affixed.

Man Ray’s willingness to substitute different versions of the same commercial object for Cadeau further emphasizes the artist’s desire to focus the viewer’s attention not on the object as such, but on its functional capacities, as at once a work of art, a commercial product, and a refusal of those categories. Just as Aragon mocks poetry by claiming that any mundane piece of writing may take its place, Man Ray mocks sculpture by revealing the ease with which supposedly un-interesting products of market capitalism can be accepted as sculpture, thus revealing how artificial the entire designation was to begin with. Crucially, the artificiality of “sculpture” is thematized by the explicit emphasis on function as the primary determinant of an object’s character: when function is taken as an object’s “essential” character, anything can easily take that object’s place.

Yet if the Readymade is, as Molesworth reads it, an explicitly anti-Taylorist gesture, then it may also be read as an anti-prosthetic gesture. As Molesworth writes, “if the innovation of Taylorism is the representation of work as work,” then the Readymade is a perverse Taylorism. Likewise, in prosthetic terms, Cadeau is a prosthesis for the work of art: a perverse prosthesis that mocks its very condition of being. Prosthetics, in the view of Amar and many others, were only said to be “successful” when they replaced the function of whatever had been lost: yet this definition of success carried with it the admission that limbs, organic or artificial, could be made standardized and interchangeable, and therefore had no claim to individuality. Prosthetics, as a material practice, were thus opposed to individualism. An uncritical acceptance of prosthetics as a “successful” replacement for whatever had been lost would have struck the practitioners of Paris Dada as precisely the kind of anti-individualist regime the movement opposed.

Man Ray returned to this theme in his 1923 work, *Object to be Destroyed* [Figure 22], in which a single photographic eye, affixed to the pendulum of a purchased metronome, gazes out at the viewer with unyielding intensity. Printed in and cut from gelatin silver and affixed to the metronome by a common paperclip, the gently rounded edges of the photograph mimic the shape of the elegant, feminine eye and piqued eyebrow contained within its “frame.” The metronome ticks precisely at the tempo Man Ray set—168 beats per minute, more than twice the speed of the human heart at rest, thus mirroring the emotional intensity of the beholder’s encounter with *Object to be Destroyed*. Back and forth it ticks (and tocks), passing from left to right (and right to left) in its perpetual semi-circular passage, petulant and immune to the desires of the increasingly agitated viewer.

Like *Cadeau*, *Object to be Destroyed* has existed in multiple variations, many of which, as its title suggests, were destroyed. Indeed, Man Ray intended for there to be a possibly limitless number of versions. In 1932, the artist, then fully engaged with and embroiled in Surrealism, published “Object of Destruction” in the Surrealist journal *This Quarter*, in which
he described the process of *Object to be Destroyed*’s creation and distribution, and, simultaneously, commanded readers to do copy the process for themselves:

Cut out the eye from a photograph of one who has been loved, but it seen no more. Attach the eye to the pendulum of a metronome and regulate the weight to suit the temp desired. Keep going to the limit of endurance. With a hammer, well-aimed, try to destroy the whole in a single blow.\textsuperscript{113}

Despite the proliferation of *Object to by Destroyed* implied by this statement, Man Ray did, however, see his 1934 version of *Object to be Destroyed* as the definitive version of the work due to the artist’s use of an imaged eye drawn from that of his model, pupil, and one-time lover, Lee Miller. As Miller recalls in a later interview, “that object had existed already, done some years before, with an eye that came along. But at the time he added my eye [1932], he titled it *Object à détruire*.”\textsuperscript{114} The biographical dimensions of *Object to be Destroyed* have been examined by Janine Mileaf, who argues that the object “consolidates its specific meaning around the life of the artist.”\textsuperscript{115} Man Ray, despite his own promiscuity, was disturbed by Miller’s credo of sexual freedom, and throughout their tumultuous relationship, he was plagued by Miller’s measured infidelity and irreverence towards his ideas about their interdependence. When Miller eventually left the artist in 1932, a despondent Man Ray produced a series of photographs depicting his own suicide and expressed his anger towards Miller by sending her the precursor to the definitive version of *Object to by Destroyed*: a photograph of her eye, cut out from a larger image and signed in the creases of the skin below her lashes. Man Ray was, by all accounts, disturbed by the control Miller was capable of exerting over him, even in absentia. He abhorred, above all, being made into an object: *Object to be Destroyed*, as sardonic and critical a work as Man Ray ever created, performs this very operation, mirroring the artist’s own “objectification” by another.

\textsuperscript{113} Man Ray, “Object of Destruction,” *This Quarter* V:I (September 1932), 55.

\textsuperscript{114} Mario Amay, “My Man Ray: An Interview with Lee Miller,” *Art in America* 63 No 3 (1975): 56.

\textsuperscript{115} Mileaf, “Between You and Me: Man Ray’s *Object to be Destroyed*,” 5.
For readers of the present day, the imaged eye of *Object to be Destroyed* evokes Jacques Lacan’s essay “The Line and Light,” in which Lacan examines the eye and its relationship to subjecthood: the object, whatever it may be, captures us in its trap.116 The object stares back, and, in doing so, undermines the apparent subjecthood of the viewer: *Object to be Destroyed* is a literal representation of this phenomenon. Man Ray, in these years, was likewise obsessed with Voodoo: Mileaf links Man Ray’s creative imagining of the work in 1929 with a love charm described in William Seabrook’s novel *The Magic Island*:

Two needles of equal length are stood upright, side by side, baptized with suitable incantations, and are given the names of the youth and his unwilling girl. The needles are then left side by side, parallel but reversed, so that the point of each presses against the eye of the other. The point is symbolic of the phallus and the eye symbolic of the vulva.117

In this reading, Miller’s imaged eye takes the place of the eye of the needle, thus alluding to intercourse through the motion of the (feminine) eye and masculine pendulum. Yet the composure of the “unwilling girl’s” eye implies that even the striking, incessant blows of the pendulum are not enough to dominate her. Though the charm is intended to persuade the girl to return to her suitor, the maker, “the object retains powers outside the control of its maker.”118

Mileaf therefore reads *Object to be Destroyed* as a kind of “surrogate body” for Miller, made animate by the incessant heart-like ticking of the metronome and the perpetual gaze of Miller’s imaged eye. Yet Mileaf might have just as easily said that *Object to be Destroyed* is a kind of prosthetic body, in that it takes the place of a body that had been lost (if only to Man Ray). Unlike *Cadeau*, which acts solely as a prosthesis for the work of art, *Object to be Destroyed* functions as a prosthesis for both the work of art and a real, organic body. *Object to be

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117 William B. Seabrook, *The Magic Island* (New York: Harcourt, Brace, 1929), 51. Seabrook’s novel, of course, was released years after the first versions of *Cadeau* and *Object to be Destroyed*. Yet it was being made into a film in the early 1930s and would have certainly been on Man Ray’s mind when he revisited *Object to be Destroyed* in advance of the 1932 essay in *This Quarter*.

118 Mileaf, “Between You and Me: Man Ray’s *Object to be Destroyed,*” 23.
be Destroyed thus makes a clear connection between conceptual prostheses and the organic bodies that first provoked reflection on and remained a key image for prosthetic logic.

Is it so wrong to believe that, somewhere within its irreverent excess, Paris Dada had a redemptive, even moralizing tone? Dada developed in response to an industrial war that, in the view of nearly all Dada practitioners, dehumanized soldiers. In this view, death was reduced to little more than a mathematical abstractions. Yet even in the peace that followed, the individual, in the view of Paris Dada, was far from liberated. Men, women, skilled and unskilled laborers, poems, sculptures, artists—all had a “proper” place in the great social machine, constructed and operated by political and cultural elites for their own ends.

Of course, in some ways, politics for Paris Dada was more self-reflexive than interventionist. Yet even if Paris Dada’s belief in the sovereignty of every individual was more resolute in theory than in practice—much has been made of the misogyny of Paris Dada, and of Man Ray in particular—the movement demonstrates an acute concern for the culture of machinery and its dehumanizing effects on the individual. In the view of Paris Dada, the ultimate injustice of the social “machine” was its refusal to acknowledge the individual as anything other than one more object to be set in its place: one more arm to be “remade” and attached to an assembly line. Paris Dada, above all, defined itself against the objectification of the individual by mirroring and mocking the logic by which the individual was objectified. This was, above all, the logic of the prosthesis made visible not only by prosthetics as a specific class of medical objects, but also through a willingness to see all things as apparently replaceable.
Epilogue

In his canonical 1963 text *Understanding Media: The Extensions of Man*, Marshall McLuhan claims that the form of the medium, rather than the message it conveys, has the greatest impact on the society that consumes it.\(^{119}\) Media changes our experience of the world by restructuring our bodies on a fundamental level. The integration of technology into human lives and bodies alter not only what bodies do, but what also can be done: subjectivity is conditioned the body’s technological extensions. McLuhan’s definition of media is inclusive. The printing press is a kind of prosthetic mouth, our clothing, prosthetic skin. Still, McLuhan’s essay is often misread as an optimistic account of man as an untroubled prosthetic god. If media gives human beings more ways of being and acting in the world, too often the question of where these extensions come from and at what cost they are used is ignored.

Writing for the *American Historical Association* in 1998, Peter Stearns notes that history “offers the only extensive evidential base for the contemplation and analysis of how societies function.”\(^{120}\) History, in this view, provides perspective, both meditative and analytical, on contemporary events. Without history, there is only an all-encompassing presentism that denies the basis upon which humans may make choices informed by the mistakes and successes of the past. Fatalist pronouncements and naïve exaltations of the present day “uberization” of all things, in which digital devices prosthetically connect each user to every other, share a common feature: they believe their subject to be a condition, whether a defect or a benefit, endemic to a networked society. Yet this view denies the ancestry of these micro-economies. The “share economy” can be read as the fulfillment of Jules Amar’s Taylorist fantasies, which conceptualized laborers in terms familiar to the architects of the cybernetic economy: as beings


of information and function. Amar had the vision but lacked the tools. Writing of the transition from the machine age to the information age, Brian Holmes has presciently noted that

... the technological apparatus has only been more fully developed ... while its cultural justifications have merely twisted to reflect a more callous opportunism ... All these technological systems involve people in a new relation between controller and controlled.121

As Matthew Biro has argued, the 1920s represent a moment when cultural producers of all political persuasions came to understand economies, cultural and otherwise, in what are now called “cybernetic” terms122: as a networked array of actors defined by their informative and functional capacities, operating in a validated place in the social machine. Such ideas were integrated into fantasies of national rehabilitation, and their popularity owes much to their promise to counteract the disorganizing effects of war with logic, precision, and reason. Yet others saw such ideas for what they also were: one more operation of power that objectified the individual and the body.

At one end of this spectrum was Jules Amar’s blind optimism in prostheses; on the other was Man Ray’s critique of the logic required to sustain such optimism. And somewhere in between rests the occupational portraits of Fernand Léger, which articulate what Blairite social democrats of the 1990s might refer to as “The Third Way.” Léger, the veteran, knew better than most that technology, when combined with power, reduces human beings to variables in an equation whose “solution” was mass death. His gradual reintroduction of the human into his portraits suggests a belief that the dehumanizing effects of technological warfare could still be found in industrial peace. At the same time, however, Léger saw the potential for machines to be


122 Biro defines cybernetics as the “study of feedback, communication, and control in human beings, machines, and other organized systems,” emerged as a field of research during World War II, but its origins lie in the earlier assumption that, “by understanding human beings and machines in terms of their functions, researchers could discover the multiple ways in which they were commensurate.” This assumption, as he argues, dates to the years after World War I, a view with which I agree. Biro, The Dada Cyborg, 3.
constructive instruments of peace, devices for the “betterment” of society. *The Mechanic* is caught between these irreconcilable positions. Without the mechanical innovations Léger admired, the world would be a technological backwater, but without humanity, it would be a corporate nightmare. Prosthetics did not cause this situation, but they were a catalyst for its development and would not be conceivable without it. The belief in prosthetics presupposes a belief in function; a belief in function presupposes a subject who names the function and an object that carries that burden. Controller and controlled become axiomatic. No appropriation is greater or more terrible than that of the body, the logical extreme of utopian dreams and materialist nightmares.

T.J. Clark’s proposed that the modern art “continually, relentlessly proposes that human qualities, once implicit and embedded in the texture of experience . . . are on the verge of extinction.”\(^{123}\) The art of modernism, in this view, “is an act of dialectical retrieval,” a chance to find human qualities once more in a world that has compressed them into bits of information that exist as the to background of buying and selling.\(^{124}\) It is not enough to resist—the challenge is not to live without the prosthetic. It is how to live with the prosthetic in spite of itself, to never lose sight of the ghost in the machine.


\(^{124}\) Ibid.
References


