Thoroughly Modern Matter

Modernism at Home in the New Material World

by

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Abstract

In the opening decades of the twentieth century, modernity was at war with nonhuman matter. The ontological boundaries between *us* and *it* were unravelling. With each new material development, a greater sense of our similarity to and increasing reliance on the nonhuman material world emerged. Faced with mounting evidence that we might not be as different from the material world as we once assumed, I argue, the efforts of modernisation sought to reaffirm our distance from, while simultaneously increasing our control over, the nonhuman, material world.

Throughout *Thoroughly Modern Matter*, I read the material developments of twentieth-century modernity as responses to the growing awareness that a centuries-old ontology of human superiority was under threat. To do this, I situate the modern home as a foundational site for this ongoing renegotiation of material relations. Although often overlooked in accounts of modernity and modernism, as I detail throughout this thesis, the domestic too endured the shocks of modernity. As subject-object relations were repeatedly turned on their head; as the spread of germ theory uncovered a lively nonhuman world, vibrant and thriving, in the midst of our human home; as modernism sought to limit the affective power of things; as the quest to transform the domestic into a cleaner, brighter, more efficient space pushed ever more towards a denial of our own, human materiality; as we harnessed electricity – the spark of life itself – and strived to domesticate its lively unpredictability by emphasising its seeming immateriality, the modern home became a site where the new material relations of the modern world were tried and tested, day in, day out.

Through this lens of the modern domestic, I read modernity's often fraught entanglements with the material world. Drawing on theories of new materialism, I detail how modernism in its various forms – from the poetry of Gertrude Stein, the photography of Margaret Watkins, Charles Sheeler, and Man Ray, to the Surrealist assemblages of Meret Oppenheim and the Combines of Robert Rauschenberg – participates in this broader dialogue of modern materiality, by both celebrating modernity's desire for thorough material control and critiquing the wilful material ignorance that these visions of our human dominance rely on. In *Thoroughly Modern Matter*, then, I examine how modernism conceptualises and represents both modernity's immaterial ideal and its messy, thoroughly material, reality.

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Introduction

This project began with a nagging sensation; a persistent, intellectual itch. Reading *Tender Buttons*, Gertrude Stein's 1914 collection of prose poetry, I was caught, like so many previous readers, by the sheer difficulty of her work. How was I to navigate the shifting meditations on objects? How should I resolve, for example, "A color in shaving, a saloon is well placed in the center of an alley" into its titular "Eye glasses"?[1] I followed an established critical path, interpreting Stein's text as a form of verbal cubism, seeking to apprehend the objects and events of the domestic space from multiple angles simultaneously. I pursued another path that argued for her work as a dissection of language, a splitting of words into physical entities that bear little resemblance to the object they claim to describe. Then the nagging began. Somewhere, in the back of my mind, the patterns of dirt and cleanliness that occur and recur throughout Stein's text began to take root. (Of the opening three poems, "Glazed glitter" offers the declaration that "charming very charming is that clean and cleansing", and the observation that "It was chosen yesterday, that showed spitting and perhaps washing and polishing"; "A substance in a cushion" notes that "It shows that dirt is clean when there is a volume.")[2] *Tender Buttons* isn't a book about dirtiness and cleanliness, but those words – those loaded concepts – kept appearing, dropping into the text like stones into water, their implications rippling across the surface and disturbing its impenetrable obtuseness, if only for a moment. There was something about dirt here that seemed to exceed the critical framings of verbal abstraction placed around *Tender Buttons*. Something pervasive, obsessional, in its patterns of recurrence; something fraught about the speaker's tone when dealings with dirt came up. I recognised this filth-fixation, this sense of spiralling fear. It was an attitude I'd been encouraged to cultivate, to live with, by advertisements for cleaning products spilling across various media, each portraying dirt as something nefarious, active, and scheming. Dirt, in *Tender Buttons* and daily life alike, was unquestionably the enemy of human wellbeing. *Why*, though? What was it about dirt that so unsettled Stein's

[1] Gertrude Stein, *Tender Buttons, The Corrected Centennial Edition*, ed. by Seth Perlow (San Francisco, CA: City Lights Books, 2014), p. 22.
[2] Stein, p. 11.

speaker, and, over a century later, me, too? What was it about this matter that so clearly marked it as our enemy?

The answer, I discovered, was its liveliness.

I started to unpick these interactions of bodily affect, liveliness, and materiality within the domestic space; I started to wonder what other patterns of behaviour I performed had their roots in modern conceptualisations of matter, and how other artists and writers responded to other unsettling encounters with lively, affective, nonhuman materialities. My explorations moved readily across decades and continents, genres and media, as I accumulated a collection – an assemblage – of artworks from the first half of the twentieth century that all engaged with particularly modern, particularly complex, materialities: dirt, both bodily and bacterial; object ornamentation; glass; and electricity. These four modern materialities form the focus of the chapters of *Thoroughly Modern Matter*.

As I analysed these artworks and explored attitudes towards these modern materialities espoused in popular media, philosophical and theoretical explorations, and modernism more broadly, two contradictory narratives of modern materiality began to emerge. In one, modernity was characterised by human triumph over the nonhuman world, as scientific discoveries and technological advancements, from bacteria to the electric light, allowed humankind to extend our control over the nonhuman entities that constantly threatened to overwhelm, undermine, or undo our strictly human successes. In another contrasting narrative, however, this traditional ontological hierarchy of human superiority over and difference from the nonhuman, material world was thoroughly and repeatedly undermined. The lively affectivity of nonhuman matter revealed by these scientific discoveries and utilised within these technological advancements destabilised the boundaries between the human and the nonhuman, subject and object, us and it. Materiality in modernity, then, was lauded as both governed and ungovernable; undesirable and necessary; an unavoidably human yet characteristically nonhuman trait.

In *Thoroughly Modern Matter*, I draw these two contradictory narratives of modern matter into dialogue with each other to tease out the complexities of the shifting relations with the nonhuman, material world in the first half of the twentieth century. Using modern artworks by Gertrude Stein, Robert Rauschenberg, Meret Oppenheim, Margaret Watkins, Charles Sheeler, and Man Ray which engage particularly modern materialities – dirt, material imitation, glass, and electricity – I

explore how modern experiences of matter are held in tension between our human desire to transcend the inconvenient and unruly messiness of materiality and our thorough implication within and reliance upon a lively material world.

The New Material World

Accounts of modern materialism often draw from what Diana Coole and Samantha Frost, in their introduction to *New Materialisms*, term the "great materialist philosophies of the nineteenth century, notably those of Marx, Nietzsche, and Freud".[3] In turn, explorations of the materiality of modernism often draw on these historical material approaches to stress a persistent sense of physicality within modernist works, from the strokes of paint that comprise Cézanne's apples (which so captivated Rainer Maria Rilke), to William Carlos Williams's often-quoted poetic declaration that there are "No ideas but in things".[4] These currents of modernist materiality have, in turn, sparked critical approaches to modernism and modernity which centre on a more *thingly* modern culture, such as Bill Brown's *The Sense of Things*, Miles Orvell's *The Real Thing*, and Maurizia Boscagli's *Stuff Theory*, each of which use modernist artworks to offer a sustained focus on the object cultures of modernity.[5]

Thoroughly Modern Matter stems from this critical path. Here, I focus on materiality as *matter*: the tangible substances and sensory forces that comprise our

[3] Diana Coole, and Samantha Frost, "Introducing the New Materialisms", in *New Materialisms: Ontology, Agency, and Politics*, ed. by Diana Coole and Samantha Frost (Durham, NC and London: Duke University Press, 2010), pp. 1–43, p. 5.

[4] Rilke writes: "In Cézanne [the apples] cease to be edible altogether, that's how thinglike and real they become, how simply indestructible in their stubborn thereness." Rainer Maria Rilke, *Letters on Cézanne* [1907] ed. by Clara Rilke, trans. by Joel Agee [1985] (New York, NY: Farrar, Straus and Giroux, 2002) p. 30. On the physicality of modern art see, for example, Didier Maleuvre, *The Art of Civilization: A Bourgeois History* (New York, NY: Palgrave Macmillan, 2016), esp. 201-32; William Carlos Williams, "Paterson" [1927] in *The Collected Poems of William Carlos Williams, Volume I, 1909-1939,* ed. by A. Walton Litz and Christopher MacGowan [1986] (New York, NY: New Directions, 1991), pp. 263-66 (p. 264).

[5] Brown and Boscagli both draw on historical perspectives on materiality, emphasising the commodity culture of modernity; while commodities certainly appear in *Thoroughly Modern Matter,* they are far from the central focus. See Bill Brown, *A Sense of Things: The Object Matter of American Literature* (Chicago, IL and London: University of Chicago Press, 2003); Miles Orvell, *The Real Thing: Imitation and Authenticity in American Culture, 1880-1940* [1989] (Chapel Hill, NC: The University of North Carolina Press, 2014); Maurizia Boscagli, *Stuff Theory: Everyday Objects, Radical Materialism* (New York, NY and London: Bloomsbury, 2014).

world, from the microscopic and invisible (bacteria), to the seemingly banal (dirt; glass), to the near-magical and immaterial (electricity). I read modernism's engagement with modern materiality not as inherently metaphorical, and therefore reflective of strictly human experience, but as fundamentally oriented around explorations of matter itself. Modernism, I argue, was attuned to the precariousness of our human relationships with the nonhuman, material world in modernity caused by the repeated material upheavals of modernisation.

My interest in reading modern matter as comprised of both physical "stuff" and affective force is drawn from the theoretical approaches and intellectual ethos espoused by new materialists, such as Jane Bennett, Diana Coole, Samantha Frost, Serpil Oppermann, Serenella Iovino, and Karen Barad (to name just a few).[6] Although diverse in its aims – Coole and Frost collect perspectives on politics, ontology, and agency in their *New Materialisms* anthology, for example, whereas Barad argues for a quantum re-evaluation of the universe – new materialism centres on, as Coole and Frost write, "a conviction that it is now time to subject objectivity and material reality to a [...] radical reappraisal" due to "changing conceptions of material causality and the significance of corporeality".[7] In practice, new materialists follow Bennett in striving to "emphasize, even overemphasize, the agentic contributions of nonhuman forces (operating in nature, in the human body, and in human artifacts) in an attempt to counter the narcissistic reflex of human language and thought".[8] In doing so, this vision of "vibrant materiality" – to use Bennett's term – transforms the material world from a stable, objective backdrop to the ever-changing vitality of human lives, into an active and powerfully affective collective that is profoundly involved in – but, crucially, not *limited to* or *defined by* its involvement in – human lives.

New materialism advocates a concerted intellectual focus on ideas of matter and materiality, both human and nonhuman, and – often by drawing on the

[6] See, for example, Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC and London: Duke University Press, 2010); Coole and Frost, *New Materialisms;* Serenella Iovino and Serpil Oppermann, eds., *Material Ecocriticism* (Bloomington and Indianapolis, IN: Indiana University Press, 2014); Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC and London: Duke University Press, 2007). New materialism also shares theoretical convictions with Object-Oriented Ontology propounded by Graham Harman and Timothy Morton.

[7] Coole and Frost, "Introducing", p. 2.

[8] Bennett, p. xvi.

phenomenology of Maurice Merleau-Ponty – stresses the necessity of recognising ourselves as thoroughly material beings embedded within a thoroughly material world.[9] As Bruno Latour – another key influence on new materialist approaches – argues: "The point of living in the epoch of the Anthropocene is that all agents [human and nonhuman] share the same shape-changing destiny, a destiny that cannot be followed, documented, told, and represented by using any of the older traits associated with subjectivity or objectivity."[10] Further, as Latour argues elsewhere, this shared destiny has emerged precisely *because* the processes of modernisation increased our interference with and reliance on the nonhuman, material world: "Science, technology, markets, etc. have *amplified*, for at least the last two centuries, not only the *scale* at which humans and nonhumans are connecting with one another [...] but also [...] the *intimacy* with which such connections are made."[11] Modernisation and modernity, then, are predicated on shifting relationships between us and the material world that new materialism seeks to interrogate.

Underlying new materialism is the desire to overturn the long-held ontological distinction between mind and matter which, new materialists argue, permits the organisation of the world into reductive and often harmful conceptual binaries, where each entity is defined in opposition to its conceptual Other: *us* and *it*, *subject* and *object*, *human* and *natural*, *mind* and *matter*, *culture* and *nature*, and so on.[12] As Bennett writes:

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[9] Coole and Frost, "Introducing", p. 6.

[10] Bruno Latour, "Agency at the Time of the Anthropocene", *New Literary History,* 45.1 (2014), 1-18 (p. 15) <http://www.bruno-latour.fr/sites/default/files/128-FELSKI-HOLBERG-NLH-FINAL.pdf> [accessed 13 October 2015]. Other key influences on new materialism include Félix Guttari and Gilles Deleuze; the phenomenological approaches of Maurice Merleau-Ponty, who stresses embodiment as a key condition of human experience; Henri Bergson, whose conceptions of vitalism challenge perspectives on the distinction between life and matter; and Baruch Spinoza, who offered an alternative ontology of matter to his contemporary, René Descartes.

[11] Bruno Latour, "'It's Development, Stupid!' Or: How to Modernize Modernization", in *Postenvironmentalism,* ed. by Jim Proctor (Cambridge, MA: MIT Press, 2008), 1-13 (p. 5), emphasis in original.

[12] As Iovino and Oppermann indicate in their collection of *Material Ecocriticism,* the aims of new materialism align in many ways with the critiques of the nature/culture divide and humankind's sustained and continued exploitation of the natural world lodged by ecocriticism. For an account of the intersections between these two critical approaches, see Serpil Oppermann, "From Ecological Postmodernism to Material Ecocriticism: Creative Materiality and Narrative Agency", in *Material Ecocriticism,* pp. 21-36.

> The philosophical project is to think slowly through an idea that runs fast through modern heads: the idea of matter as passive stuff, as raw, brute, or inert [...] The quarantines of matter and life encourage us to ignore the vitality *of* matter and the lively powers *of* material formations.[13]

Our ability to virtually ignore matter – "its brute 'thereness' seems so self-evident and unassailable", Coole and Frost argue – is "indebted" to Descartes's seventeenth-century definition of matter "as corporeal substance constituted of length, breadth, and thickness; as extended, uniform, and inert".[14] Descartes's dualist philosophy of matter, Coole and Frost note,

> provided the basis for [...] ideas of nature as quantifiable and measurable and hence for Euclidean geometry and Newtonian physics. According to this model, material objects are identifiably discrete; they move only upon an encounter with an external force or agent, and they do so according to a linear logic of cause and effect [...] The corollary of this calculable natural world was not, as one might have expected, a determinism that renders human agency an illusion but a sense of mastery bequeathed to the thinking subject: the *cogito* (I think) that Descartes identified as ontologically *other* than matter.[15]

In designating matter as utterly inert and emphasising the human as lively and affective, a rigid, hierarchical ontology was born. In contrast to the dull material world, we – humankind – emerged as a "rational, self-aware, self-determining agents", whose innate difference from matter not only allowed us to measure, quantify, and classify the material world, but also endowed us with both the capacity and compulsion to "manipulate and reconfigure matter on an unprecedented scale".[16] This denial of our own materiality, new materialists argue, fosters the conceptualisation of the natural, nonhuman world as, Stacy Alaimo writes, "a 'blank slate' for human inscription" which encourages us to use nature as we desire.[17] This denial also, as Bennett argues throughout *Vibrant Matter*, instils within us a skewed conception of the material world as dull, dead, or inert, leaving us wilfully ignorant of the countless material interactions that comprise our universe.

New materialism often takes as its focus current challenges to material ontology: biotechnologies, bioethics, and biopolitics; the idea of the posthuman, stem

[13] Bennett, p. vii, emphasis in original.
[14] Coole and Frost, "Introducing", p. 7.
[15] Coole and Frost, "Introducing", p. 7, emphasis added.
[16] Coole and Frost, "Introducing", p. 8.
[17] Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material of Self* (Bloomington, IN: Indiana University State Press, 2010), p. 1.

cell research, genetic engineering, and environmental disasters. Yet, the issues that capture the attention of new materialism – the blurring of the boundaries between subject and object; the ungovernable liveliness of nonhuman matter; the deceptive guises of immateriality afforded by technological advancements – arose over a century before. The discovery of microbes and the attendant fear of bacterial life as being intrinsically inimical to human wellbeing led to discourses of dirt that blurred the line between the animate and the inanimate and thoroughly destabilised long-held imperatives of human agency. The object excesses afforded by the mechanisation of production within modernity sparked widespread cultural concerns about the "tyranny of things" and the erasure of the distinction between the human subject and the nonhuman object. Electrical power and illumination were repeatedly distanced from their material requirements and celebrated as the apex of modern innovation because of their seeming immateriality.

As I detail over the next five chapters, work of the early-twentieth century, from philosophy to poetry, journalism to photography, repeatedly engaged in such examinations of the human relationship with the material world. These examinations were by turns implicit and explicit, overt and unknowing, provoked by the rapid and successive material upheavals of modernity. Drawing these modern experiences of materiality into dialogue with the ideas of new materialism, I unpick the nuances and complexities of these modern materialities. Faced with mounting evidence of material liveliness, nonhuman affectivity, and our own thorough implication within this newly vibrant, material world, I argue, modernity clung on to an ideal ontological hierarchy that, increasingly, was distanced from the experiences of lived reality. Striving to maintain a narrative of human control over nonhuman matter, modernity shied away from renegotiating the ontological boundaries that structure our world even as it endured crisis after ontological crisis. This, then, is the "new material world" that early twentieth century artists grappled with. This is the world that I describe and analyse in *Thoroughly Modern Matter*.

Modernism, At Home

I ground my explorations of modernism, modernity, and materiality within a specific site: the home. In many ways, the home appears to be directly opposed to the key concerns of both modernism and modernity. With its roots comfortably steeped in tradition, its spaces insular, adorned, and sheltered from the brute forces of progress at play in the outside world, the domestic interior is a far cry from the whirls of sensation and the newfound speeds of modern life suggested by Cubism and Futurism, or the bustling streets of urban anonymity witnessed by the wandering *flâneur*.[18] Part of this exclusion of the home from discourses surrounding modernity stems from the diagnosis of "homelessness" as a key condition of modern experience, brought on by the dismantling of traditional socio-cultural structures during modernisation.[19] Further, as Christopher Reed argues, modernism itself – particularly the avant-garde – often sought to position itself as specifically anti-domestic as a way of distinguishing the "high" art of modernism from the "low" art that populated the nineteenth-century home.[20] American modernists in particular, as Wanda Corn observes, sought to assert the "Americanness" of modernity by "forging an identity based on modern skyscrapers and machines".[21]

[18] For an overview of the development of the domestic space, see Witold Rybczynski, *Home, A Short HIstory of an Idea* (London: Heinemann, 1988) or Alison Blunt and Robyn Dowling, *Home* (London and New York, NY: Routledge, 2006).

[19] This pervasive sense of "homelessness" was caused by the diminishment of traditional social anchor points such as religious communities and small-town life within society under the force of market capitalism, Peter L. Berger, Brigitte Berger and Hansfried Kellner suggest in *The Homeless Mind: Modernization and Consciousness* (Middlesex: Penguin Books Ltd., 1973).

[20] Christopher Reed, ed. *Not At Home: The Suppression of Domesticity in Modern Art and Architecture* (London: Thames and Hudson, 1996). However, the domestic is increasingly being drawn into modernism studies, with works such as Victoria Rosner's *Modernism and the Architecture of Private Life* (New York, NY: Columbia University Press, 2005), which explores how the domestic space informed and influenced the artistic output of the Bloomsbury Group, and Morag Shiach's examination of "Modernism, the City and the 'Domestic Interior'", *Home Cultures*, 2.3 (2005), 251–68 <doi:10.2752/174063105778053300> [accessed 7 May 2014], which, through an analysis of Ezra Pound's experience in London, argues that the conditions of domesticity played a vital role in the development of modernism, not least by providing a model of interiority which emphasised subjectivity.

[21] Wanda M. Corn, *The Great American Thing: Modern Art and National Identity, 1915-1935* (Berkeley and Los Angeles, CA, and London: University of California Press, 1999). As Corn notes, this industrial "Americanness" was not always literal: "Calling upon symbolist theories of correspondences and equivalences, they [American modernists] researched new materials and new forms of line and color and devised new metaphors to embody their understanding of Americanness." (xv-xvi)

Yet, the home too endured the repeated shocks of modernisation, the conceptualisations of and behaviours within the domestic interior shifting with the numerous waves of technological, cultural, and scientific progress. From the revelation that microscopic life thrives, unseen, all around us, to the introduction of the electric light, the home in modernity became a space of new material encounters. As such, the home itself came under renewed scrutiny within modernity. From the preponderance of housekeeping literatures and advice guides that swarmed into publication in the nineteenth century, to Walter Benjamin's fierce attacks on the nineteenth century's "addiction" to dwelling, and architect Le Corbusier's declaration that the "house is a machine for living in", analysing, critiquing, and advising on the praxis of everyday life as performed within the domestic space was a recurrent refrain in the first half of the twentieth century.[22] Further, as I demonstrate throughout my analysis in *Thoroughly Modern Matter*, the home was not merely passively affected by modernisation, but was a site where a fundamental tenet of modernity – the extension of human control over the nonhuman material world – was put into practice, day in, day out.

Reading the material relations of the modern domestic, then, not only offers new perspectives on the experiences of modernism and modernity, but also allows the home to emerge within modernity as – to use Victor Buchli's summary of the domestic space – a site where we investigate "the key elements of the human

[22] Walter Benjamin, *The Arcades Project*, trans. by Howard Eiland and Kevin McLaughlin (Cambridge, MA and London: Harvard Univresity Press), pp. 220–221 [I4]; Le Corbusier, *Toward an Architecture* [1928] trans. by John Goodman (Los Angeles, CA: The Getty Research Institute, 2008), p. 151. As Karina Van Herck describes, the most radical calls for reform of the domestic interior came from the avant-garde architects in mainland Europe: among others, Adolf Loos, Le Corbusier, and Adolf Behne. Writing in 1919, Behne railed against the stupefying comfort of the secluded nineteenth century interior, where the inhabitants existed in a "dull vegetative state of jellyfish-like comfort in which all values [have] become blunted and worn". "Away with coziness!" was Behne's charge. "Only where comfort ends, does humanity begin." For Behne, like Benjamin, the self-focus afforded by the model of interiority materialised in the domestic caused a profound erosion of the quality of public life. While the seclusion of the nineteenth century home was in many ways a necessary shell, in the "phantasmagorias of the interior", as Van Herck argues, "objective societal reality", "the human ability of insight and reflection" – in short, "the rational and social dimension of man" – all threatened "to vanish". Sealed in a case of their own traces, the inhabitants were cut off from a vital involvement in the collective life of the world. Karina Van Herck, "'Only where comfort ends, does humanity begin': On the 'coldness' of avant-garde architecture in the Weimar Period", in *Negotiating Domesticity: Spatial Productions of Gender in Modern Architecture,* ed. by Hilde Heynen and Gülsüm Baydar (London and New York, NY: Routledge, 2005), pp. 123-44 (p. 126), with quotations from Adolf Behne, "Review of Scheerbart's Glass Architecture" in *Form and Function,* ed. by Tim Benton and Charlotte Benton (London: Lockwood, 1975), pp. 76-78, and *Die Wiederkehr der Kunst* (1919).

condition [...] where family, gender, and the nature of the individual are understood [...] public and private realms are forged, nature/culture boundaries are created and negotiated."[23] Although often overlooked in discourses of modernism and modernity alike, the domestic is where we learn how to *be* in the world, where we navigate the relationships with the entities – human and nonhuman – that comprise the world at large.

The domestic is also where we are most intimately entangled with the nonhuman, material world. "The house and the body are intimately linked," Janet Carsten and Stephen Hugh-Jones argue: "House, body and mind are in continuous interaction, the physical structure, furnishing, social conventions and mental images of the house at once enabling, moulding, informing and constraining the activities and ideas which unfold within its bounds."[24] As Juhani Pallasmaa writes, the home is "not merely an object or building, but a diffuse and complex condition, which integrates memories and images, desires and fears, the past and present [...] a set of rituals, personal rhythms and routines of everyday life":

> Dwelling, or the house, is the container, the shell for the home. The substance of the home is secreted [...] upon the framework of the dwelling by the dweller. Home is an expression of the dweller's personality and his unique patterns of life. Consequently, the essence of home is closer to life itself than an artefact.[25]

The home represents an intimate entanglement of human subject and nonhuman objects: it is a space where the boundaries of people and material things merge and coalesce, where we both exercise and eradicate evidence of our own bodily materiality, filling the home with ornaments, photographs, mementos, to physically incarnate our subjective human experiences, while at the same time hastening to sweep away dust, polish away fingerprint smears from smooth surfaces, and vacuum

[23] Victor Buchli, "Households and 'Home Cultures'", in *The Oxford Handbook of Material Culture Studies*, ed. by Dan Hicks and Mary C. Beaudry (Oxford: Oxford University Press, 2010), pp. 502–17 (p. 502).
[24] Janet Carsten and Stephen Hugh-Jones, "Introduction", in *About the House, Lévi Strauss and Beyond*, by Janet Carsten and Stephen Hugh-Jones (Cambridge: Cambridge University Press, 1995), pp. 1–46 (p. 2).
[25] Juhani Pallasmaa, "Identity, Intimacy, and Domicile - Notes on the Phenomenology of Home", in *The Home: Words, Interpretations, Meanings, and Environments*, by David N. Benjamin and David Stea (Aldershot: Ashgate), pp. 131–47 (p. 132-33).

away errant hairs. As Akiko Busch asserts in her 1999 exploration of the *Geography of Home*, "I am certain that writing about rooms is a way of writing about people."[26]

This conception of the home as an extension of the human self is a particularly modern formulation, that is, as Charles Rice notes, evident in the shifting usage of the term "interior" itself:

> The *Oxford English Dictionary* records that "interior" had come into use from the late fifteenth century to mean inside as divided from outside, and to describe the spiritual and inner nature of the soul. From the early eighteenth century, "interiority" was used to designate inner character and a sense of individual subjectivity [...] It was only from the beginning of the nineteenth century, however, that the interior came to mean "The inside of a building or room, esp. in reference to the artistic effect[.]"[27]

Writers on the modern home seized on this material merging of human subject and nonhuman object. Mary Pattison, theorising the *Principles of Domestic Engineering* in 1915, for example, asked, "Did you, my good reader, ever look at a house with the impression that it was a person? Did it ever make faces at you, frown, scowl, or be astonished at your gaze [...] conveying the disposition of the family through its composition, texture, color, form and quality[?]".[28] B. Russell Herts, instructing on *The Decoration and Furnishing of Apartments* in the same year, conceptualised the interior decorator as "a doctor, the physician of the inside of people's houses as the medical practitioner is of the inside of their bodies".[29]

In practice, too, this blurring of human subject and nonhuman object was encouraged. In the latter decades of the nineteenth century, as Beverly Gordon describes, middle-class American women were advised to adorn the home with

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[26] Akiko Busch, *Geography of Home: Writings on Where We Live* (Princeton, NJ: Princeton Architectural Press, 1999), p. 24.

[27] Charles Rice, *The Emergence of the Interior: Architecture, Modernity, Domesticity* (London and New York, NY: Routledge, 2007), p. 2, citing "interior" and "interior decoration" from *The Oxford English Dictionary* <http://dictionary.oed.com/>.

[28] Mary Pattinson, *Principles of Domestic Engineering, Or, The What, Why and How of a Home: An Attempt to Evolve a Solution of the Domestic "Labor and Capital" Problem: To Standardize and Professionalize Housework: To Re-Organize the Home Upon "Scientific Management" Principles: And to Point Out the Importance of the Public and Personal Element Therein, as Well as the Practical* (New York, NY: Trow Press, 1915), p. 198, *Home Economics Research Archive: Research, Tradition, and History* (*HEARTH*) (Ithaca, NY: Albert R. Mann Library, Cornell University) <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4302030>.

[29] B. Russell Herts, *The Decoration and Furnishing of Apartments* (London: G. P. Putnam's Sons, 1915), p. 5 <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4614138> [accessed 25 March 2016].

material signs of their "good taste", to drape and dress sofas, windows, tables, and chairs like they would their own bodies, with ruffles, bolsters, and petticoats, until they and the interior "became almost interchangeable", and "symbolically one could stand in for the other".[30] Under the guise of permitting women to exercise their creativity, Gordon argues, such interior decoration blurred the ontological boundaries between subject and object, as women became merely "something to be looked at", a further element of décor, no different to a plush throw, a still life lithograph, or a statuette.[31] In Walter Benjamin's scathing analysis of the nineteenth-century interior, too, the supposedly symbiotic relationship between people and things encouraged within the modern domestic was presented as utterly devastating:

> The bourgeois interior of the 1860s to the 1890s, with its gigantic sideboards distended with carvings, the sunless corners where palms stand, the balcony embattled behind its balustrade, and the long corridors with their singing gas flames, fittingly houses only the corpse. "On this sofa the aunt cannot but be murdered." The soulless luxuriance of the furnishings becomes true comfort only in the presence of a dead body.[32]

In fuelling their entanglement with the material world, Benjamin's inhabitant fashions only their own mausoleum, which, as Benjamin's connection of these traces with the emergent detective genre shows, can stand in – easily, uncannily – for the inhabitant themselves after death.[33]

For better or worse, then, the modern domestic gave rise to a lived experience centred around the increased entanglement of *us* and *it*, and, as I explore throughout *Thoroughly Modern Matter*, modernity became increasingly concerned with governing this entanglement. From the avant-garde architectures of Europe to the advice offered in *Good Housekeeping*, in the opening decades of the twentieth century the domestic

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[30] Beverly Gordon, "Woman's Domestic Body: The Conceptual Conflation of Women and Interiors in the Industrial Age", *Winterthur Portfolio,* 31.4 (1996), 281-301 (pp. 291, 281) <https://www.jstor.org/stable/1215239> [accessed 23 May 2014].

[31] Gordon, pp. 301, 291.

[32] Walter Benjamin, "One-Way Street" [1933] in *One-Way Street and Other Writings*, trans. by Edmund Jephcott and Kingsley Shorter (London: NLB, 1979), pp. 45–104 (pp. 48–49).

[33] For Benjamin, the cloying, deadening domestic interior didn't necessarily operate along the engrained gender bias that Gordon describes – if anything, man, as master of the house, was more likely to fall prey to the home's comforting wiles. Although women were ideologically confined to the home, for Benjamin middle-class men were equally alienated from the world of industry by the force of market capitalism: "Corresponding to [the] phantasmagorias of the market […] are the phantasmagorias of the interior, which are constituted by man's imperious need to leave the imprint of his private individual existence on the rooms he inhabits." Walter Benjamin, "Paris, Capital of the Nineteenth Century" [1939] in *Arcades Project,* pp. 14-26 (p. 14).

interior was subject to repeated calls for its necessary modernisation, centred on severing the increased and engrained entanglement of persons and things, fighting back against the lively materiality of the nonhuman world, and striving towards a modern ideal of transcendent immateriality. Most of all, I argue, these modern visions of the home sought to reaffirm the ontological boundaries between subject and object by exercising increased human control over the nonhuman, material world.

Thoroughly Modern Matter

The artworks which serve as my "cases" for the chapters that follow have all been read through the lens of this conflation of the domestic interior with human interiority: their domestic focuses seemingly invite biographical interpretations.[34] Works by Gertrude Stein, Robert Rauschenberg, and Meret Oppenheim have all been interpreted as intimate explorations of their sexualities; the photography of Margaret Watkins through her feminine identity; and Charles Sheeler's images of the domestic interior as a "stand-in for human associations" that form, in effect, "a self-portrait as well".[35] In my analyses of these works, and in my explorations of the domestic space itself, I deliberately and repeatedly resist such a ready conflation between the interior and human interiority. To read the objects and entities presented within these artworks as purely reflective of the private lives of the people who produced them reiterates many of the conceptual binaries between public and private, interior and exterior, human and nonhuman, subject and object, that the works I examine seem to interrogate, challenge, or actively overturn. Writing about the domestic may be a way of writing about people, but a large part of this project is driven by the conviction that exploring nonhuman encounters in the domestic space can also be a way to write about affect and materiality, ontology and uncertainty, and radical reappraisals of liveliness and agency.

[34] I take this term from Sara Ahmed, who cautions that "To name one's archive is a perilous matter; it can suggest that these texts 'belong' together". I want to avoid such a suggestion here, and instead stress that these works are only examples selected because they allow me to explore the shifting material upheavals of modernity. Sara Ahmed, *The Cultural Politics of Emotion,* second edn. (Edinburgh: Edinburgh University Press, 2014), p. 14.

[35] Karen Mae Lucic, "The Present and the Past in the Work of Charles Sheeler" (unpublished PhD thesis, Yale University, 1989), p. 65.

Over the course of the next five chapters and the conclusion, I use four contested modern materialities – dirt, objects, glass, and electricity – to frame my explorations of *Thoroughly Modern Matter.* As I demonstrate throughout, although each of these entities have been part of human experience for centuries and may, on the surface at least, appear to be innocuously integrated into the patterns of everyday life, these materialities emerged within modernity as subjects of sustained scrutiny and – at times – flashpoints of controversy. These modern materialities, I argue, informed the conceptualisation of the human relationship with the nonhuman, material world at large.

Throughout *Thoroughly Modern Matter*, I use the terms "modernism" and "modernity" to describe the works I engage and their contemporary contexts. I use these as terms of convenience to describe the period of transition and upheaval in life, art, nature, and culture, that spans from the late-nineteenth century to the mid-twentieth century, and as a catch-all term for any and all works – from magazine articles in *Good Housekeeping* to avant-garde assemblages – that engage these upheavals. The elasticity of these terms allows them to respond to their particular circumstances, but also to describe movements and developments that span centuries and cross continents.[36]

There is something blurry, messy, and unifying about "modernity" and "modernism" that I want to exploit throughout this project to let me talk about the disparate array of artworks without having to clarify at every turn precisely how these artworks fit a single model of modernism, or to focus on arguing for their inclusion in

[36] The temporal and stylistic boundaries of modernity and modernism are very much up for debate: Susan Stanford Friedman describes "modernity" and "modernism" as constituting "a critical Tower of Babel, a cacophony of categories that become increasingly useless the more inconsistently they are used". For example, James C. Scott situates high modernism as the period from the onset of industrialisation in the 1830s to the outbreak of World War I; Marshall Berman identifies three phases of modernity, spanning from the sixteenth century onwards; Malcolm Bradbury and James McFarlane position modernism between 1890 and 1930, a time frame shared by Miles Orvell; some critical accounts raise the question of whether we have ever been *post*modern at all. See Susan Stanford Friedman, "Definitional Excursions: The Meanings of *Modern/Modernity/Modernism*", *Modernism/Modernity,* 8.3 (2001), 493-513 (p. 497) <https://doi.org/10.1353.mod.2001.0062> [accessed 8 September 2017], James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT and London: Yale University Press, 1998), pp. 89-90; Marshall Berman, *All That Is Solid Melts Into Air: The Experience of Modernity* (London and New York, NY: Verso, 1983), pp. 16-17; Malcolm Bradbury and James McFarlane, eds. *Modernism: A Guide to European Literature 1890-1930* [1976] (London: Penguin Books, 1991); Orvell; Astradur Eysteinsson and Vivian Liska, "Introduction: Approaching Modernism", in *Modernism,* ed. by Astradur Eysteinsson and Vivian Liska (Amsterdam and Philadelphia, PA: John Benjamins Publishing Company, 2007), pp. 1-8.

this project at all. My application of "modernity" similarly yokes together North American and European modernism; in doing so, my aim is not to run roughshod over the differences and nuances of international experiences, or to argue for an overriding hegemonic condition of "modernity". My aim is instead to emphasise the common currents of discourse that circulated within modernity around, within, and between America and Europe without erasing or eliding the cultural complexities and specificities of international experience. My interest here is in the parallels that emerge within discourses of modern materiality, not in tracking the dissemination of ideas and influence within modernism and modernity. Quite simply, I use "modernism" to describe the artworks I engage here because it emphasises that these works all, in some way, engage with or respond to the developments of modernity. I use "modernity" because it encompasses the complexities of socio-cultural change, technological advancements and scientific discoveries, and their specific national cadences, while still emphasising that there are elements of commonality or shared experiences that characterise the period as a whole.

I start my exploration of *Thoroughly Modern Matter* by turning to "Anxious Materialities". I focus on the discovery of microbes and the widespread acceptance of the germ theory of disease transmission around the turn-of-the-century. Reading through the languages of cleanliness and contagion that populate Gertrude Stein's 1914 book of prose poetry, *Tender Buttons*, in Chapter One I explore how the idea of microscopic life flourishing within the human home gave rise to a broader conception of dirt as lively matter. I examine the development of this material animation through the language of contemporary housekeeping literature, and explore how the affective, material capacities of dirt and germs alike were conceptualised within modernity and modernism as evidence of a conspiracy of nonhuman forces, feverishly working to undermine human health and wellbeing. In Chapter Two, I trace this early-twentieth century war against lively matter through to its culmination in the "culture of cleanliness" that dominated mid-century American society.[37] Drawing on theorisations of disgust, I examine how modernity's desire to exert control over nonhuman matter extended to the material liveliness of the human body itself by analysing Robert Rauschenberg's notoriously filthy artwork, *Bed* (1955), as an object of material disgust.

[37] Hoy, p. 151.

Part Two, "Material Excess, Material Restraint" brings together two perspectives on the materiality of objects. In Chapter Three, I investigate the idea of object interiority through Meret Oppenheim's Surrealist artwork, *Object*, better known as *Breakfast in Fur* (1936). I position Oppenheim's fur-covered cup, saucer, and spoon as a parody of the material excesses of nineteenth-century modernity through an exploration of material imitation in the late-nineteenth century interior as depicted in contemporary photographs and described by writers such as Stephen Crane. I read the twentieth-century rejection of this nineteenth-century aesthetic of material imitation (espoused by Edith Wharton and Ogden Codman Jr., for example) as a defensive reaction against the idea of object interiority, a way of reaffirming the ontological distinction between the interior complexities of the human subject and the supposed dullness of the material object. In Chapter Four, I move on from the prior emphasis on material excess to focus on modern aesthetics of material restraint. Drawing on the work of Walter Benjamin, Paul Scheerbart, and the short fiction of Virginia Woolf, I explore the conceptualisation of glass as an idealised, modern materiality, capable of countering the material excesses afforded by nineteenth-century modernity. Using the still life photography of Margaret Watkins produced between 1919 and 1928, where glass shifts between sparkling immateriality and decidedly grubby matter, I scrutinise the complexities and contradictions of this celebration of glass.

In Part Three, "Domesticating Lively Matter", I explore the aesthetics of immateriality that surround electricity. In Chapter Five, I trace electricity's path from public phenomenon to private utility by analysing contemporary conceptualisations of the electric light drawn from newspaper articles, housekeeping literatures, and the emergent tradition of the photographic nocturne as seen in the work of Alvin Langdon Coburn. Turning to a series of interior photographs produced by Charles Sheeler circa 1916-17, I explore how the emphasis on the seeming immateriality of electric illumination was both upheld and unsettled by its introduction into the domestic space. In my conclusion, I continue to pursue this narrative thread of transcendent, electrical immateriality, using a portfolio of photogravures produced by Man Ray in 1931 centred on *Electricité* to examine how ideas of modern matter from previous chapters – control over material liveliness, and a denial of our own, bodily liveliness – coalesce into an idealised vision of modern life.

Over the course of the following five chapters and the conclusion, then, I explore artistic engagements with the material relations of the modern domestic space to trace a narrative of ontological upheaval that runs throughout the first half of the twentieth century. My examinations move between high art and mass media, philosophy and journalism, as I present my "cases" as usefully illustrative of a much broader concern about how the new material relations of modernity affected and altered the human relationship with the nonhuman world.

Chapter One

Into a Lively World

Dirty Materiality in Gertrude Stein's *Tender Buttons*

Every day, in the home, we eradicate potentially harmful microscopic lifeforms simply by wiping a surface, briefly, routinely. We obliterate cobwebs, suspended in corners and thickened with dust, with a sweep of a vacuum cleaner. We eliminate grease from dishes with suds and ease. We vacuum up dust mites and errant hairs from carpets. These activities are casual – not eagerly anticipated, often undertaken grudgingly, but easy enough to accomplish. There is a certain sense of satisfaction that a freshly cleaned room provides: a magazine sparkle, a gleam, a feeling of rightness and order.

Cleanliness has such strong positive connotations, and dirt, such negative ones, that the need for domestic cleanliness and its links to emotional and physical wellbeing carry the weight of universal truths. It is our duty to clean our homes: cleanliness is always desirable, and dirtiness is always to be avoided. We know this, and we believe this. We adhere to this logic, unquestioningly, in some small form or another, every day of our lives. Yet, at the heart of these universal truths, there is a tautology. We clean because *dirt is dirty and dirt needs to be cleaned*. Cleanliness and dirtiness operate in self-justifying, self-perpetuating cycles. The pattern of avoiding dirt and striving towards cleanliness shapes and structures our behaviour within the home to a degree most of us probably aren't even aware of.[1]

I start my investigation of modernity's material relations by examining the origins of our modern dealings with dirt around the turn of the twentieth century. Germ theory – the idea that invisible, potentially deadly, agents of contagion survive and thrive in the human home – was gaining widespread public attention. As popular science magazines, housekeeping journals, and household advice books adopted a language of microbes and malevolence, dirt began to take on new forms and meanings. Its longstanding negative associations acquired new shape as dirt started to be portrayed as vibrant and aggressive – no longer just an inconvenient by-product of everyday life, but part of a conspiracy of material forces, stirred into action by malevolent, nonhuman intent. As the language of germ theory spread from scientific

[1] See Ben Campkin and Rosie Cox, "Introduction: Materialities and Metaphors of Dirt and Cleanliness", in *Dirt: New Geographies of Cleanliness and Contamination*, ed. by Ben Campkin and Rosie Cox (London: I.B. Tauris, 2007), pp. 1–8; Kate Forde, "Introduction", in *Dirt: The Filthy Reality of Everyday Life,* by Rosie Cox and others (London: Profile Books Ltd, 2011), pp. 1–7.

journals to housekeeping literatures and popular magazines, cleanliness garnered new importance. Keeping the home clean was no longer just a moral imperative, needed to maintain social standing and moral wellbeing, but a physical necessity. When "tuberculosis, diphtheria, typhoid, and polio" were, to use Suellen Hoy's term, "real killers", dirt in the domestic was taken very seriously indeed.[2] As influenza epidemics and pandemics swept America and the globe alike, people perished in their millions.[3] Dirt – the most insignificant matter of all – became a matter of life and death.

Over the next two chapters, I thrust the liveliness of dirt into the spotlight, arguing that our attitudes and behaviours towards dirt, defined over a hundred years ago, set the tone for modernity's stance towards lively matter. I position the discovery of a world of bustling nonhuman activity occurring unseen inside our homes – *germs* – as a defining moment in modernity's material relations. As these invisible organisms, inimical to human health and wellbeing, were conceptualised in a language of scheming bacilli and malicious microbes, all forms of dirt, from dust to dander, were increasingly implicated as agents in this emergent war between human order and nonhuman matter. With this blurring between animate lifeforms and inanimate matter, I argue, long-held ontological distinctions between human and nonhuman, subject and object, *us* and *it*, the human and the natural, the active and the passive, started slowly, and then with increasing rapidity, to unravel. As I explore throughout this first part of *Thoroughly Modern Matter*, instilling dirt in all its manifold manifestations with an active, and disturbingly affective, capacity altered our relationship with matter itself. For centuries categorised as dull, inert, "devoid of all experience, intrinsic value, internal purpose, and internal relations", matter around

[2] Suellen Hoy, *Chasing Dirt: The American Pursuit of Cleanliness* (Oxford: Oxford University Press, 1995), p. 123.

[3] Influenza outbreaks were relatively common in the US around the turn of the century, with pandemics sweeping the globe in 1889-90, and epidemics in America in 1916-17. The influenza pandemic of 1918 infected over 25 million Americans and 500 million people worldwide, of which 50 million died of the disease; the impact of this pandemic, Bristow writes, "was severe enough to lower life expectancy for Americans in 1918 by twelve years." Nancy K. Bristow, *American Pandemic: The Lost Worlds of the 1918 Influenza Pandemic* (Oxford and New York, NY: Oxford University Press, 2012), pp. 3-4, 14-17, 31-36.

the turn of the century began to appear lively, organised, and capable of unsettling the very foundations of our world.[4]

In this chapter, I analyse both this characterisation of dirt as active, affective, and out to disrupt our human lives and the ensuing desire to reinstate human control over the material world by fighting back against these invasive material forces by drawing on the patterns of cleanliness and dirtiness, of gleaming surfaces and pervasive germs, that run throughout Gertrude Stein's 1914 book of prose poems, *Tender Buttons.* Tracing these patterns back to the language of contagion – of scheming dirt and material foes – I detail how Stein's work captures a particular moment within modernity's shifting conceptualisations of nonhuman materiality; a moment of unsettling vulnerability, sparked by the dawning awareness that our human homes may not, strictly speaking, be our own.

In Chapter Two, "Disgusting Us", I pursue this trajectory of modern material liveliness through to mid-century America, where the patterns of behaviour provoked and inspired by our desire to exert control over nonhuman matter culminate, as Hoy describes, in a full-blown "culture of cleanliness".[5] Focusing on Robert Rauschenberg's notoriously filthy artwork, *Bed*, I explore the radical renegotiations of material ontology that ensue when our own bodies are repeatedly revealed as decidedly lively materialities. Throughout the next two chapters, then, I detail the complex interactions between the human and this newly lively material world, tracking the shifts in balance and agency, will and affectivity, which occur – often unnoticed – in the course of our everyday lives. I examine how modernism across media both conformed to and rebelled against modernity's increasingly stringent stance towards lively, nonhuman matter.

[4] Serpil Oppermann, "From Ecological Postmodernism to Material Ecocriticism: Creative Materiality and Narrative Agency" in *Material Ecocriticism,* ed. by Serenella Iovino and Serpil Opperman (Bloomington and Indianapolis, IN: Indiana University Press, 2014), pp. 21-36 (p. 22), quoting from David Ray Griffin, *Whitehead's Radically Different Postmodern Philosophy: An Argument for its Contemporary Relevance* (Albany, NY: State University of New York Press, 2007), p. 8.

[5] Hoy, p. 151.

Dishing the Dirt: Domesticity and *Tender Buttons*

An extensive body of criticism surrounds *Tender Buttons*, much of which emphasises the domestic setting of Stein's text. From its triptych division into "Objects", "Food", and "Rooms", to its attentiveness to the minutiae of daily life – "why is lamb cheaper, it is cheaper because so little is more" – *Tender Buttons* is, inescapably, a text grounded in the domestic and the patterns of a household.[6] Within this recognisable setting, however, lies a work of remarkable difficulty: as Sarah Garland writes, "we know this language of 'putting' and 'shining' and 'making', 'eggs', 'orange juice' and 'sugar', and yet we don't know *this* one".[7] Stein's work is highly paratactic, stripped of pronouns, and repeatedly turns in circles, caught in self-reflexive loops of linguistic definition. Where we are given objects, food, and rooms, ostensibly to guide us, the stability of even these most familiar of concepts is consistently undermined, to the extent that we are never quite sure if the object or idea presented to us in a title determines or disturbs the information collected beneath it. Margueritte S. Murphy describes how "the frequently riddlelike quality of [Stein's] prose poems" provides the overriding sensation that "they are somehow in code".[8]

Stein is often positioned as the key to decoding her own text. Drawing on her relationship with Alice B. Toklas and their home at 27 rue de Fleurus on Paris's Left Bank, *Tender Buttons* is often read as a treatise on lesbian domesticity. From the titular "tender buttons" – suggestive, Murphy notes, of the French term for nipples – to the "provocatively ambiguous" "Red Roses" – "A cool red rose and a pink cut pink, a collapse and a sold hole, a little less hot" (26) – Stein's work is most often represented

[6] Gertrude Stein, "Mutton", in *Tender Buttons, The Corrected Centennial Edition*, ed. by Seth Perlow (San Francisco, CA: City Lights Books, 2014), p. 42. All subsequent references given parenthetically. Titles of individual poems given in this edition are presented in small capitals, with large capital letters used to denote the letters that Stein herself capitalised in her manuscript, to help differentiate between poem titles and body text. To reflect this editorial decision (and Stein's own decisions about capitalisation), I use sentence case for the titles within *Tender Buttons* throughout, with capitalisation as indicated by the text.

[7] Sarah Garland, "'A Cook Book to Be Read. What about It?': Alice Toklas, Gertrude Stein and the Language of the Kitchen", *Comparative American Studies*, 7.1 (2009), 34–56 (pp. 38–39) <http://dx.doi.org/10.1179/147757009X417215> [accessed 13 May 2014], emphasis in original.

[8] Margueritte S. Murphy, "'Familiar Strangers': The Household Words of Gertrude Stein's *Tender Buttons*", *Contemporary Literature*, 32.3 (1991), 383–402 (p. 387) <https://www.jstor.org/stable/1208563> [accessed 23 April 2014].

as an intimately coded, erotically charged exploration of feminine sexuality.[9] By setting her radical assault on syntax and referentiality within the "feminine" sphere of the domestic, both Murphy and Julie Goodspeed-Chadwick argue, *Tender Buttons* launches a joint attack on both the normative restrictions on female sexuality in the early twentieth century and the masculine-dominated cultural movement of modernism – and all its various celebrations of that most manly of spaces, the city.[10] In the past decade, critical attention has increasingly emphasised the "dailyness" of Stein's work. Wanda Corn and Tirza True Latimer, in staging their exhibition, *Seeing Gertrude Stein*, presented selections from Stein's famous art collection alongside objects taken from the Stein-Toklas household, in recognition of the sustained interrelationship of art – both her own and others' – and the domestic in Stein's life.[11] Murphy, Belinda Bruner, and Mary O'Connor all focus on the imperative parataxis of Stein's prose, and liken her authoritative tone and lack of pronouns to the method of address common to early twentieth century housekeeping, recipe, and etiquette books aimed at bringing the domestic under the growing influence of mass consumer culture.[12] For the most part, however, readings of the domestic within Stein's work still seek to read Gertrude Stein herself, and the approaches to the patterns of everyday life offered within *Tender Buttons* are steeped in ideas of female sexuality. They remain centrally concerned with how Stein's life with her "wife", Alice Toklas, both deviates from and conforms to early twentieth century societal norms.[13]

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[9] Murphy, p. 384; Neil Schmitz, "Gertrude Stein as Post-Modernist: The Rhetoric of *Tender Buttons*", *Journal of Modern Literature*, 3.5 (1974), 1203–18 (p. 1210) https://www.jstor.org/stable/3831005> [accessed 12 May 2014].

[10] Julie Chadwick-Goodspeed, "Reconfiguring Identities in the Word and in the World: Naming Marginalized Subjects and Articulating Marginal Narratives in the Early Canonical Works by Gertrude Stein", *South Central Review*, 31.2 (2014), 9–27 <http://muse.jhu.edu/article/548418> [accessed 13 August 2014].

[11] See Wanda Corn and Tirza True Latimer, *Seeing Gertrude Stein: Five Stories* (Berkeley and Los Angeles, CA, and London: University of California Press, 2011).

[12] See Murphy; Belinda Bruner, "A Recipe for Modernism and the Somatic Intellect in *The Alice B. Toklas Cook Book* and Gertrude Stein's *Tender Buttons*", *PLL*, 45.4 (2009), 411–33 <http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?vid=5&sid=cdeb7957-02fc-41ed-a8f0-98599eb109c3%40sessionmgr103> [accessed 22 July 2014]; Mary O'Connor, "The Objects of Modernism: Everyday Life in Women's Magazines, Gertrude Stein, and Margaret Watkins", in *American Modernism Across the Arts*, ed. by Jay Bochner and Justin D. Edwards (New York, NY: Peter Lang Publishing Inc., 2001), pp. 97–123.

[13] Much has been made of how Stein and Toklas referred to themselves as "husband" and "wife". See Shari Benstock, *Women of the Left Bank, Paris, 1900-1940* (London: Virago Press, 1994).

When dirt and cleanliness within *Tender Buttons* do receive critical attention, Toklas is situated at the heart of these analyses. Dirt and cleanliness are viewed as figurative rather than literal, symbolic of lustful taint and spiritual purity, irrevocably subsumed into the discourses of secrecy and desire perceived to be surrounding Stein's personal relationships. For Neil Schmitz, there is "typically sexual allusion" as "references to dirt and cleanliness recur" throughout the text, positioning *Tender Buttons* in line with what William A. Cohen terms "psychoanalytic logic", where "repulsion and attraction unconsciously converge", and the dirtiness of sexual desire is allowed to "besmirch" moral purity.[14] For Garland, drawing on the work of Pamela Hadas, Alice herself can be read into the "dirt" in "Roastbeef", as the stigma attached to the Stein-Toklas lesbian relationship carries with it, in the eyes of Stein's brother, Leo, an undeniable moral taint.[15] William H. Gass describes Stein's writing on dirt as a mirror for human emotion: "objects are either clean, so that they shine and glitter, gleam and dazzle, or like the tarnish on copper pots, the grayness of dusty glass [...] are dull and dirty, as our lives become when we are left unloved and unemployed."[16] For Gass, the practice of cleaning can be read as an act of love, care, and tenderness, but also as a method of absolution, where we clean to eradicate the stains of sexual desire, of lust, and of the fundamental baseness of living: "we hope [...] one day we shall be able to [...] purify ourselves the way we polish hardware and pots, clear tables, or better yet, our sin, and cook without dirtying a dish.[17]

These readings all emphasise the human presence in Stein's work, yet the human is remarkably absent from the text of *Tender Buttons*, aside from a single instance of a spying "I" in "Butter" (52). Throughout the poems, we are audience to the abstracted, refracted, subjective experience of the speaker, whose physical presence leaves no trace on the vignettes as they unfold. Because of this dislocation of the human, as Gass's description of *Tender Buttons* above indicates, the divisions between subject and object are repeatedly blurred within Stein's text. Gass notes that objects "are either clean" or "dull and dirty": not *cleaned* by someone or *left* to get dirty. Volition

[14] Schmitz, p. 1210; William A. Cohen, "Introduction: Locating Filth", in *Filth: Dirt, Disgust, and Modern Life*, ed. by William A. Cohen and Ryan Johnson (Minneola, MN and London: University of Minnesota Press, 2005), pp. vii – xxxvii (pp. ix–x).
[15] Garland, p. 43.
[16] William H. Gass, "Gertrude Stein and the Geography of the Sentence: *Tender Buttons*" [1976] in *Gertrude Stein*, ed. by Harold Bloom (New York, NY and Philadelphia, PA: Chelsea House, 1986), pp. 145–65 (p. 146).
[17] Gass, p. 151.

is repeatedly ascribed to the nonhuman in *Tender Buttons* through Stein's removal of human interference, positioning the speaker as witness to this lively nonhuman domestic, rather than the locus of action and agency. This tension between the categorisation of nonhuman matter as inert and the mounting perception of its innate liveliness swirls throughout Stein's poems, as dirt and the domestic, the human and nonhuman, subject and object split and share affectivity, sometimes willingly, sometimes not. By illuminating Stein's dealings with dirt in this chapter, I use *Tender Buttons* to help reveal how engrained and unsettled, thoroughly entrenched and utterly uncertain, relations between *us* and *it*, people and matter, in early twentieth century modernity truly were.

Contagion and Contamination

"[E]verywhere there is dirt", a commentator on housekeeping declared in 1917,

> there too lurk the foes of our health, and perhaps of our lives [...] In crevices on the floor, in dark, dank corners in cellars and such places, they may lie dormant if the dirt is long left untouched, only to revive once again after entering the human body in some manner and reproduce with dizzying speed.[18]

American home-economics pioneer Ellen Swallow Richards argued that a "pinpoint of dust" could yield "three thousand living organisms, not all malignant, but all enemies of health."[19] In 1908, Lyman Abbott, meditating on the ideals of a female "Home-Keeper", offered an update on John Wesley's seventeenth-century epigram, that "cleanliness is next to godliness": "Cleanliness itself is a virtue. Next to godliness? If she were quite frank with herself, she would probably change the order and say godliness is next to cleanliness."[20] Dirtiness and cleanliness, in the early twentieth century, were loaded terms indeed.

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[18] Ingeborg Möller, *Konsten Att Vara Huslig* (Uppsala: 1917), p. 18, quoted in Boel Berner, "The Meaning of Cleaning: The Creation of Harmony and Hygiene in the Home", *History and Technology: An International Journal*, 14.4 (1998), 313–52 (p. 324) <http://dx.doi.org/10.1080/07341519808581936> [accessed 12 June 2014].

[19] Ellen H. Richards, *The Cost of Cleanliness* (New York, NY: John Wiley and Sons, 1908), frontispiece, quoted in Hoy, p. 153.

[20] Lyman Abbott, "The Home-Keeper" in *Home Making*, ed. by Marion Harland (Boston, MA: Hall and Locke, 1911), pp. 1–7 (p. 1), *Home Economics Archive: Research, Tradition and History* (*HEARTH*) (Ithaca,

Although we have dedicated time to the removal of dirt from our bodies since antiquity, as the germ theory of disease began to gather public attention around the turn of the twentieth century, the concern surrounding dust, dirt, and germs within the home reached fever pitch. As scientific research into microbes, pioneered by Louis Pasteur and John Tyndall, among others, began to spread into *Popular Science Monthly* and housekeeping magazines, dirt became increasingly synonymous with microbes, and, as William Gilman Thompson observed in 1885, microbes captured the public imagination: "The germ theory appeals to the average mind: it is something tangible, it may be hunted down, captured, colored, and looked at through a microscope, and then in all its varieties, it can be held directly responsible for so much damage."[21] Microbes rendered visible the previously unseen "seeds" of contagion.[22] With the rise of germ theory came the realisation that invisible entities, previously as dull as dust, were thriving, dividing, and multiplying within the confines of the human home. Where the previously accepted "miasma" theory of disease transmission ascribed illness to atmospheric, airborne clouds of infection, germ theory for the first time located this invisible threat within our own bodies, and our homes.[23] Any speck of mud became suspect, a possible source of contagion; the natural, material world became lively; and the domestic became the front line in a long-raging battle between us and dirt.[24]

We see this threat of microscopic activity running rife through Stein's prose poem, "Roastbeef", as the speaker explores what lies beneath a seemingly inert surface. In a section that begins, "The change the dirt, not to change dirt means that there is no beefstake and not to have that is no obstruction" (35), Stein's lines lengthen and the poem's tone becomes increasingly feverish as the speaker imaginatively investigates the activities of these unseen agents of contagion:

NY: Albert R. Mann Library, Cornell University) <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4391447> [accessed 27 July 2015].

[21] William Gilman Thompson, "The Present Aspect of Medical Education", *Popular Science Monthly*, 27 (1885), 589–95 (p. 590), quoted in Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge, MA: Harvard University Press, 1998), p. 7.

[22] Tomes, p. 3.

[23] Tomes, p. 3.

[24] The home became a particular cause for concern when bacteriologists claimed to be able to culture the tuberculae bacillus from common house dust, and found evidence that houseflies carried the same bacillus and other germs on their feet. The latter, as Tomes describes, "led to crusades to get window screens on every home". See Tomes, pp. 8–9.

> All the time that there is use there is use and any time there is a surface there is a surface, and every time there is an exception there is an exception and every time there is a division there is a dividing. Any time there is a surface there is a surface and every time there is a suggestion there is a suggestion and every time there is silence there is silence and every time that is languid there is that there then and not oftener, not always, not particular, tender and changing and external and central and surrounded and singular and simple and the same and the surface and the circle and the shine and the succor and the white and the same and the better and the red and the same and the center and the yellow and the tender and the better, and altogether (35-36).

Each time a "surface" is used – for food preparation, as the title "Roastbeef" invites, or writing on, or eating from – in the ongoing process of everyday life, the "suggestion" of dirt inevitably follows. Stein's language here echoes early writings on the germ theory of disease, with each "use" of a surface matched "every time" by "a division [...] a dividing". Nancy Tomes, in *The Gospel of Germs*, explains that early commentaries on the microbial spread of disease sought to emphasise the "primitive" nature of pathogens by describing how "they reproduced not by the mating of male and female", as with creatures higher up the classificatory scale, "but by budding, dividing, or producing spores".[25]

Despite their subordinate status and rudimentary reproduction, however, these microbes possessed the capacity to spread at a staggering rate: in 1903, H.W. Conn detailed how:

> Certain kinds of common bacteria can reproduce themselves once every half hour, the result of which is that a single bacterium will have become two in half an hour, four in an hour, eight in an hour and a half, and so on. This increase of progeny by geometrical progression results in the production of descendants with immense rapidity. If the rate of multiplying above mentioned should continue for twelve hours, the result would be the production of about seventeen million offspring.[26]

By breaking her self-established pattern in this section of "Roastbeef", Stein emphasises this sense of uncontrollable rapidity, of teeming, thriving, nonhuman life. Where each noun is once an exact repetition (use, use, surface, surface, exception, exception), Stein recognises the fervent activity the surface harbours by transforming a predicted noun into a verb, writing that "every time there is a *division* there is a *dividing*". Where surfaces, uses, and exceptions are static, Stein's engagement with the

[25] Tomes, p. 41.

[26] H.W. Conn, *Bacteria, Yeasts, and Molds in the Home* (Boston, MA: Ginn and Company, 1903), pp. 107–108, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4765416> [accessed 27 July 2015].

language of contagion renders stasis impossible, as each completed act of bacterial reproduction (division) immediately precipitates another "dividing". This dirt, lurking within the *Tender Buttons* domestic, is active, relentless, and out to multiply.

While each individual cell may be "singular and simple" in physical structure – as Tomes writes, they are little more than "a cell wall enclosing a largely undifferentiated mass of protoplasm" – cumulatively, these bacteria pose a credible threat.[27] Conn continues: "Although they are so small that a single one can accomplish practically nothing in nature, the fact that this single one can in twenty-four hours produce millions of descendants gives to bacteria almost unlimited power."[28] Stein picks up on this mammoth force in numbers, as the speaker's focus swings between the individual characteristics of a lone cell, "surrounded and singular and simple and the same", and the very real danger these ever-multiplying cells pose, as they are "tender and changing and external and central".[29] Cells spill over like froth from a boiling pan, constantly shifting position in relation to each other, the once central now pouring out as new life bursts into existence.

More disconcerting than their sheer number, however, is their *liveliness*. On a dull, ordinary surface, unremarkable in many respects, we are, through Stein's examinations, exposed to a new world of imperceptible activity. Something previously dull as dirt is now bristling with life. Further, these invisible agents of contagion are not just active and multiplying: they are wholly unconcerned with the havoc they may wreak, uncaring and "not particular", as any individual vulnerability or tenderness is more than compensated for by their thriving, collective mass. For Stein, Conn, and converts to germ theory alike, these germs "represent a force in nature of almost inconceivable magnitude".[30]

This combined vision of "feral" dirt instilled with a "conscious malevolence" characterises the language of germ theory.[31] Tomes notes how, in the 1880s, William Mays portrayed germs as hunting "in packs" and physicians referred to microbes as "atmospheric vultures", using "highly charged adjectives such as 'foreign,' 'base,'

[27] Tomes, p. 41.
[28] Conn, p. 108.
[29] Tomes, pp. 41–43.
[30] Conn, p. 108.
[31] Tomes, pp. 42–43.

'murderous,' and 'cunning,'" to describe germs.[32] Over a century later, our dominant vision of dirt is still drawn from these depictions of germs as active, animalistic, and on the rampage. A television advertisement for *Domestos* bleach aired in 2012 depicts bacteria holding a strategy meeting for their "bathroom invasion plan"; another shows a germ, rendered as a nightmarish hybrid of insect, gastropod, and rodent, singing "I'm going to make some people vom, people vom, people vom" to the tune of *London Bridge is Falling Down*.[33] We still live this legacy of lively material aggression today, and act upon its teachings unquestioningly, throughout our lives, believing in the absolute, unflinching necessity of eradicating dirt.

Germs, then, are depicted as the most utterly relentless form of dirt. Although cleanliness briefly cuts through the swarm of nonhuman life in "Roastbeef", as "the shine and the succor and the white" cleanses each surface, rendering it "better", the battle against germs and active dirt is ongoing. Each moment of apprehended visual certainty that comes with Stein's positioning of "the white", "the red", and "the yellow" as concrete nouns is undercut by her repetition of "the same". The flatness of the soft vowels here dulls the clear brightness created by the accretion of hard vowels that ring as the stresses fall on the *shine* and the *white*. Following the flatness of "the same", Stein's line gives way to further soft vowels: "and the better and the red and the same and the centre and the yellow and the tender and the better, and altogether". The certainty and the clarity of cleanliness is lost, here, highlighting how, for every human use of a surface, there is a nonhuman, pathogenic threat, dividing unseen, underscoring our every domestic action. As Conn cautions, "We must not [...] think that anything is safe from contamination with bacteria because it looks clean."[34] Lively matter could be lurking anywhere, waiting, dividing, *growing*, without us ever knowing.

These conceptualisations of microbes as maliciously organised – both turn-of-the-century and contemporary – aren't too distanced from the truth. While there is

[32] William Mays, "On the Supposed Identity of the Poisons of Diptheria, Scarlatina, Typhoid Fever, and Pueperal Fever", *San Francisco Western Lancet*, 9 (1880), 110–15 (p. 111), quoted in Tomes, pp. 42–44.

[33] Domestos, *Anti-Germs 24hrs* (United Kingdom, 2010) <http://uk.adforum.com/agency/3928/creative-work/34459421/anti-germs-24h/domestos-domestos> [accessed 11 October 2014]; Domestos, *5x "Vom"* (London, 2006) <http://www.campaignlive.co.uk/thework/884712/> [accessed 11 October 2014].

[34] Conn, p. 212.

little evidence to support the idea that bacteria actively scheme against human wellbeing, bacteria do communicate and interact with each other. As Serpil Oppermann notes, "Molecular biologists observe that bacteria use chemical signalling as 'words' to communicate with one another. They 'release, detect, and respond to the accumulation of these molecules, which are called autoinducers [...] to coordinately control the gene expression of the entire community.'"[35] What, to our human imaginations, appears as a seething mass of "primitive", thoroughly sub-human, life, is, in reality, a complex of single-celled organisms that are able to self-organise, "to behave as multicellular organisms, and to reap benefits that would be unattainable to them as individuals", and even "communicate within and between species".[36] All told, bacteria appear far less "feral", and far more unnervingly well-organised, than we might have ever imagined.[37]

More than "A Dirty Word"

This feverish, filthy activity wasn't just restricted to the microscopic transmitters of disease, however. As concerns about germs spread, *dirt* became synonymous with *germs*, and dust and grime were simultaneously instilled with equal measures of liveliness and malevolence. Such heightened attentiveness to the liveliness and affective capacity of domestic dirt was thoroughly encouraged in the late nineteenth and early twentieth century. As Tomes describes, Tyndall urged the readers of *Popular Science Monthly* "to think about the molds that grew on wet boots or a piece of fruit left exposed to the air and about the dust that appeared in a beam of sunshine after the housemaid cleaned a room", to see with their own eyes the vitality and vibrancy of the material world; Abbott argues that, so engrained were the lessons of germ theory, the female housekeeper "needs no scientist to tell her that the germs of insidious disease lurk in dirt"; with no small amount of vitriol, Ingeborg Möller writes that dust "should always be despised, for dust always contains bacteria".[38]

[35] Oppermann, p. 32, quoting from Stephen Schauder and Bonnie L. Bassler, "The Languages of Bacteria", *Genes and Development,* 15 (2001), 1468-80 (p. 1468).
[36] Tomes, p. 41; Schauder and Bassler, p. 1468, quoted in Oppermann, p. 33.
[37] Tomes, pp. 42–43.
[38] John Tyndall, "Fermentation and Its Bearings on the Phenomena of Disease", *Popular Science Monthly*, 9 (1876), 129–54, quoted in Tomes, p. 40; Abbott, p. 1; Möller, p. 18, quoted in Berner, p. 324.

While these appeals for germ awareness were designed to encourage the spread of hygienic behaviours, this conceptualisation of dirt as lively matter helped to foster an animated image of the nonhuman, material world. The malevolence of germs, conflated with dust, dirt, and grime, gave rise to a vision of filth in the domestic as out to disrupt the happy human home. For an anonymous contributor to a Swedish housekeeping magazine, this active, nonhuman world is comprised of "enemies in the house":

> quiet, but ever active demons that seek unremittingly to destroy all therein. A grain of sand or dust is caught by the curtain and wears away a thread; smoke gets in and blackens the glass; moths get in the upholstery; the gilding is darkened by moisture; the meat is spoiled and the butter made rancid by heat [...] Not today, tomorrow or the day after, but day after day, unceasing, your entire life; at first it is unnoticeable, not at all worth the effort, but tomorrow it is worse than today and the day after the damage is already impossible to calculate.[39]

As the revelations of microscopic activity fused with filth's longstanding negative connotations, dirt itself became lively, disruptive, and instilled with agency. The habit, as Jane Bennett describes, of "parsing the world into dull matter (it, things) and vibrant life (us, beings)" engrained in modern thought was unsettled by the least significant matter of all – dirt.[40] Matter, once dull, became potentially lively.

Throughout *Tender Buttons*, Stein shows various strains of dirt – natural, nonhuman matter – to be powerful, active, and affective. In "A red stamp", lilies that are "lily white" become agents of domestic disruption, exhausting "noise and distance and even dust": "if they dusty will dirt a surface that has no extreme grace, if they do this and it is not necessary it is not at all necessary" (15). As she transposes *dirty* and *dust*, Stein makes the usually inert noun "dirt" into a verb, active and lively, hinting at both the generative capacities lily pollen possesses, and the yoking together of the allegedly inert (dust) and lively (pollen) that the banner term "dirt" so often conceals. This dirt, dustying a surface, is as culpable and malevolent as Conn's and Möller's microbes, revelling in the "not at all necessary" destruction of domestic order.

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[39] Anonymous, "Ett Kapitel Som Borde Intressera Varje Kvinna", *Svenska Husmodern*, 1.2 (1877), p. 3, quoted in Berner, pp. 322–323.

[40] Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC and London: Duke University Press, 2010), p. vii; Valerie Allen, "Matter", in *Inhuman Nature*, ed. by Jeffrey Jerome Cohen (Washington, D.C: Oliphaunt Books, 2014), pp. 61–77 (p. 67).

In "Cranberries", dirt in the form of mould turns cut "red" fruit "a yellow color" as "it is smelled", and Stein notes that "there is a solid chance of soiling no more than a dirty thing" (47). Just as Tyndall and Dr William Roberts, writing at the very beginning of germ theory, vividly captured "bacteria's transformative effects on liquid or solid media" – "meat or soup initially described as 'sweet,' 'pure,' or 'limpid' became 'slimy,' 'putrid,' or 'turbid'" – Stein's cranberries also undergo a permanent, linguistically-instilled, change.[41] As a "remarkable degree of red means that, a remarkable exchange is made", the cranberries are turned into an inedible "jelly" after "suffering" under the irreversible effects of mould: "Just as it is suffering, just as it is succeeded, just as it is moist so there is no countering" (47). Dirt, once again, is active and affective in the domestic space.

In "A seltzer bottle", Stein's speaker warns of the potential havoc this lively dirt can wreak. "Any neglect of many particles to a cracking", Stein writes, "any neglect of this makes around it what is lead in color and certainly discolor in silver" (18). As glass fissures and metal oxidises, reacting in air, this lively, affective dirt corrodes both the formal integrity and visual appearance of Stein's objects, meaning the traces of dirt's presence cannot be countered simply by cleaning it away. This change is irreversible: the seltzer bottle has spoiled and discoloured, much like the fruit in "Cranberries". We see this irrevocable alteration, too, after dust has fallen in "A box", where "white" turns "yellow" – a particularly damaging effect, given Stein's assertion in "A piece of coffee" that "Dirty is yellow" (13) – and the "pieces pieces that are brown" remain "dust color" even "if dust is washed off" (16). In "Dirt and not copper", Stein writes: "Dirt and not copper makes a color darker. It makes the shape so heavy and makes no melody harder" (14). To see the metal lustre of an object – a pan, a bowl, a jug – dulled by nondescript "dirt", then, is to *feel* its form become leaden, to *hear* the previous, discordant chimes of use – the clang of a pan onto a stove, the thunk of a pot against the edge of a sink or a jug onto the kitchen side – fade into disuse, "no melody", and silence. Stein's copper is tarnished – dirtied – and made "unwholesome to use" by a reaction between the metal and air.[42]

The links that Stein makes through her speaker's perception of objects between dirt settling on objects and alterations to the object itself chime with

[41] John Tyndall, "Spontaneous Generation", *Popular Science Monthly*, 12 (1878), pp. 476–88, 591–604 quoted in Tomes, p. 39.
[42] Gass, p. 150.

Möller's 1917 description of an ill-kept kitchen, where sensory perceptions spill into one another:

> The water is turbid and repugnant, the dishwashing implements are soiled and sour [...] greasy and dull silver [is] often washed quite casually, even in an otherwise proper house [...] poorly washed silver "smells silver," as they say. The metal does not smell, but the nauseating, aforementioned layer of grease that has entered in chemical reaction with the silver under the effects of the air, creates the unpleasant odour.[43]

Just as dirt makes Stein's visually dulled objects heavy and quiet, this silver, tarnished by domestic neglect, is spoiled by its contact with dirt, and rendered malodorous. Like the "heavy" shape and silenced "melody" in "Dirt and not copper", the effects of dirt that Möller describes become popularly conflated with the properties of the objects themselves, as silver begins to *smell silver*. Dirt – mould, or oxidation, or pollen, or germs, or dust – possesses an affective liveliness that is just as powerful, and just as communicable, then, as disease. The nonhuman domestic, once inertly unclean, is, in the early twentieth century, abuzz with vibrant material activity.

"It was a Cleaner [...] It was Needless"

Faced with such lively, affective dirt, we have only one course of action: we clean. We sweep leaves blown in through open doors back onto the street outside; scrub germs away in a torrent of suds; beat clouds of dust thick from rugs; wipe traces of mud from a linoleum floor. We fight, ceaselessly, to stop the incursion of lively, natural, nonhuman matter into the human home. We do this, as Célie Brunius describes in 1917, to achieve a moment of domestic bliss:

> It is with a feeling of respect, almost admiration, that I enter a room that has just undergone a thorough cleaning. I need not see it – I feel the cleanliness in the air upon my first breath and the impression is confirmed by the faint reflection of the chair legs in the floor, the clear and sharp contours of objects; the entire atmosphere of peace and tranquillity that engulfs you and gives you an unconscious feeling of well-being.[44]

[43] Möller, p. 66, quoted in Berner, p. 329.

[44] Célie Brunius, *Sin Egen Tjänare. Husliga Studier Sommaren* (Stockholm: 1917), p. 72, quoted in Berner, p. 344.

Signs of household activity punctuate *Tender Buttons*, as Stein's text veers between instances of dirt and the bustle of domestic cleanliness. Her speaker repeatedly references "cleansing" and "rubbing", "washing and polishing" as they strive towards a reinstatement of the "arrangement in a system to pointing" (11) – a return to domestic order – with which Stein's text opens.

As Murphy and Bruner note, throughout *Tender Buttons* Stein engages with the mode of address and tone of housekeeping guides that surged into publication in the 1900s. Although Murphy and Bruner emphasise recipe books as Stein's potential source material, Stein's noted authoritative tone and parataxis also bear striking resemblance to works centred on domestic cleanliness.[45] In "A piece of coffee", for example, Stein's declaration – "The settling of stationing cleaning is one way not to shatter scatter and scattering" (14) – is remarkably similar in tone to Clarice T. Courvoisier's advice on fabric care:

> SATIN
>
> If very soiled pour one and one-half tablespoonfuls of kerosene into three quarts of soapsuds and soak the satin one or two hours. Move the fabric up and down in clean warm water and soap, and rinse well. When nearly dry, press.[46]

Just as *Tender Buttons* is divided into "Objects", "Food", and "Rooms", Courvoisier's 1906 text is "classified" into five subsections – "Fabrics", "Household", "Laundry", "Personal", and "Miscellaneous" – each further organised into short bursts of information contained under subheadings. As "A piece of coffee" continues, Stein begins to draw on household advice itself. Stein's assurance, that "The one way to use custom is to use soap and silk for cleaning" (14), echoes both Courvoisier's advice for "Mirrors" – "Remove soil with a damp cloth and polish with a woolen cloth and powdered blue, giving a final polish with a chamois-skin or old silk handkerchief" – and Emily Holt's directions for glass cleaning in *The Complete Housekeeper* (1903):

[45] Murphy, pp. 389–393; Bruner, p. 427.

[46] Clarice T. Courvoisier, *Spots, Or, Two Hundred & Two Cleansers* (San Francisco, CA: Elder, 1906), p. 3, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4399912> [accessed 27 July 2015].

> Once a year polish all sorts of fine glass this way: Sift some powdered French whiting through fine silk gauze, to make sure there shall be no coarse particles, put the siftings into a fresh gauze-bag, turn the glass, freshly washed, upside down upon a cloth-covered table, and dust it thickly with the whiting.[47]

In "A box", Stein turns to the idea of "airing" rooms as a method of removing unseen germs from the domestic space which, as Boel Berner describes, was popular in the early decades of the twentieth century:

> In the household manuals and articles [...] *airing* seemed [...] a moral imperative [...] "Air in the room shall *be renewed several times a day*," I. Möller insisted in 1917. "It is not enough, as some people believe, to let the window remain open long enough for the *foul smelling* air to leave. For the air is not always clean just because the uncleanliness cannot be seen or perceived by the olfactory organs."[48]

Just as Möller advocates airing, "A Box" offers a space "Left open, to be left pounded, to be left closed, to be circulating in summer and winter", a room with windows and doors flung open wide to scare off the "sick color that is grey that is not dusty" that permeates the domestic space (16). Stein returns to this language of airing again in the extended poem at the close of the collection, "Rooms", although here her writing mirrors the sensory distrust present in Möller's instructions:

> Currents, currents are not in the air and on the floor and in the door and behind it first. Currents do not show it plainer. This which is mastered has so thin a space to build it all that there is plenty of room and yet is it quarrelling, it is not and the insistence is marked. A change is in a current and there is no habitable exercise (72).

Although the "currents" which sweep the domestic space ("on the floor and in the door and behind it first") should remove all traces of both the microscopic agents of infection and the lively dirt that denatures domestic objects, the process of airing offers no visual reassurance that the dirt is actually gone: airing does "not show" cleanliness "plainer" than any other form of domestic cleaning practice. Despite dirt, dust, and germs being "mastered" by the flowing air currents, being left with "so thin

[47] Courvoisier, p. 30; Emily Holt, *The Complete Housekeeper* [1903] (Garden City, NY: Doubleday, Page & Company, 1917), p. 102, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4391455> [accessed 27 July 2015].

[48] Möller, p. 38, quoted in Berner, p. 328, emphasis in original.

a space to build it all", they still linger, still pose a tangible threat. Their "insistence is marked", and the human is left with "no habitable exercise" to provide relief from these ongoing dealings with dirt.

Cleanliness runs through *Tender Buttons* like a fever. The quest to combat the lively, affective capacities of natural dirt requires a near-constant effort, as Stein emphasises in "A chair": "If the chance to dirty diminishing is necessary," the speaker wonders, "if it is why is there no complexion, why is there no rubbing, why is there no special protection" (20). Although posed as questions, Stein's noted ungrammaticality renders these lines rhetorical: their problems, quite literally, can't be resolved. The active and powerful "dirt" will conquer the "complexion" of any surface, and no amount of "rubbing" will offer "special protection" against its material threat, or allow an object affected by dirt to be restored to its original state.

These efforts towards cleanliness around the turn of the century, as Brunius also acknowledged, were well-recognised as a constant drain: "Of the multitude of small tasks, first one, then another, will take on gigantic proportions [...] A definite order for the task of the day and the week are both easier to implement [...] once you lag behind it becomes increasingly difficult to restore that order once again."[49] Stein references this domestic entropy in "Butter", cautioning that a neglect of household cleanliness will allow the affective capacities of nonhuman matter to alter the home beyond recognition: to "Clean little," Stein writes, is to "keep and a strange, estrange on it" (52). In "A plate", Stein addresses the effort of cleanliness with another rhetorical question, wondering "how soon does washing enable a selection of the same thing neater" (17): how soon will the signs of cleanliness begin to show; how long will its effects last?

The answer, it appears, is not long. In fleeting moments of respite from dirt, objects are allowed to shine, but their brilliance is brief. Cleanliness appears as a dazzling spell, a momentary trick in "Glazed glitter", as the speaker assures us that "charming very charming is that clean and cleansing. Certainly glittering is handsome and convincing" (11). The speaker's need to assure us that "glittering" is "convincing" is a telling moment of over-insistence that reveals a lack of conviction, even as the speaker tries to assure us otherwise. As previously mentioned, in "A red stamp", by toying with the verb and noun forms of *dusty* and *dirt* – where lilies, "if they dusty, will

[49] Brunius, p. 35, quoted in Berner, p. 335.

dirt a surface" – Stein destabilises the boundaries between clean and dirty (15). Carolyn Steedman notes that "to dust" means both to "remove something" and "to put something there": to "cleanse a place – usually a room in a house – *of* dust", or to "sprinkle something with a small portion of powdery matter".[50] While "dirty" is a fixed state of uncleanliness, with dust, "the oscillation of meaning that produces circularity is already contained within the word itself".[51] Dust belongs to both cleanliness and being unclean, and possesses the capacity to transcend these two opposed states: for Steedman, as Teresa Stoppani describes, "There is no dichotomy [...] There is not even a conflict, but a continuous circular motion".[52] We see this in our homes, when we dust a surface with a cloth, disturbing and clearing the dust settled on the side but stirring it into the air, into action, as we do so. We dirty, it seems, even as we clean.

Perhaps, then, cleanliness is beyond our reach. Although Gass likens cleaning to confession – "the spells it casts are effective, because a tidy house does seem for a while to be invulnerable" – Stein, like her contemporaries writing housekeeping literature, positions cleaning as a near-thankless task.[53] Despite the speaker's best efforts, instances of dirt outweigh instances of cleanliness in *Tender Buttons*. The threat of dirt is too pervasive, dirt itself is too affective and tenacious, to be successfully eradicated from the domestic space. All we can do, it seems, is try to keep dirt at bay. In "Veal", Stein's speaker indicates a clear fatigue with the fruitlessness of cleaning, declaring, "Very well very well, washing is old, washing is washing" (53). Beneath this seeming dismissal, however, lies a greater truth. As B. Hackett argues, cleanliness is perhaps better considered not as a "predefined goal" – an instance of spiritual or physical invulnerability – but instead as "the outcome of whatever it is that people do in its name".[54] Cleanliness need not be the total absence of dirt, then, but a smaller, more achievable accomplishment: cleanliness can be the brief glittering of a charmingly clean surface, or fresh air breezing through a still room. Cleanliness is only

[50] Carolyn Steedman, *Dust*, 6th edn (Manchester: Manchester University Press, 2001), p. 160.
[51] Teresa Stoppani, "Dust Revolutions: Dust, *Informe*, Architecture (notes for a Reading of Dust in Bataille)", *The Journal of Architecture*, 12.4 (2007), 437–47 (p. 439) <http://dx.doi.org/10.1080/13602360701614714> [accessed 13 April 2014].
[52] Stoppani, p. 439.
[53] Gass, p. 151.
[54] B. Hackett, "Clotheslines: Assessing the "Instrumental" Character of Everyday Practical Conduct" (Unpublished paper, Department of Sociology, University of California Davis, 1993), referenced in Elizabeth Shove, *Comfort, Cleanliness, and Convenience: The Social Organization of Normality* (Oxford: Berg, 2004), p. 85.

ever a momentary respite, found in the completion of a task that keeps dirt away; *cleaning* itself is cleanliness, however temporary its effects may be.

Matter Out of Place

Throughout *Tender Buttons*, the dirt that Stein's speaker seeks to remove takes many forms. Dirt is tarnish on metal objects in "Dirt and not copper" (14), pollen tipping from lilies in "A red stamp" (15), bacteria thriving in "Roastbeef" (35), and fruit spoiling in "Cranberries" (47), as well as "dust" that needs to be ousted from the confines of "Rooms" (68) and "A box" (16). Dirt is both lively (bacteria) and dull (dust); wasting (mould) and generative (pollen). Dirt is defined more by its characteristics, by its negative effects and unwanted status, than by its actual composition or material form; it appears more the result of an act of evaluation than an independent entity in its own right. We might know dirt when we see it, but, "dirt" itself lacks a definitive form.

In her seminal analysis of dirt, *Purity and Danger*, anthropologist Mary Douglas attempts to account for this material complexity by situating dirt as a product of an act of classification, rather than a specific entity: dirt is, Douglas argues, not a particular form or type of matter, but any "matter out of place".[55] As Douglas notes, "Shoes are not dirty in themselves, but it is dirty to place them on the dining-table; food is not dirty in itself, but it is dirty to leave cooking utensils in the bedroom".[56] In Douglas's structuralist analysis, dirt is that which violates a system of human order: in the newly lively world of domestic dirt that emerged around the turn-of-the-century, we see this too.[57] In *Tender Buttons*, as pollen drops onto a surface in "A red stamp", transgressing the confines of the lilies it falls from, it becomes "dirt". Where the lilies themselves are orderly, pure and "lily white", as they "exhaust" "dust", their actions become "not necessary [...] not at all necessary", and their pollen becomes dirt; matter out of place (15). We see this too in the spread of bacteria in "Roastbeef", in

[55] Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* [1966] (London and New York, NY: Routledge, 2002), pp. 44–45.
[56] Douglas, p. 44.
[57] For an exploration of Douglas's "symbolic or semiotic understanding of dirt", see Ben Campkin, "Degradation and Regeneration: Theories of Dirt and the Contemporary City", in Campkin and Cox, pp. 68-79.

the speaker's wild imaginings of life hidden beyond plain sight, as the microbes that the meat harbours exceed the boundaries of the "beefsteak" (35). To a certain extent, then, dirt in *Tender Buttons* accords with Douglas's conception of "matter out of place": dirt is matter which moves beyond its confines, spreads invasively into the home, upsetting the domestic order of the text.

Even in the early decades of the twentieth century, however, this vision of dirt as matter out of place had its limitations: as Abbott argues of his female housekeeper in 1908, "the definition of dirt as 'matter misplaced' does nothing to cool her vehement ardor" for cleanliness.[58] Within Stein's text, too, dirt exceeds the boundaries of "matter misplaced": dirt doesn't just passively trouble the sense of domestic order, but actively schemes to undermine it.[59] Dirt is repeatedly rendered lively and volatile, inscribed with agency and attributed with malicious intent. As a result, dirt deeply unsettles the idea of matter itself "as passive stuff, as raw, brute, or inert".[60]

Throughout *Tender Buttons*, then, Stein's dirt instead behaves in a way that forces us to recognise what Jane Bennett terms its "vitality": "the capacity of things – edibles, commodities, storms, metals – not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own."[61] We are confronted, repeatedly, in Stein's text with both the multiplicity and affective variety of dirt. Dirt – in the form of pollen as well as of microbes – contains the capacity for life. Dirt responds both to its environments and its own needs, behaving according to its own tendencies – as John Gray notes, "Bacteria act on knowledge of their environment: sensing chemical differences, they swim towards sugar and away from acid."[62] Dirt needs energy; dirt reproduces; dirt *behaves*. Although the writings of germ theory conspire to create an inaccurate vision of dirt and germs as animalistic – anthropomorphic, even – in their quest to deliberately undermine the human domestic – to the extent that dirt can be "held responsible" for the numerous crimes against humanity it has committed – their use of language hints at recognition of the vitality of this natural, nonhuman life.

[58] Abbott, p. 1.
[59] Abbott, p. 1.
[60] Bennett, p. vii. Julia Kristeva's writings on the abject also address this idea of dirt troubling the subject/object boundary, from a psychoanalytical perspective. I discuss these ideas in relation to disgust and Robert Rauschenberg's *Bed* in the next chapter.
[61] Bennett, p. viii.
[62] John Gray, *Straw Dogs: Thoughts on Humans and Other Animals* (London: Granta Books, 2002), pp. 59–60.

Further, Stein's rendering of non-bacterial dirt (pollen; oxidisation) as active hints at the potential for recognition of the vitality of *matter*. In *Tender Buttons*, vibrant and lively dirt frustrates human wills, irrevocably alters domestic objects, and threatens human health. It is profoundly affective; a powerful and animate force throughout. It is, then, far more than mere "matter".

As such, the dirt in *Tender Buttons* cannot be contained by Douglas's representation of how we deal with this misplaced matter. For Douglas, in seeking to maintain order we become participant in what is, effectively, a cycle of dirt. As we identify matter and categorise it as out of place, we are forced to confront the origins of this newfound filth: "dirt" comes into existence as the matter out of place "can be seen to be unwanted bits of whatever it is [it] came from, hair or food or wrappings" – or lily pollen, or microbes.[63] It is these lingering traces of a recognisable origin, Douglas states, which allow dirt to threaten our sense of order: as its "half-identity still clings" to the out-of-place matter, "the clarity of the scene" into which dirt obtrudes is "impaired" by its "presence".[64] In its obtrusion, this matter destabilises the system that we feel compelled "to impose on an inherently untidy experience", and challenges the validity of our faith in the world possessing or adhering to such an underlying order.[65]

Thankfully for Douglas, however, the cycle of ambiguity and differentiation that dirt is trapped within is self-fulfilling. Although our act of differentiation reveals the threat that dirt is perceived to pose, bestowing such a designation on matter allows us to deal with it accordingly. We remove it from its out-of-place location, sweep it into a bin, or wipe it away. Grouped in this jumble of unwanted matter, Douglas argues, the potential danger of dirt is negated: "the origin of the various bits and pieces is lost, and they have entered into the mass of common rubbish [...] It does not even create ambiguous perceptions since it so clearly belongs in a defined place, a rubbish heap."[66] Once its origins are lost, dirt is "utterly undifferentiated", and order is restored.[67] As dirt breaks down, the foul odours released and the visually

[63] Douglas, pp. 197–198.
[64] Douglas, pp. 197–198.
[65] Douglas, p. 5.
[66] Douglas, pp. 197–198.
[67] Douglas, pp. 197–198.

unappealing spectacle it creates work to retrospectively affirm our faith in system as correct. As Douglas writes:

> a cycle has been completed. Dirt was created by the differentiating activity of the mind, it was a by-product of the creation of order. So it started from a state of non-differentiation; all through the process of differentiating its role was to threaten the distinctions made; finally it returns to its true indiscriminable character.[68]

In the newly lively world of modernity, however, dirt doesn't lose the evidence of its origins. Throughout *Tender Buttons*, dirt is specifically *natural*, nonhuman matter which makes its way, unwanted and unbidden, into the human home. Although, as Kate Forde writes in her introduction to *The Filthy Reality of Everyday Life*, "humans, like every other living organism, are extremely efficient generators of dirt", the dirt in *Tender Buttons* is profoundly disconnected from the human.[69] It is not fingerprint smudges on mirrors or hair clogging plugholes that Stein's speaker encounters, but an altogether more "natural" dirt, as metal tarnishes in air, pollen falls from lilies, and bacteria from a beefsteak divide and multiply. Dirt is in the air, in the plants, in the microbes; as Gertrud Norden, writing in 1924, concedes, cleaning in the opening decades of the twentieth century is conceived of as "a rather negative task by which we combat the processes of destruction and dissolution with which nature implacably threatens our possessions".[70]

Dirt within *Tender Buttons* may be created by acts of transgression, but throughout Stein's text dirt fails to conform to Douglas's cyclical structure of differentiation and identity loss. Rather, for Stein, in keeping with the attitudes circulating around the turn of the century, dirt is part of a material conspiracy of lively matter working to undermine the stability of the human home. In the languages of liveliness and contagion which characterise germ theory, and throughout *Tender Buttons*, lively, nonhuman matter is conceived as an enemy working in direct opposition to the sensations which define the home itself – comfort and familiarity, intimacy, security, and control.[71] We can't placate this matter; we can't reason with

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[68] Douglas, pp. 197–198.
[69] Forde, p. 1.
[70] Gertrud Norden, *Styra Och Ställa* (Stockholm: 1924), p. 87, quoted in Berner, p. 322.
[71] Jeanne Moore, "Placing Home in Context", *Journal of Environmental Psychology*, 20.3 (2000), 207–17 (p. 210) <doi:10.1006/jevp.2000.0178> [accessed 4 April 2014], referencing T. Putnam and C. Newton, *Household Choices* (London: Futures, 1990).

it. All we can do is view its action against us as "not necessary", "not at all necessary", and try to sweep its influence away (15).

What happens, then, to our faith in an underlying structural order in the face of such lively matter? As Diana Coole describes, our vision of human dominion over the material world is contingent on our belief that human subjectivity is superior to the dullness of nonhuman materiality:

> Because [...] matter is without value or internal qualities or significance, it is not forbidden for this [human] subject to control the material domain that is, for Descartes, synonymous with nature (including animals, whose lack of a soul or self-awareness renders them mere automata). Subjectivity is from this rationalist perspective immaterial (disembodied), potentially omniscient, and legitimately omnipotent.[72]

Matter, in this Cartesian perspective, needs human subjectivity to instil meaning, to govern its progression, because it is merely matter, devoid of tendencies, agency, and desires. Yet, the whole language of germ theory and its profound emphasis on the necessity of the human mastery of matter is centred on the threat of lively, animated, aggressive dirt. The fervour surrounding household cleanliness is founded on the inability of matter to conform to this perceived hierarchy of being, where human will supersedes material force. *Germ theory*, then, *recognises that matter behaves as a subject.* Even as it emphasises the necessity of upholding the binary opposition of the human and the material, germ theory smashes the whole spectrum of matter, agency, and meaning wide open. Dirt becomes vibrant, wilful, affective, and the human becomes increasingly powerless.

We have already seen, however, in the language of housekeeping and domestic order, how these contradictions are reconciled. Matter, a vibrant, lively other, in exceeding its bounds of inert materiality, remains our enemy: agency and affect become further weapons in its arsenal. Germs, mould, grime, and dust – conflated under the banner term "dirt" – become agents of destruction: "foes of our health"; "quiet, but ever active demons"; "so constantly at work [...] that the affairs of the household are in a state of more or less constant warfare against these invisible,

[72] Diana Coole, "The Inertia of Matter and the Generativity of Flesh", in *New Materialisms: Ontology, Agency, and Politics*, ed. by Diana Coole and Samantha Frost (Durham and London: Duke University Press, 2010), pp. 92–115 (pp. 94–95).

unrecognised, and unknown foes".[73] Recognition of nonhuman, material liveliness affords only the greater need for us to control, contain, and eradicate its threat. Writing in 1913, Ellwood Hendrick captures this link between natural, material liveliness and increased human vigilance:

> Nature always seems to be wanting to do something. It is always busy [...] acting according to its own laws, and a great deal of what is called the divinity in us consists in our ability to make nature serve us and our kind. And the more we know of nature and its ways, and how to control it, and how to kill and utterly destroy forms of life that are inimical to human welfare and growth, the better hope we shall have of increasing this divinity and approaching the great light of truth.[74]

Dirt, and the natural, material world are "always something other than 'mere' matter" in this moment of early twentieth-century modernity, but, paradoxically, this liveliness makes its containment, eradication, and prevention all the more necessary.[75]

Today, in our twenty-first century homes, we still adhere to this doctrine of dirt. We live modernity's legacy of germ theory – of scheming dirt and material foes, relentless battles and ceaseless vigilance. We still subscribe to the need to clean. Dirt is still our common enemy, threatening to undermine the tranquillity of the human home, upset objects within the domestic space, and infect our human bodies. Matter, out of place, is still dirt: still filthy, undesirable, tainting, toxic. It is still our duty to clean away material trace from our domestic space, to do all we can to curtail the presence of lively nonhuman materialities within the human home.

[73] Möller, p. 18, quoted in Berner, p. 324; Anonymous, p. 3, quoted in Berner, pp. 322–323; Conn, p. 100.

[74] Ellwood Hendrick, "A Plea for Materialism" [1913] in in *Percolator Papers* (New York, NY and London: Harper & Brothers, 1919), pp. 42-61 <https://archive.org/details/percolatorpapers00hendiala> [accessed 16 June 2014].

[75] Diana Coole and Samantha Frost, "Introducing the New Materialisms", in *New Materialisms: Ontology, Agency, and Politics*, ed. by Diana Coole and Samantha Frost (Durham and London: Duke University Press, 2010), pp. 1–43 (p. 9).

Chapter Two

Disgusting Us

Vibrant Bodies and Robert Rauschenberg's *Bed*

"Humans," Kate Forde writes in her introduction to *The Filthy Reality of Everyday Life*, "like every other living organism, are extremely efficient generators of dirt": from the hair and skin that we shed, to the sweat and oils our skin secretes, and the excretions of our digestive and endocrine systems.[1] Fortunately, we have also become extremely efficient at dealing with our dirt. From showers to sewerage, anti-perspirants to vacuum cleaners, we have developed methods and technologies to deal with the by-products of our messy, material existence.

Our desire to be clean is instinctive – just as animals bathe, wash, and groom themselves to maintain their coats and skin, Rosie Cox argues, we too wash or wipe away dirt and stickiness from our bodies.[2] Valerie Curtis attributes our human desire to control dirt to an epidemiological legacy of hygiene behaviours prevalent within the nonhuman, animal world, noting that

> Ants are hygienic: they groom themselves to remove fungal pathogens and dispose of diseased and dead conspecifics. Bees remove dead and diseased brood, defecate away from the nest and employ antibacterial compounds to keep nests free of parasites [...] Bats groom to remove ectoparasites, as do most other mammals, fish and birds.[3]

Yet, we haven't always been as fastidious as our animal companions in our practices of hygiene. As Richard L. and Claudia L. Bushman describe in their analysis of "The Early History of Cleanliness in America", during the eighteenth century, full submersion of the body in a bath while washing was rare; men may have bathed in

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[1] Kate Forde, "Introduction", in *Dirt: The Filthy Reality of Everyday Life*, by Rosie Cox and others (London: Profile Books Ltd, 2011), pp. 1–7 (p. 1).

[2] Rosie Cox "Dishing the Dirt: Dirt in the Home" in *The Filthy Reality of Everyday Life,* pp. 38-73.

[3] Valerie A. Curtis, "Dirt, Disgust and Disease: A Natural History of Hygiene", *Journal of Epidemiology and Community Health,* 61.8 (2007), 660-64 (p. 661) <https://www.ncbi.nlm.nih.gov/pubmed/17630362> [accessed 22 May 2015], referencing E. O. Wilson, *The Ants* (Cambridge, MA: Harvard University Press, 1990), N. R. Franks, J. Hooper, C. Webb et al, "Tomb Evaders: House-Hunting Hygiene in Ants", *Biological* Letters, 1 (2005), 190-92, P. K. Visscher, "Hygiene in Honey Bee Colonies", *American Bee Journal,* 123 (1983), 511-13, and H. Hofstede and M. Brock Fenton, "Relationships between Roost Preferences, Ectoparasite Density, and Grooming Behavior of Neotropical Bats", *Journal of Zoology,* 266 (2005), 333-40.

rivers and oceans, but women usually made do with "a basin of water and a towel".[4] By the turn of the nineteenth century, bathing houses that "emphasized cleanliness rather than the stimulation of cold or mineral waters" began to emerge, but soap didn't begin to feature in bathing until the mid-nineteenth century.[5]

Our relationship with dirt has always been more than simply hygienic, however. While cleansing has been part of human behaviour since antiquity, the idea of uncleanliness began to garner particular connotations of immorality, incivility, and disgrace as codes of propriety established in sixteenth-century circles of European gentility filtered through the centuries and moved across continents.[6] In the 1740s, Lord Chesterfield "told his son a bath was as important to his heath as to the avoidance of offence"; by the 1880s, Bushman and Bushman write, Henry Ward Beecher was being "featured in Pear's Soap ads somewhat ludicrously proclaiming that 'if Cleanliness is next to Godliness Soap must be considered as a Means of Grace and a Clergyman who recommends moral things should be willing to recommend Soap'."[7] Long before the hygienic imperatives of exercising control over dirt became apparent through the discovery of germs, then, dirt became disgusting.

During the twentieth century, dealing with uncleanliness became even more of a moral necessity, as dirt emerged not only as unseemly, but lively and nefarious to boot. However, it also became easier for us to tackle dirt, whether human or nonhuman in origin, as, in the wake of the electrification of the domestic space in the opening decades of the twentieth century, a slew of labour-saving devices and household technologies started to enter the home. By the 1950s, American homes were ready-equipped with washing machines, automatic dryers, and garbage disposals, allowing us to deal with our dirt more systematically and efficiently than ever before. The cleanliness that we strived for so fruitlessly in the opening decades of the twentieth century became, by the mid-century, an everyday reality.

Within this "culture of cleanliness", as Suellen Hoy puts it, the concerns about hygiene and human wellbeing that dominated early-twentieth century modernity

[4] Richard L. Bushman and Claudia L. Bushman, "The Early History of Cleanliness in America", *The Journal of American History,* 74.4 (1988), 1213-38 (p. 1215) <http://www.jstor.org/stable/1894408> [accessed 12 August 2014].
[5] Bushman and Bushman, pp. 1215, 1217.
[6] Bushman and Bushman, pp. 1220.
[7] Bushman and Bushman, pp. 1222, 1218, referencing *Frank Leslie's Illustrated Newspaper,* 4 July 1885, p. 328.

combined with the centuries-old tradition of moralising cleanliness as innately good, and dirtiness as unequivocally bad, to create a climate where dirt – a lively, immoral, threat to human health and civility – was thoroughly intolerable.[8] Showers and laundry became daily rituals, and Americans, Hoy notes, "used more water and had more bathrooms per family than any other nation on earth".[9]

Against this mid-century backdrop of imperative cleanliness, in this chapter I situate Robert Rauschenberg's unabashedly filthy artwork, *Bed*. Produced in 1955, when "'Whiter than white'" had "become the national norm", Rauschenberg's presentation of his paint-smeared, pencil-smudged and -scrawled, toothpaste-splattered, sweat-stained, wholly unwashed bedsheet, pillow, and quilt, is an affront to the values of American modernity.[10] *Bed*, quite frankly, is disgusting. Where Gertrude Stein, as I explored in the previous chapter, embraced the language of animate matter that swirled within the germ theory of disease transmission, allowing *Tender Buttons* to be caught up in contemporary ideas of cleanliness and contagion, Rauschenberg's *Bed* operates in fierce opposition to its cultural climate, violating both visceral and moral strains of disgust by publicly flaunting its filthiness.

Throughout this chapter, I focus on reading Rauschenberg's *Bed* as an object of disgust. After a brief history of the making of *Bed* and its critical reception, I situate the artwork in the context of Rauschenberg's other works of the early 1950s, the *Elemental Paintings*, where Rauschenberg first started to work in "collaboration" with filthy, lively matter – such as dirt and mould – during the production of artworks.[11] Reading *Bed* as an extension of this practice, I treat the work as a collaboration between the artist and the material liveliness of his own body, positioning *Bed* as a celebration of nonhuman material agency and the vibrant creativity of nonhuman matter. As I go on to explore, however, it is this shameless display of material liveliness that disgusted *Bed*'s early audiences. Drawing on various theories of disgust, I explore these aversive responses to *Bed*, before closing this chapter by examining the role of disgust itself within the modern culture of cleanliness. By exploring the

[8] Suellen Hoy, *Chasing Dirt: The American Pursuit of Cleanliness* (Oxford: Oxford University Press, 1995), p. 151.
[9] Hoy, pp. 151, 169.
[10] Hoy, p. 151.
[11] Calvin Tomkins, *Off the Wall: Robert Rauschenberg and the Art World of Our Time* (Garden City, NY: Doubleday & Company, Inc., 1980), p. 87.

complex entanglements of human and nonhuman, similarity and revulsion, proximity and aversion that the experience of disgust entails in relation to the standards and practices of cleaning in mid-century America, I use *Bed* to interrogate the wilful distance placed between us and lively matter by mid-twentieth century modernity.

Making *Bed*

"The bed," Georges Perec writes, is "the individual space *par excellence*, the elementary space of the body [...] we have only one bed, which is *our* bed".[12] This designation of the bed as intimately related to the individual became engrained within Western society between the sixteenth and eighteenth centuries, as Tom Crook describes, when sleeping began to be "accorded a different space from the activities of cooking and dining".[13] During the nineteenth century in particular, as the bedroom "became the place where the self was groomed" and diaries and letters composed, the bedroom became "the pre-eminent place where the secrets of the individual were located: where they were nurtured, cherished and intensified".[14] Within the home, already a private refuge from public life, the bedroom came to represent a further level of intimacy, and the bed itself – a form of "instrumental assistance" to sleep – positioned as "a space where the real and the imagined overlapped" as the vivid imaginaries of sleep and dreams entwined with the material regenerations undertaken by the body at rest.[15] Robert Rauschenberg's Combine, *Bed* [Fig. 2.1], complicates this entanglement of the material and the imagined, the private and public, in its marriage of the evidence of human materiality with such an emblem of human comfort.

Bed is unique among the Combines Rauschenberg produced between the mid-1950s and mid-1960s: it is the sole example, as Rosalind Krauss notes, of a work that doesn't draw attention to its multiplicity, to its combination of objects,

[12] Georges Perec, "Species of Spaces" [1974] in *Species of Spaces and Other Pieces*, ed. and trans. by John Sturrock (London: Penguin Classics, 2008), pp. 1–96 (p. 16), emphasis in original.
[13] Tom Crook, "Norms, Forms and Beds: Spatializing Sleep in Victorian Britain", *Body & Society*, 14 (2008), 15–35 (p. 17) <journals.sagepub.com/doi/pdf/10.1177/1357034X08096893> [accessed 15 September 2015].
[14] Crook, p. 23.
[15] Crook, p. 23.

images, and paint, but instead emphasises "the singleness of the work's presence as an object".[16]

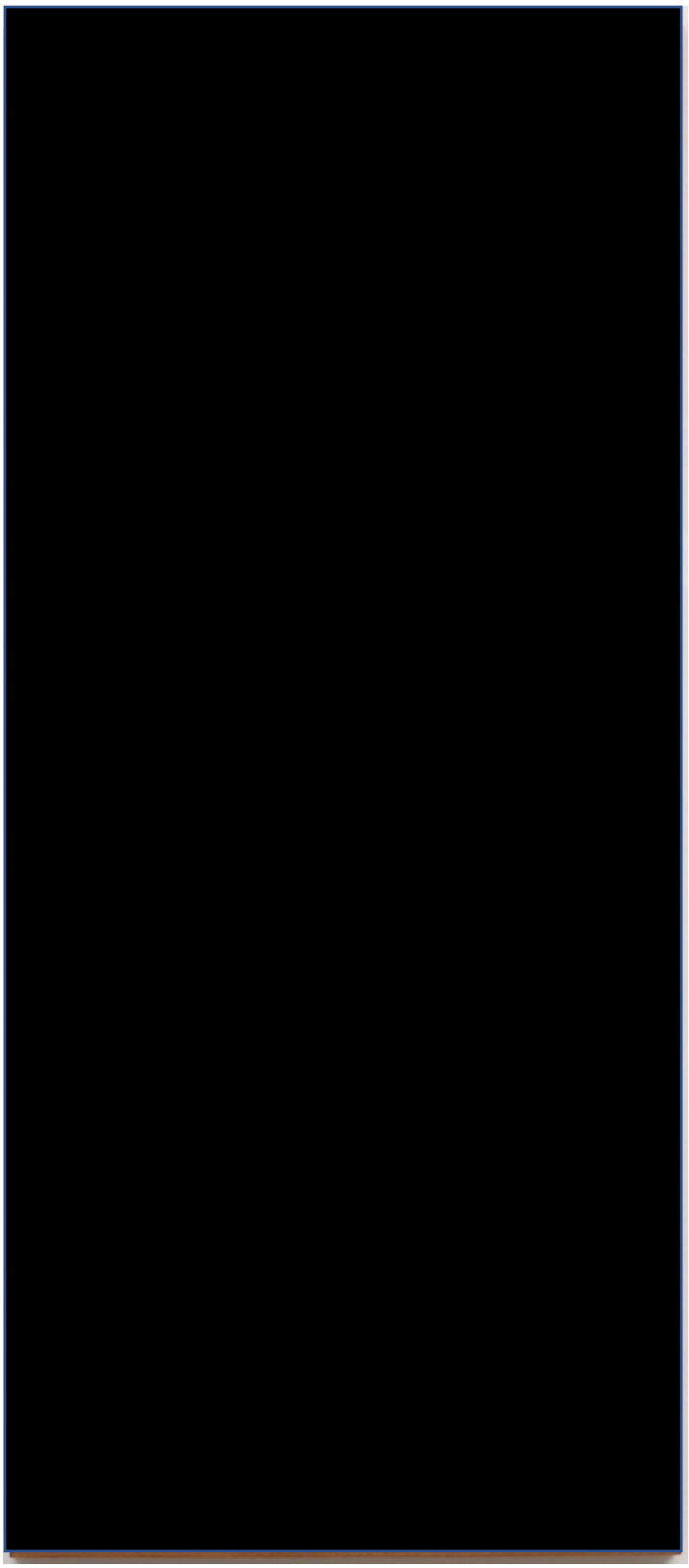

Fig. 2.1
Robert Rauschenberg, *Bed,* 1955. Oil and pencil on pillow, quit, and sheet on wooden supports. 191.1 x 80 x 20.3 cm (75 ¼ x 31 ½ x 8 in.). Museum of Modern Art, New York, NY.

[16] Rosalind Krauss, "Rauschenberg's Materialized Image" [1972] in *Robert Rauschenberg*, ed. by Branden W. Joseph (Cambridge, MA: MIT Press, 2002), pp. 39–55 (p. 40).

Bed is also unique in its notoriety, to use Calvin Tomkins's phrase, garnered by the strongly aversive reactions it generated amongst its first audiences. Despite the furore it generated, however, Rauschenberg's *Bed* stems from innocuous beginnings. As Tomkins describes, Rauschenberg

> had waked up one morning in the spring of 1955, wanting to paint, but with nothing to paint on – no canvas, and no money to buy any. His eye lit on the old quilt that had come up with him from Black Mountain [College], where it had once belonged to a fellow student named Dorothea Rockburne [...] The colors and the patchwork pattern interested him. He made a stretcher for it, just as though it were a canvas. He tried painting on the quilt, but something was wrong. The pattern was too strong. He attached his pillow and part of the sheet to the top of the stretcher. This solved the problem – the quilt "gave up and became a bed, stopped insisting on itself," as he explains it.[17]

Bed, then, is almost comprised of two separate layers: the bedlike assemblage, soiled with signs of repeated and frequent human use, of quilt, sheet, and pillow – "grayed", for Rick Barot, "from what must have been its first white, now the color of mashed potatoes" – and the impasto smears and dribbles paint clotted on the fabric surface.[18] While the first layer displays a very human dirt, in its sweat-stained sheets and grease-marked pillow, the second layer exaggerates this dirt, blowing up the traces of filth from our everyday lives to an uncomfortably graphic degree.

It was Rauschenberg's combination of an emblem of human comfort – the warm welcome of a soft bed – with the dramatic extrapolation of normal dirt into larger-than-life stains that made this artwork notorious. In the 1950s, reception to *Bed* was openly hostile. In 1958, Italian authorities refused to display the artwork as part of the first Festival of Two Worlds at Spoleto, opting instead to sequester the work in a back office; when the artwork was finally shown later in the year, one reviewer likened the piece to "a police photo of a murder bed after the corpse has been removed".[19] Even enthusiastic supporters of Rauschenberg draw attention to the repulsive aspects of the work: in his essay on Rauschenberg, John Cage poses the (hopefully rhetorical) question, "will we in that bed be murdered?"[20] Since its initial

[17] Tomkins, pp. 136–37.
[18] Rick Barot, "Rauschenberg's *Bed*", *The Yale Review*, 96 (2008), 64–75 (p. 64) <http:// doi:10.1111/j.1467-9736.2008.00364.x> [accessed 25 November 2014].
[19] Tomkins, pp. 136–137; *Newsweek*, 31 March 1958, quoted in Mary Lynn Kotz, *Rauschenberg: Art and Life* (New York, NY: Abrams, 1990), p. 85.
[20] John Cage, "On Robert Rauschenberg, Artist, and His Work", in *Silence, Lectures and Writings* [1961] (Hanover, NH: Wesleyan University Press, 1973), pp. 98–109 (p. 106).

hostile reception, critics have sought to reclaim *Bed*, in part to account for Rauschenberg's own view of the work as "friendly", and his attendant fear that "someone would want to crawl into it".[21] For Barot, the "mess" on *Bed* has "too many colors for the gore to be mere blood, and there is too much vivacity in the colors to speak merely of disaster".[22] James Leggio positions the patina of white and red smears and drips as testament to the visceral physicality of human sexuality, representing menstrual blood and semen.[23] Adrienne Rich's ekphrastic poem, "Rauschenberg's Bed", similarly renders the paint as evidence of sexual encounters, as the speaker wonders "What body holes expressed | their exaltation loathing exhaustion", and examines the "inarticulate liquids spent from a spectral pillow".[24] For Barot, Rich, and Leggio, *Bed* is, ultimately, ambiguous. While the extrapolation of bodily fluids and excreta, vividly rendered in ochre, burnt umber, and white, still verges on the repulsive, this revulsion is undercut by the context of sexual pleasure. What we are perturbed by, then, in these readings is not the dirt itself – exaggerated or otherwise – but the transgression the display of this dirt enacts, as it moves between the personal and the public, between intimate and exhibition.[25]

For me, however, *Bed* is not about murderous devastation or sexual exploration. As Leggio notes, the "stains" denoted by Rauschenberg's application of paint are not where they should be, if produced during a sexual encounter. Although Leggio acknowledges that "a bed might be stained by semen or menstrual blood", he argues that these "would presumably mark its lower half, yet *Bed* is stained almost entirely on its upper half", meaning that "a 'normal' interpretation is frustrated by the top/bottom (and inside/outside) displacement of the stain's location, versus where they 'should' be."[26]

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[21] Tomkins, pp. 136–37.
[22] Barot, p. 65.
[23] James Leggio, "Robert Rauschenberg's *Bed* and the Symbolism of the Body", in *Essays on Assemblage*, ed. by John Elderfield (New York, NY: Museum of Modern Art, 1992), pp. 79–117.
[24] Adrienne Rich, "Rauschenberg's Bed", in *Later Poems: Selected and New, 1971-2012* (New York, NY and London: W.W. Norton & Company Ltd., 2013), p. 336.
[25] Paul Schimmel extends this emphasis on sexual exploration in *Bed* even further, arguing that this work evokes Rauschenberg's sexual relationship with Jasper Johns. For Schimmel, however, the paint references Johns's flag paintings, rather than dirt. See Paul Schimmel, "Autobiography and Self-Portraiture in Rauschenberg's Combines", in *Robert Rauschenberg, Combines*, ed. by Paul Schimmel (Los Angeles, CA: The Museum of Contemporary Art and Steidl Verlag, 2005), pp. 211–29 (pp. 224–225).
[26] Leggio, p. 87.

For Leggio, like Rich, *Bed* is instead a sign for "an absent human body".[27] Emphasising the absence of the human invites us to read beyond the canvas, to find a way to explain the loss and situate *Bed* within a plausible narrative. *Bed* then becomes evidence in a tale, celebratory or sordid, of the extremes of sexual pleasure or the violent aftermath of destruction. Yet, for me, *Bed* is about something altogether more mundane, more homely: it is about the domestic, our bodies, and our dirt. *Bed* clearly has its own stories to tell, and they become uncomfortably clear once we stop positioning the piece in the wake of human absence and begin to recognise that, instead, the work offers an abundance of nonhuman *presence.*

As an object, *Bed* strikes at the very heart of our domestic experience, a symbol of the development of our primal need for rest and shelter which are the foundations of the idea of home. Within this familiar setting of comfort, Rauschenberg's work then confronts us with all the filthy traces of life that the human body leaves behind: as Rich touches on at her poem's close, *Bed* presents an uncanny "human crust", formed of paint and the yellowing, stained bedclothes.[28] In my reading, Rauschenberg's application of paint, often read as both a homage to and a rebellion against Abstract Expressionism, is more an exaggerated chromatography of human dirt, where the usually unnoticed is not only revealed, but separated out into its various component hues and rendered as viscous, clotted, larger-than-life stains.

The top of the pillow, comparatively untouched by paint, is covered, as Barot notes, in a "maniacal" looping pencil scrawl [Fig. 2.2].[29] This scrawl, concentrated on the pillow, is so dense in parts that the marks form a cloudy grey smear, emphasised by the swag of fabric created by the pillow's anchor-points. These marks also stray across the uppermost section of the sheet, underneath the pillow. Straggling, tangled, but predominantly vertical, these marks fall like hair across the pillow top, where we would expect human hair to fall if we accepted Rauschenberg's invitation after all, and climbed into *Bed.* Where the violent application of colour kicks in, halfway down the pillow, the deep brown paint is slightly translucent, seeping like a stain into the cotton pillow. Despite being boldly out-of-place, this brown recedes from attention as the emphasis falls instead on the sharp contrast of the dribbles of flesh-tone paint,

[27] Leggio extends this much further in his reading, likening *Bed* to the Turin Shroud, and describing the suspended pillow as sagging "like the head of a crucified Christ". See pp. 81, 95.
[28] Rich.
[29] Barot, p. 65.

spilling in vertical lines from the pillow's halfway point. In Rauschenberg's chromatographed filth, these drips mimic an accretion of saliva, pooling down the pillow's curve night after night. Adding to this impression, the strike of green, red, and white – the lone horizontal movement on the pillow's surface – resembles toothpaste, carelessly wiped off from around the mouth in sleep. This could actually even be toothpaste: Leggio notes that Rauschenberg describes using "the recently introduced consumer product 'striped' toothpaste" on this work.[30]

Fig. 2.2 Detail of Robert Rauschenberg, *Bed,* 1955. Museum of Modern Art, New York, NY.

The fleshy tones continue on the draped sheet and the top of the quilt, smeared and muddied as if accumulated over time and worked together by frequent tossing and turning of a sleeping subject enduring restless nights. Viewed through this lens of chromatography, the blaze of red and yellow, caught under the top right corner of the quilt, becomes an almost too-literal incarnation of Rich's "human crust", referencing blood and pus, scabs and skin sloughed off in careless sleep. The bottom of the quilt, like the top half of the pillow, is free from paint aside from a few small drops. Both are left comparatively untainted because these areas are mostly untouched by the human body at rest: any further stains would be inside, safely hidden from view by the neat restriction of the quilt's hospital corners. That the *Bed* itself is so well-made, with just the top of the quilt folded back in invitation, emphasises the piece as an exaggerated exploration of usually unseen dirt. *Bed* looks

[30] Leggio, p. 87 referencing Barbara Rose, *An Interview with Robert Rauschenberg* (New York, NY: Vintage Books, 1987), p. 53.

as if someone has just left its warm confines, and is made and ready, waiting for someone to return.

Bed, then, is an exaggeration of our natural, human, bodily filth: it is a display of all the secretions normally too subtle or slight to be seen, played out in paint on an uncomfortably grand scale. It is an abstract expression of what our bodies produce. Although the interpretation of the work as "murder bed" ghoulishly taken from the scene of the crime is arguably too extreme, these early reactions to Rauschenberg's work unwittingly attest to what makes *Bed* so deeply unsettling. It is not the absence of the human body that upsets us, but the *presence* of all that we leave behind, six foot three tall, looming vertically above us: the disgusting evidence of our daily, domestic, material existence. Far from being stained with marks of death, I believe *Bed* is so disgusting and so disturbing because it forces us to recognise the usually overlooked, easily erased signs of human *life*.

Filthy Creativity

"It is easy", Jane Bennett writes, "to acknowledge that humans are composed of various material parts (the minerality of our bones, or the metal of our blood, or the electricity of our neurons)."[31] Yet, everything about the aversive responses that Rauschenberg's *Bed* provokes testifies to the overwhelming difficulty we face when we cannot shy away from our own materiality. There must be something more at stake than our fleshly human embodiment in *Bed*, then, something to account for the emotional experiences that the piece provokes. By placing *Bed* in the context of the *Elemental Paintings* – works Rauschenberg himself describes as "the beginning of the combines" – the stories of nonhuman presence that *Bed* holds start to emerge.[32] Dirt begins to possess far more than the affective capacity attributed to it in the early days of germ theory: filth becomes creative, generative, expressive. To continue with Bennett's argument, I believe *Bed* repulses us because, although we can acknowledge our embodiment, "it is more challenging to conceive of these materials as lively and

[31] Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC and London: Duke University Press, 2010), p. 10.
[32] Rose, p. 58.

self-organizing, rather than as passive or mechanical means under the direction of something nonmaterial, that is, an active soul or mind."[33] *Bed*, then, is so unsettling because it challenges us to do just that.

Growing Painting (1953) and *Dirt Painting (for John Cage)* (ca. 1953) [Fig. 2.3] are perhaps two of the most extreme examples of Rauschenberg's approach to art as a "collaboration" between the artist and their "materials".[34] *Growing Painting* – originally intended to be a dirt painting comprised of soil – earned its title when grass, spawned from a seed dropped from a bird cage in his studio, began to grow on the dirt that Rauschenberg had assembled. This emergence of life from supposedly inert matter created a duty of care between artist and work: when the piece was exhibited in 1954, Rauschenberg frequently returned to the gallery to water and "take care" of the inadvertently cultivated new life.[35] In *Dirt Painting (for John Cage)*, as Walter Hopps describes, a "pattern of lichen or mold" grows across "compacted earth, organic matter, and water glass (a binding material) in a shallow box support".[36] Both of these works are presented vertically, hung on the wall like paintings, in a move that Leo Steinberg describes as "a transposition from nature to culture through a shift of ninety degrees".[37]

To see these dirt paintings as a method of enculturating nature, however, is to miss much of what they offer. While Craig Owens challenges Steinberg's distinction, arguing that postmodern art demonstrates "the impossibility of accepting [the] opposition" between nature and culture, for Owens this impossibility is presented in the work of Rauschenberg and other postmodern artists by treating nature "as wholly domesticated by culture; the 'natural' can be approached only through its cultural representation".[38] Yet, what we see in these *Elemental Paintings* is not a cultural

[33] Bennett, p. 10.
[34] Tomkins, p. 87.
[35] Rose, p. 56.
[36] Walter Hopps, *Robert Rauschenberg, The Early 1950s* (Houston, TX: Houston Fine Arts Press and the Menil Collection, 1991), p. 162.
[37] Leo Steinberg, "Reflections on the State of Criticism" [1972] in *Robert Rauschenberg*, ed. by Branden W. Joseph, (Cambridge, MA: MIT Press, 2002), pp. 7–37 (p. 29). *Dirt Painting (for John Cage)* is now too fragile to be presented this way, and *Growing Painting* only exists in the form of a photograph, having been destroyed by Rauschenberg after two mice died in his cold studio. See Charlotte Healy, "A Radical Disregard for the Preservation of Art: Robert Rauschenberg's *Elemental Paintings*", *Interventions*, 4.1 (2015) <http://interventionsjournal.net/2015/01/23/a-radical-disregard-for-the-preservation-of-art-robert-rauschenbergs-elemental-paintings/#_edn30> [accessed 16 February 2015].
[38] Craig Owens, "The Allegorical Impulse: Toward a Theory of Postmodernism, Part 2", in *Beyond Recognition: Representation, Power, and Culture*, ed. by Scott Bryson and others (Berkeley, CA: University of California Press, 1992), pp. 70–87 (pp. 74–75).

representation of "nature", *it is the natural itself*. Rauschenberg's art here *is* the tangible matter of the nonhuman natural world – earth, grass, and mould – not a likeness or image of it. By presenting natural matter so matter-of-factly, Rauschenberg does not subsume the natural comfortably into the realm of human culture, but instead affirms the natural as a powerful nonhuman agent in its own right.

Fig. 2.3 Robert Rauschenberg, *Dirt Painting (for John Cage),* ca. 1953. Dirt and mould in wood box. 39.4 x 40.6 x 6.4 cm (15 ½ x 16 x 2 ½ in.). Robert Rauschenberg Foundation.

Branden W. Joseph argues that, in *Growing Painting* and *Dirt Painting (For John Cage)*, "Rauschenberg made 'paintings' out of [the materials] by placing them within a rectangular format and hanging them on the wall."[39] Joseph's reading of these works relies on *Painting* serving as a titular noun, but a very different perspective emerges if *Painting* operates not as a noun, but as a verb. What we see then is not a work of art created by an artist, but *dirt itself painting*, creating a patina in "blue and gray" across a surface; we see a *painting growing* as dirt, elevated through chance material encounters above the negative connotations lavished upon it since antiquity, becomes a

[39] Branden W. Joseph, *Random Order: Robert Rauschenberg and the Neo-Avant-Garde* (London: MIT Press, 2003), p. 92.

manifestation of life, abundance, and natural creativity. These works are not, as Joseph writes, occasions where "each material emphatically asserts its existence as unaltered stuff".[40] This reading treats the grass and mould as inert, Cartesian substance, "whose sole irreducible property is extension"; its ability to occupy space.[41] The "stuff" in these works *is* altered: it is just altered by the interaction of lively nonhuman materialities rather than by a human hand. These works are better described as demonstrations of "nature's autoproductive genesis", to use Diana Coole's phrase; or as examples of what Maurice Merleau-Ponty termed *natura naturans*, "nature naturing" – that is, nature creating itself.[42] While Rauschenberg helped foster the material conditions for this natural production – the soil, the water, sufficient light – the art that we encounter with is generated by the liveliness and interactivity of the materials themselves. These artworks, from their very inception, are full of "immanent vitality".[43]

Growing Painting and *Dirt Painting (for John Cage)*, then, are more radical in their distribution of agency than even Rauschenberg's own conception of "collaboration" allows. These works are not just examples of Rauschenberg's attempts to reduce the presence of his personal artistic preferences – a skill he reportedly aspired to after his time with Josef Albers at Black Mountain College.[44] These works also foreground the inherent vitality of the most negligible, unimportant matter of all: dirt. Here, in the form of soil and mould, dirt is presented as a vitally generative force, a viable environment that nonhuman life responds to, relies on, and interacts with. Here, dirt creates art, as its generative capacities play out slowly across its surfaces, creating patterns of colour and life in unique, expressive responses to its environments.[45]

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[40] Joseph, p. 92.

[41] Diana Coole, "The Inertia of Matter and the Generativity of Flesh", in *New Materialisms: Ontology, Agency, and Politics*, ed. by Diana Coole and Samantha Frost (Durham, NC and London: Duke University Press, 2010), pp. 92–115 (p. 94).

[42] Coole, pp. 97–98; Merleau-Ponty attributes these concepts to the twelfth century Andalusian-Arab philosopher Averroës. See Maurice Merleau-Ponty, *Nature: Course Notes from the Collège de France*, trans. by Robert Vallier (Evanston, IL: Northwestern University Press, 2003).

[43] Coole, p. 94.

[44] Tomkins, pp. 27–35.

[45] Joseph argues that these works, derived from the "Bergsonian perspective common to Rauschenberg and Cage", are attempts to "present matter as immersed in duration […] to overcome the situation of a human perception predisposed, even bound, to the arrest of temporal change and the perception of matter in terms of distinct, static forms." While Joseph's reading opens the door for a focus on the materiality of the works themselves, which is underexplored in accounts of Rauschenberg's art, this perspective still places the emphasis on the "stuff" as "stuff", rather than being attentive to the innate liveliness of the actual materials involved. Joseph, p. 81.

Although these works of art ostensibly demonstrate natural processes that occur every day, we are remarkably ill-equipped to deal with such creative collaboration between supposedly inert materialities. Critics lack the language to describe the work created by the mould as it grows in *Dirt Painting (for John Cage)*, spreading and developing colours and textures according to its own propensities. Although Rauschenberg's monochromatic *Black Paintings* can be described in precise detail, ("A strong duality emerges as the area of monochrome is strikingly played against the activated brown, suggesting a calm stability united with agitated activity"), *Dirt Painting (for John Cage)* is a "blue and gray presence" for Walter Hopps, and an "irregular blue and yellow pattern" for Charlotte Healy.[46] Both Hopps and Healy emphasise the chance nature of this work, as the mould produces "a completely accidental 'composition'"; a "confluent randomness" that "echoes [...] field-structured Abstract Expressionist painting".[47] These descriptions are devoid of the details of hue and tone often used to convey the vividness of Rauschenberg's works, but *Dirt Painting (for John Cage)* is a composition of Payne's grey and burnt umber, of yellow ochre, mauve, and white: it is just that this particular composition is nonhuman, formed and reformed by matter creatively responding to its environment. As Cage writes, hinting at the liveliness of the materials themselves: "Crumbling and responding to changes in weather, the dirt unceasingly does my thinking".[48] In these *Elemental Paintings*, then, dirt is not just the affective force seen in the early twentieth century, but is creative and generative. Dirt, here, is lively matter, and matter is positioned as a "talented" nonhuman agent; these *Elemental Paintings* exist as "a constitutive *intertwining* [...] between material and human agency".[49]

On the surface, *Bed* appears to have very little in common with these *Elemental Paintings*. The dirt on *Bed* is hardly "growing", and the bold smears of paint which arrest our attention are quite clearly a human creation. If we look beyond the vibrant paint,

[46] Hopps, pp. 68, 162; Healy.
[47] Hopps, p. 162; Healy.
[48] Cage, pp. 99–100.
[49] Bennett, p. 99; Andrew Pickering, *The Mangle of Practice: Time, Agency, and Science* (Chicago, IL and London: The University of Chicago Press, 1995), p. 15, emphasis in original. Pickering uses the term "constitutive intertwining" in his analysis of the sociology of scientific knowledge, arguing alongside Bruno Latour, Ian Hacking, and, later, Karen Barad for the necessity of including a material agency – which is parallel to, but not wholly interchangeable with human agency – within both accounts of and approaches to scientific experimentation. The term, however, seems appropriate to describe the acts of "collaboration" Rauschenberg perceived himself as performing in his work.

however, to the quilt itself, the creative potential of dirt starts to emerge in the patterns and discolouration that play out across the quilt's surface. As with *Dirt Painting (for John Cage)*, critical accounts of *Bed* acknowledge the materials of its production, but rarely describe the aesthetic appearance of the materials themselves, opting instead to focus on the recognisably human contributions of Rauschenberg's painting. Where readings do turn toward the materiality of the "bed" itself, they typically emphasise the pictorial significance of the quilt, focusing on the homeliness of the pattern, the history of the patchwork quilt as an American tradition, or the provenance of the quilt and its personal significance for Rauschenberg himself.[50]

Yet, the quilt's appearance is profoundly affected by the presence and interaction of materialities that we, for the most part, would be unwilling to recognise as human. For years, as Rockburne and Rauschenberg were, respectively, covered by the quilt, dirt, in the form of sweat, skin, secretions, and fluids, accumulated and penetrated its surface, altering the appearance, texture, and behaviour of the fabric itself. As eccrine sweat glands excreted water and salts, the fabric of the quilt dampened, then stiffened as it dried. As apocrine sweat glands excreted water and fatty substances and bacteria broke down these materials, distinctive sweat odours developed.[51] As hair snagged on loose threads, dried skin sloughed off, scabs caught and blood stained, the quilt too became an "accidental composition" of mauve, umbers and yellows. Like *Growing Painting* and *Dirt Painting (for John Cage)*, *Bed* is an abstract expression of how nonhuman entities – this time present within the human body itself – unconsciously and continuously relate to their environments. Somewhat ironically, this arguably makes Rauschenberg's *Bed* as accurate an expression of *human* being in the world as we could possibly get.

This patina, so often overlooked in favour of the garish paintwork, comprises almost half of Rauschenberg's piece, meaning that *Bed*, like *Growing Painting* and *Dirt Painting (for John Cage)*, far exceeds the idea of cooperation implied by the idea of a "collaboration" between an artist and his materials. A large part of *Bed* can instead be

[50] See Dennis Adrian, "Rummaging Among Twentieth-Century Objects", *Art Journal*, 45.4 (1985), 344–49 (p. 349) <https://www.jstor.org/stable/776810> [accessed 20 December 2014]. Leggio notes how Dorothea Rockburne, a fellow student at Black Mountain, gave Rauschenberg the quilt in his argument that *Bed* is reflective of Anni Albers's weavings and her husband, Josef's, geometic artworks, leading *Bed* to become an androgynous fusion of masculine and feminine identities which reflect Rauschenberg's own personality. See Leggio, p. 100.

[51] "Perspiration", *Encyclopedia Britannica* <https://www.britannica.com/science/perspiration> [accessed 15 August 2017].

viewed as an example of thoroughly distributed agency, a showcase of the creative expression of nonhuman entities generated by their interactions with and responses to their environments. Beyond the paint, the quilt of *Bed* presents the capacity for material production that our bodies possess, and challenges us to recognise the lively independence with which bodily processes are undertaken. While the human is usually the source of all agency and creator of all art – as Hubert Zapf notes, "For a long time, the concept of creativity appeared to be inextricably bound up with a notion of radical individualism and of the quasi-godlike creative genius of the human mind" – in *Bed*, the human becomes the medium through which nonhuman entities such as bacteria, salt, water, glands, and the nervous system, create their art. Here, and in *Growing Painting* and *Dirt Painting (for John Cage)* alike, to continue with Zapf, "creativity is beginning to newly move into the focus of attention not alone as an exclusionary feature of human culture but as a property of life and, to an extent, of the material world itself".[52]

It might sound odd to discuss bodily secretions as art. Yet, as Charles Hartshorne argues, "the cells of one's body are [...] constantly furnishing their little experiences or feelings which, being pooled in our more comprehensive experience, constitute what we call our sensations".[53] As Hartshorne points out, to counter objections "raised to this claim that molecules and atoms also possess creative experience and some degree of feeling", "If atoms respond to stimuli (and they do), how else could they show that they sense and feel? And if you say, they have no sense organs, the reply is: neither do one-celled animals, yet they seem to perceive their environments."[54] As the lively, nonhuman materialities of our very own bodies are expressive, creative, and responsive, exhibiting "signs of spontaneous activity", Hartshorne concludes, "we have no conceivable ground for limiting feeling" – or creativity – "to our kind of individual, say the vertebrates, or even to animals".[55] Biologist Charles Birch concurs: "To be a subject is to be responsive, to constitute

[52] Hubert Zapf, "Creative Matter and Creative Mind: Cultural Ecology and Literary Creativity" in *Material Ecocriticism,* ed. by Serenella Iovino and Serpil Opperman (Bloomington and Indianapolis, IN: Indiana University Press, 2014), pp. 51-66 (p. 51).
[53] Charles Hartshorne, *Creative Synthesis and Philosophic Method* (La Salle, IL: Open Court Press, 1970), p. 7, quoted in Serpil Oppermann, "From Ecological Postmodernism to Material Ecocriticism: Creative Materiality and Narrative Agency" in *Material Ecocriticism,* pp. 21-36 (p. 24).
[54] Oppermann, p. 24; Hartshorne, p. 6, quoted in Oppermann, p. 24.
[55] Hartshorne, pp. 8, 124, quoted in Oppermann, p. 24.

oneself purposefully in response to one's environment [...] human experience [is] a high-level exemplification of entities in general, be they cells or atoms or electrons. All are subjects."[56]

Bed, then, is not just a sign for an absent body; it is a sign of how independent, lively, and material our bodies really are. Yet, as Bennett observes, this liveliness makes us profoundly uncomfortable. Where we may be capable of ceding agency to dirt and mould in *Growing Painting* and *Dirt Painting (for John Cage)*, the nonhuman-human vitality that *Bed* confronts us with makes the work seemingly so toxic that it cannot even be shown to an audience. *Bed*, uniquely among these pieces, provokes the visceral, emotional reaction of disgust. By examining the roots of this reaction, as I do in the next section of this chapter, we can begin to account for our willingness to attribute agency to decidedly natural, nonhuman entities, much as Stein's language of contagion does throughout *Tender Buttons*, and our paradoxical refusal to attribute agency to the "nonhuman" elements within ourselves.

Matters of Disgust

A large part of *Bed*'s shocking appeal comes from its successful representation of its titular object: at over 6 feet long, complete with sheet, quilt, and pillow, *Bed* certainly mimics a bed; the lack of personal possession denoted in its simple, noun title, instils an anonymity within this otherwise personal object. What we're seeing here isn't *my* bed, or *his* bed, or even *Rauschenberg's Bed*, but *a* bed; a narrow bed, at just over two feet wide, but one that can potentially belong to anyone who might desire to take up Rauschenberg's invitation and climb, imaginatively, between the sheets.

If we do so, though, we might begin to see *Bed*'s filthy display as our own filthy display; the products of "expressive creativity" as the products of our own lively, material bodies; we might start to imagine the active, affective, and vibrant nonhuman world with which we share our sheets.[57] We start, then, as its earliest audiences did, to feel repulsed by this vision of bacteria and bodily secretions; to feel the need to turn

[56] Charles Birch, "The Postmodern Challenge to Biology", in *The Reenchantment of Science: Postmodern Proposals,* ed. by David Ray Griffin (Albany, NY: State University of New York Press, 1988), pp. 69-78 (pp. 70-71), quoted in Oppermann, p. 24.
[57] Oppermann, p. 27.

away; to step back and prevent ourselves from coming into closer contact with the *Bed*. In short, we experience disgust.

Teasing out the individual stages of the reactions to Rauschenberg's *Bed*, we begin to see the complexity of the disgust experience. Although the primary manifestations of disgust are bodily, as we recoil from the object that offends, wrinkle our noses, and even feel nauseated, disgust is not "an innate reflex, like the body's response to other noxious stimuli".[58] Rather, as Colin McGinn describes, disgust is a "sensory-somatic" emotional defence reaction, triggered by our sensory engagement with an object of disgust, which entails "a degree of cognitive sophistication".[59] Although initially linked to the sensation of taste and the rejection of food by Charles Darwin, since Aurel Kolnai's 1929 treatise on the subject, the sense of smell has been widely recognised as "the true place of origin of disgust".[60] The emphasis within both Darwin's and Kolnai's accounts on the human body being physically infiltrated by foreign biological entities reveals what is at stake in the experience of disgust: the preservation of the human self, in the face of an invading other. As Winfried Menninghaus describes, "Everything seems at risk in the experience of disgust. It is a state of alarm and emergency, an acute crisis of self-preservation in the face of unassimilable otherness, a convulsive struggle, in which what is in question is, quite literally, whether 'to be or not to be.'"[61]

In critical accounts of disgust, this issue of "to be or not to be" is often very literal. Kolnai argues that "the prototype of all disgusting objects seems to lie in putrefaction", and William Ian Miller and McGinn both identify the decomposing human corpse as the "paradigm" of the disgusting object.[62] It is not death in itself, however, that is disgusting: as McGinn notes, dry bones may upset or disturb us, but they are unlikely to make us feel the physical nausea particular to disgust.[63] It is more

[58] Colin McGinn, *The Meaning of Disgust* (Oxford: Oxford University Press, 2011), pp. 44–45.
[59] McGinn, pp. 44–45.
[60] William Ian Miller, *The Anatomy of Disgust* (Cambridge, MA: Harvard University Press, 1997), p. 1; Aurel Kolnai, *On Disgust* [1929] ed. by Barry Smith and Carolyn Korsmeyer (Chicago and La Salle, IL: Open Court, 2004), p. 41.
[61] Winfried Menninghaus, *Disgust, Theory and History of a Strong Sensation*, trans. by Howard Eiland and Joel Golb (Albany, NY: State University of New York Press, 2003), p. 1.
[62] Kolnai, p. 51; McGinn, p. 13; William Ian Miller.
[63] McGinn, pp. 88–89.

the *activity* which surrounds the process of decay which causes us to feel such revulsion. Miller writes:

> What disgusts, startlingly, is the capacity for life [...] Death thus horrifies and disgusts not just because it smells revoltingly bad, but because it is not an end to the process of living but part of a cycle of eternal recurrence. The having lived and the living unite to make up the organic world of generative rot [...] The gooey mud, the scummy pond are life soup, fecundity itself.[64]

Julia Kristeva, in her theorisation of abjection, similarly emphasises this balance of "life *in death*" as a paradigm of disgust:[65]

> A wound with blood and pus, or the sickly, acrid smell of sweat, of decay, does not *signify* death [...] No [...] refuse and corpses *show me* what I permanently thrust aside in order to live. These bodily fluids, this defilement, this shit are what life withstands, hardly and with difficulty, on the part of death.[66]

Within this paradigm of life-in-death, two key attributes of disgust are evident: we are disgusted by both the liveliness of matter and by our own materiality. The sensation arises when inert objects are shown to be lively, affective, and therefore subject-like, and nonmaterial human attributes – our minds, our consciousness – are revealed to be merely material, and therefore object-like. Disgust, then, is a response to a transgression of the perceived divide between subject and object. The reaction exposes the fragility – the falsity – of dividing the world into subject and object, mind and matter. As *Bed* shows, by rendering the body all-too-garishly material, our own human existence presents a severe challenge to this dualistic conception: *Bed* reveals how, in the words of Hannes Bergthaller, "human beings are everywhere and ineluctably enmeshed in material processes that elude human mastery in their irreducible multiplicity, unpredictability, and sheer generative excess."[67]

Although for Kolnai and McGinn disgust is primarily provoked by physical proximity to actual objects of disgust, Carolyn Korsmeyer argues that art has the capacity to disgust because sight can be an equally powerful trigger for the

[64] William Ian Miller, pp. 40–41.
[65] Kolnai, p. 54, emphasis in original.
[66] Julia Kristeva, *The Powers of Horror, An Essay in Abjection,* trans. by Leon S. Roudiez (New York, NY: Columbia University Press, 1982), p. 3, emphasis in original.
[67] Hannes Bergthaller, "Limits of Agency: Notes on the Material Turn from a Systems-Theoretical Perspective", in *Material Ecocriticism,* pp. 37-50 (p.38).

sensation.[68] Korsmeyer bases her view on Kolnai's assertion that sight provides "such a comprehensive grasp of the features of the object that [...] it is able 'at first blow' to present a *sui generis* quality of disgust".[69] This visual apprehension of a disgusting object then engages our other senses, as we begin to imagine the tactile experience the object would provide if it fulfilled our fears and came into contact with our skin, or if we smelled the cloying, fetid odours that would surround it. Our imagination plays so powerful a role that, as Korsmeyer observes, "Mendelssohn, Lessing, and Kant all note the failure of mimesis to distinguish between reality and representation with disgusting objects [...] The artistic depiction of disgust arouses the emotion as if the artwork were a real existing object".[70] That the visceral critical responses which Rauschenberg's *Bed* provoked centred on paint which only approximated blood and/or semen is testament to the central roles that sight and our imaginations play in disgust reactions.

In its painted extrapolation of flesh tones and bodily fluids, the physical appearance of *Bed* mimics many of the primary elicitors of disgust. Despite Graham Bader's suggestion that anyone would "feel ready to curl up on its blanket and pillow after a long museum afternoon", the viscous, glossy paint implies that a sticky, unpleasant tactile sensation awaits anyone who would try.[71] The vertical drools of paint, some just overhanging the lip of the bedsheet, add to this sense of persistent fluidity caught in temporary suspension, as if the liquids have curdled on the fabric surface and are being held in stasis by a thickened skin. This, in turn, compounds the disgust sensation: as Miller notes, "some of the things we least like to touch parody the form if not quite the function of skin [...] Crusts, skins, and films covering fluid interiors have a special ability to elicit disgust".[72] Kristeva describes a childhood encounter with "that skin on the surface of milk – harmless, thin as a sheet of cigarette paper" as "perhaps the most elementary and most archaic form of abjection": "I experience a gagging sensation", Kristeva writes, "all the organs shrivel up in the body

[68] Carolyn Korsmeyer, *Savoring Disgust, The Foul and the Fair in Aesthetics* (Oxford: Oxford University Press, 2011).
[69] Kolnai, p. 52.
[70] Korsmeyer, p. 47.
[71] Graham Bader, "Rauschenberg's Skin", *Grey Room*, 27 (2007), 104–18 (p. 107) <http://doi:10.1162/grey.2007.1.27.104> [accessed 13 November 2014].
[72] William Ian Miller, pp. 63–64.

[…] *nausea* makes me balk at that milk cream".[73] (For Kristeva, this visceral reaction has a psychological trigger: the rejection of the skin on the milk, she continues, "separates me from the mother and father who proffer it. 'I' want none of that element, sign of their desire").[74]

The disgust response that crusts and films provoke relates, for Miller, to "the central themes of disgust elicitation: the eternal recurrence of […] swarming generation and the putrefaction and decay that attend it".[75] While this argument is especially compelling if *Bed* is situated in the aftermath of a violent murder, it doesn't appear to account for the aversion *Bed* generates if its appearance is attributed to "normal" dirt. However, the difference between interior and exterior that a "skin" emphasises also links back our expectations about the dullness of object matter. As Coole and Samantha Frost write, much of our perception of the world is grounded on the belief that the "real" material world is composed of "bounded objects that occupy space and whose […] behaviors are predictable".[76] Any matter that defies these expectations and asserts itself as something more than "'mere' matter" – especially by being "oozy, slimy, viscous, teeming, messy, uncanny" – possesses the capacity to disgust because of these signs of its material liveliness.[77] As Kristeva continues, "It is […] not lack of cleanliness or health that causes abjection but what disturbs identity, order. What does not respect borders, positions, rules. The in-between, the ambiguous, the composite": lively, bodily, materialities.[78]

Beyond their challenge to widely-held conceptions of matter, the human "secreta" that Rauschenberg exaggerates in paint and pencil are themselves innately disgusting.[79] As Kolnai describes, this is primarily due to "the general disgustingness of the viscous, semi-fluid, obtrusively clinging".[80] These sensory sensations – all associated with touch and sight, rather than smell – are in turn disgusting because they "carry the motif of an 'indecent surplus of life' – an abundance that, true to nature, points once more to death and putrefaction, towards life which is in decline".[81] For

[73] Kristeva, p. 3.
[74] Kristeva, p. 3.
[75] William Ian Miller, pp. 63–64.
[76] Diana Coole and Samantha Frost, "Introducing the New Materialisms", in *New Materialisms,* pp. 1–43 (p. 8).
[77] Coole and Frost, p. 9; William Ian Miller, p. 50.
[78] Kristeva, p. 4.
[79] Kolnai, p. 54.
[80] Kolnai, pp. 54–55.
[81] Kolnai, pp. 54–55.

Kolnai, too much materiality is in itself dangerous: interior waste products becoming exterior waste products are automatically indicative of an *excess* of dirt which, in turn, signals ill-health and imminent demise. The dramatized chromatography of dirt Rauschenberg plays out in *Bed* amplifies this disgusting transgression of the internal/external boundary, turning "an abundance" into an over-abundance, thick and cloying, smeared and stained. In its exaggerated smatters of painted dirt on top of human dirt, *Bed* depicts a form of human hyper-materiality, where the human body teeters perilously close to the edge of excess.

However, if we look beyond this hyper-material "crust" of oil paint – the obvious focal point for *Bed*'s aversion – we see that the bedlinens themselves are also disgusting. They are steeped in evidence of human life, which, as Kolnai describes, triggers "a quite normal propensity towards bodily disgust which exerts itself [...] when [the body] makes itself felt too much *as a body*, so that it is devoid of that 'human' role which makes it acceptable".[82] Disgust occurs when we realise that, as McGinn describes, life "goes forward by dint of these organic processes – the filthy plumbing of the body, with its symptoms and by-products", which are "coolly oblivious to our hot wills and fervent ideals [...] They are, in effect, independent agents, assertive of their rights and determined to complete their tasks".[83] Disgust, then, is a response to the distribution of agency *within ourselves*. Disgust happens when – as with *Bed* – we realise that our bodies have lives of their own.

Disgust, then, is our subjective response to our inevitable objectification; our way of affirming human difference in the face of overwhelming evidence of material similitude to the nonhuman world.[84] As Susan B. Miller writes:

> Disgust for natural processes often emerges as an agent in our efforts to separate ourselves from nature [...] Nature routinely challenges us with regard to matters of personal identity and self-boundary. We labor to keep ourselves apart from nature in certain of its forms, to say we are different from this odorous animal, that moldy vegetation, this fetid swampland. But our materials and many of our mechanisms are those of nature; we, like they, are bags of matter within a skin that is sensitive to penetration and rupture.[85]

[82] Kolnai, p. 61, emphasis in original.
[83] McGinn, p. 80.
[84] Kristeva's theorisation of abjection similarly emphasises visceral disgust as an affirmation of self in moments of similitude to an Other: for Kristeva, however, this affirmation is a psychological distancing of the individual self from our parents. See pp. 2-3.
[85] Susan B. Miller, *Disgust: The Gatekeeper Emotion* (Hillsdale, NJ: The Analytic Press, 2004), p. 47.

The evidence of the "impermanence of our physical form" that *Bed* provides "disturbs our efforts to separate ourselves from nature" and the material world, thereby triggering a disgust response.[86] Disgust is provoked by moments of recognition of the distribution of agency within our own bodies; yet it is also disgust which prevents this recognition from fully occurring. We turn away, recoil, step back, take any action necessary to avoid the realisation that we are not subjects contained within object bodies, but material entities thoroughly distributed and subsumed within other material agencies. Disgust, then, saves us from recognising the lively, independent, materialities of our *selves*.

The Need to Clean

So far my exploration of *Bed* has heavily emphasised the first of the "two categories" of disgust which Korsmeyer identifies in her analysis of the sensation: "literal 'core' or 'material' disgust that is viscerally responsive to foul and contaminated objects [...] and 'moral' disgust that takes as its objects persons or behaviors that transgress social norms".[87] Focusing on *Bed*'s distribution of agency beyond the human and the lively materiality of our own bodies which Rauschenberg confronts us with, I've positioned *Bed* as an object of material disgust, repulsive in its evidence of human naturalness. In this section, I want to turn to the emotional experience of moral disgust, and situate Rauschenberg's work in its mid-century context – in the midst of the American "culture of cleanliness" – in order to explore the filthy work as an act of social transgression, a violation of cultural norms.[88]

Firstly, however, I want to turn to another disgusting *Bed*. When Tracey Emin exhibited *My Bed* [Fig. 2.4] – an assemblage of "tossed sheets surrounded by overflowing ashtrays, used tissues and condoms, unwashed underwear, and medicine bottles"– as part of the 1999 Turner Prize show at the Tate Gallery in London, the *Daily Mail* reported that

[86] Susan B. Miller, pp. 47–48.
[87] Korsmeyer, p. 4.
[88] Hoy, p. 151.

> A 42-year-old housewife took to the bed with a spray can of cleaning fluid. Later, she said she had no choice but to clean up Miss Emin's mess [...] "Tracey is setting a bad example to young women [...] Everyone always finds it hard to be clean. It was my duty to clean up the mess."[89]

The audience member here displays a behavioural response triggered by a disgust reaction: appalled and repulsed by "Miss Emin's mess", she undertakes "a cleaning up" of "surroundings, to [achieve] a weeding out of what is disgusting therein".[90] In doing so, she effectively distances herself from the object of disgust by attempting to remove it altogether – to sanitise it, to clear it away. The audience member turns aversion into action, as many of us do, every day, within the domestic. It's interesting to note, however, the language that the audience member uses to justify this behaviour; how she views Emin's exhibition of dirt as "setting a bad example", and that, as a result, she felt it was her "duty" to clean. These terms of moral evaluation speak to another attribute of the disgust experience. As Kolnai describes, disgust entails "a certain low evaluation of its object, a feeling of superiority", which prompts such cleanliness behaviours.[91] Disgust, then, is not just a response to human similarity to a lively, material nonhuman world. It is also a cultural experience, intimately related to cleanliness, dirtiness, and social acceptance.

While material disgust can be countered by cleaning up the physical objects of disgust, the sense of moral disgust which both Emin's and Rauschenberg's *Bed*s provoke with their transgressions of the boundaries between public and private – very literally airing their dirty laundry in public – is altogether more difficult to erase. Moral disgust, although intangible, is seemingly just as dangerous, just as toxic, as material disgust: there is little chance that Emin's and Rauschenberg's sheets pose a physical threat to human health, but nonetheless they necessitate a cleaning up and a quarantine. Disgust operates not only on an individual basis, then, as a biologically-derived emotional response reaction, but also on a broader, sociocultural level.

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[89] Sidonie Smith and Julia Watson, "The Rumpled Bed of Autobiography: Extravagant Lives, Extravagant Questions", *Biography*, 24 (2001), 1–14 <doi:10.1353/bio.2001.0025> [accessed 23 October 2015]; Lucie Morris, "Tate That!; Housewife 'Cleans up' Turner Exhibit as Two Artists Use It for a Pillow Fight", *Daily Mail* (London, 25 October 1999), p. 5.

[90] Kolnai, p. 42.

[91] Kolnai, p. 42.

Fig. 2.4 Tracey Emin, *My Bed,* 1998. Mattress, linens, pillows, and objects. 79 x 211 x 234 cm (31 $^{3}/_{8}$ x 83 $^{1}/_{16}$ x 92 $^{1}/_{8}$ in.). Saatchi Gallery, London.

Both Menninghaus and William Ian Miller cite Freud in their treatments of moral disgust. For Freud, disgust is "a (neurotic) symptom of the repression of archaic libidinal drives", whose function is to "inhibit the consummation of unconscious desire".[92] Here, the primary function of disgust – to protect the human self in the face of an overwhelming other – becomes abstracted from its primary, material roots and intertwined with culturally-conditioned ideas of civilised and beastly behaviours. Disgust acquires a moral dimension, as it begins to not only affirm human subjectivity over nonhuman materiality, but also to condone certain types of behaviours or attitudes as more appropriate than others. Norbert Elias's analysis in *The Civilizing Process* transforms this "Freudian developmental story of the individual psyche" into what William Ian Miller describes as "a social and historical process", where "the childlike exuberance of medieval man" is moulded into "the decorous and repressed

[92] Menninghaus, p. 2; William Ian Miller, p. 5. McGinn connects Freud's emphasis on repression with biological necessity in his theorisation of disgust, arguing that disgust originated in order to prevent early humans from succumbing to their limitless appetites and eating faeces and copulating with corpses - indulging their extreme libidinal urges - to avoid any ensuing negative health effects these actions could have. See, p. 123–129.

style of the contemporary bourgeois adult".[93] Within this process, disgust becomes codified into appropriate and inappropriate behaviours through public opinion, as "Sanctions that once relied on public ridicule and the actual presence of disapproving others become internalized so that the social is transformed into the psychological."[94] As Jane Bennett and William Chaloupka note, we no longer need admonitions such as "'Before you sit down, make sure your seat has not been fouled'" to help govern our behaviour, because we are "more *civilized*" than our fifteenth-century counterparts; "we have, that is, established more space between the human and the animal."[95] We see the effects of this process manifest in the audience member's reaction to Emin's exhibition of her personal filth, where private dirt becomes a source of public shame, a "bad example" to society. Through years of "civilisation" and wilfully distancing ourselves from our lively, human materiality, cleanliness has become engrained as a social norm, and dirtiness as a toxic transgression.

Rauschenberg's *Bed*, produced in the mid-1950s, exists at a point where these two strains of disgust – moral and material – collide. As I suggested previously, Rauschenberg's work provokes a disgust reaction because the piece confronts us with how independent and lively our human bodies really are. However, the work is also an act of moral transgression: even if *Bed* isn't saturated with the evidence of the gross moral failings of murder or a public display of a private, post-coital scene, its sheer filthiness marks a severe deviation from mid-century cultural norms. By the 1950s, America was consumed by a "culture of cleanliness", with bodily and domestic cleanliness increasingly positioned as "pre-requisites" for social success and domestic happiness.[96] Situated in this mid-century context – when women, as Hoy describes, searched "often without respite, for the 'cleanest clean possible'" – Rauschenberg's filthy *Bed* is an affront to established social convention, a paradigm of disgust for the washing machine age.[97]

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[93] William Ian Miller, p. 171, referencing Norbert Elias, *The Civilizing Process* [1939] trans. by Edmund Jephcott (Oxford: Wiley-Blackwell, 2000).
[94] William Ian Miller, p. 171.
[95] Elias, p. 129; Jane Bennett and William Chaloupka, "Introduction: TV Dinners and Organic Brunch", in *In the Nature of Things: Language, Politics, and the Environment* (Minneapolis, MN: University of Minnesota Press, 1993), pp. vii – xvi (p. ix), emphasis in original.
[96] Hoy, pp. 151, 171.
[97] Hoy, pp. 151–52.

This mid-century fever for cleanliness also arises at the point where material and moral disgust meet. As I explored in the previous chapter, in the early decades of the twentieth century, dirt was synonymous with contagious disease and bacterial invasion. Cleaning directly engaged with the primary, protective function of disgust, as cleanliness behaviours sought to curtail the very real threat of the human body being infiltrated by a rampaging, microscopic other. In the years after World War I, however, Nancy Tomes notes, "personal and household hygiene practices gradually came to be less essential to the control of disease".[98] Thanks to the spread of vaccinations, the increasing diversity and reliability of antibiotics, and the widespread adoption of basic hygiene practices (hand washing, not sharing drinking cups), common bacteria no longer posed such a direct and undeniable threat to human health. Yet, at the same time, the American urge to combat dirt became more engrained than ever before. Throughout the 1940s, the desire for modern technologies to help combat human and nonhuman dirt grew steadily. In 1944, Adam Rome notes,

> the federal office of Civilian Requirements took a survey to determine the things Americans were most keen to buy when the war ended, and household appliances topped the list. The most commonly cited item was a washing machine. Then, in order, the survey respondents looked forward to buying electric irons, refrigerators, stoves, toasters, radios, vacuum cleaners, electric fans, and hot water heaters.[99]

The American need to clean was so well established that the ease of clean clothes beat even the convenience and health benefits – in terms of slowing bacterial growth – that a refrigerator could provide.

As America approached the middle of the twentieth century, then, cleanliness became less about responding to material disgust – the perceived presence of nonhuman dirt which poses a threat to human health – and far more about avoiding moral disgust by eradicating all traces of nonhuman dirt which threatened culturally-condoned standards of cleanliness. Within these shifting functions of cleanliness, disgust itself begins to operate differently. Where, in the early twentieth century, disgust often triggered cleaning behaviours, by mid-century these cleaning behaviours become about avoiding the experience of disgust itself.

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[98] Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge, MA: Harvard University Press, 1998), p. 12.

[99] Adam Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York, NY and Cambridge: Cambridge University Press, 2001), p. 36.

This shift is crucial. When disgust is a formative part of the pursuit of cleanliness, we undergo the full affective experience of the sensation. Although disgust reaffirms the sanctity of the human in the face of an invading, nonhuman other, as we recoil and seek to eradicate the offensive matter, the experience also brings us into *proximity* with the nonhuman other. At the core of each recoil there lies an expression of similitude, a recognition of our own lively materiality as we are disgusted by encounters with biological entities which force us to recognise that *we too are biological.* In contrast, when we seek to avoid the experience of disgust altogether, we also avoid these expressions of similitude. By systematically eradicating any and all traces of nonhuman material liveliness before they have chance to manifest as an object of disgust, we become increasingly distanced from our own dirt – our own lively materiality – and, in turn, from the material liveliness of the nonhuman. The crucial proximity to the lively, material nonhuman that disgust provides is itself wiped away in the culture of cleanliness, casting the lively materialities of the nonhuman world as more of an aberrant Other, more distanced from everyday life, than ever before.

Modern household technologies facilitated the avoidance of the disgust response by making it even easier to avoid and combat dirt. With many of the 15 million new homes built in the 1950s coming fully equipped with washing machines, dryers, flushing toilets, and garbage disposals, eradicating dirt no longer required the extensive physical contact with nonhuman matter which characterised housework in the early twentieth century.[100] Previously, human effort could only combat so much lively dirt – as we beat dust from carpets, brushed cobwebs from ceilings, and swept blown-in leaves out the door – meaning our lives were pervaded by nonhuman matter on a daily basis. In contrast, by the 1950s, household technologies were interpolated between us and the dirt, severing the vital connection to lively matter which pervaded and even characterised the early-twentieth century experience of home. By avoiding these crucially up-close-and-personal encounters with dirt, and failing to trigger a disgust response, Americans no longer had the instance of recognition of similitude – of the liveliness of matter; of human materiality – which the disgust response affords.

[100] Rome, p. 35; Hoy, pp. 169–70.

By the standard measures of success in modernity, this estrangement is a triumph; after all, the mastery of matter – our own materiality included – is the mark of being truly modern, and cleanliness its badge of success.[101] Yet, this estrangement from our own materiality, the constant indulgence of the need to clean, and the perpetual avoidance of the experience of disgust all have dire consequences. They establish a pattern of behaviour where dirt – unwanted, undesirable, nonhuman matter – cannot be tolerated, and must be instantly removed. Hoy describes how, in the 1950s, a vast litter problem developed as "Individuals who would never have thrown paper cups or beer cans in their own yard or in their neighbor's garden unhestitatingly flung them from car windows; they also left large amounts of trash behind, especially in city streets [...] litter begot litter."[102] Hoy positions this public pattern of carelessness as anomalous with the private emphasis on cleanliness, writing that although "Americans had come to value cleanliness for personal reasons," by the 1950s, they still "failed to recognize the connection between how they behaved at home and what they did in public".[103] In contrast to Hoy, however, I believe how Americans behaved at home directly connects to their behaviour beyond. There is no place for dirt – unwanted, nonhuman materialities– in the mid-century domestic. This zero-tolerance policy for unwanted matter which undergirds domestic behaviour and the persistent emphasis on cleanliness simply carried forward beyond the home, as people discarded any objects or entities that became unneeded or undesirable, undertaking a "cleaning-up" of their immediate surroundings with a mind-set that can literally be defined as "out of sight, out of mind".

Through the combination of these perspectives, the space beyond the home came to be conceived as a dumping ground for the dull waste products of the thoroughly modern home. These waste products proved to be anything but inert, however. Rome describes how, in the late 1950s, "public health boards in a number of communities began to receive complaints from homeowners about foul odors and tastes in their drinking water. In many cases, people also noticed a strange sudsing when they turned on their taps."[104] Upon investigation, the authorities realised that the majority of these complaints came from residents of post-war suburban housing,

[101] Robin G. Schulze, *The Degenerate Muse: American Nature, Modernist Poetry, and the Problem of Cultural Hygiene* (Oxford and New York, NY: Oxford University Press, 2013), p. 3.
[102] Hoy, p. 174.
[103] Hoy, p. 173.
[104] Rome, pp. 105–6.

which, lacking access to public water supplies and sewers, relied instead on backyard wells and septic tanks. The foul-tasting drinking water was, the authorities found, caused by these wells becoming contaminated by effluents from septic tanks; the suds pouring "out of the faucets of thousands of suburban homes" were caused by "synthetic detergents which had followed a liquid path from washing machines through septic tanks to drinking wells".[105] These allegedly "inert" nonhuman materialities, behaving according to their own propensities and responding to their environments, enact an uncanny return to the "human" home, frothing out of household taps in a disgusting reminder that the even the material repressed will always, inevitably, return. Ironically, these bubbling signs of household cleanliness and purity also "intensified the danger of disease outbreaks, since detergents seemed to allow both bacteria and viruses to travel farther in groundwater".[106] These incidents not only testify to the undeniable liveliness of the nonhuman material world, but also emphasise the perilous consequences of viewing the world as constructed around conceptual binaries – clean/dirty, lively/dull, human/nonhuman, subject/object – in the face of overwhelming material evidence to the contrary.

By confronting us with our own natural, human filth, Robert Rauschenberg's *Bed* forces us to explore our responses to the evidence of our own nonhuman materiality. *Bed* is a testament to the liveliness of our bodies, to the independent agencies distributed throughout and within the human form, and, as a result, *Bed* deeply disturbs the emphasis on subjective human individuality. As our responses to *Bed*'s exaggerated, human, domestic filth boil over from discomfort into disgust, we begin to see just how uncomfortable we really are with our status as material human beings. When we explore the disgust response itself, we start to realise how entangled the human and nonhuman, the dull and lively, the intimate and dangerous, truly are. By examining our need to clean as a further manifestation of the disgust response – teasing out the overwhelming desire to wash *Bed*'s sheets and send all the engrained filth swirling down the drain – it becomes clear how patterns of cleanliness and dirtiness enacted within the domestic are intimately and intricately bound up in modern attitudes and behaviours towards the material world at large. Within this context of modernity's unsettled material ontologies, as I continue to explore in Part

[105] Rome, pp. 13, 105–6.
[106] Rome, p. 106.

Two, "Material Excess, Material Restraint", modernism's role was not to guilelessly comply with visions of unquestionable human control, but to challenge and provoke its audiences, inviting them to test modernity's ideal against their lived experiences of reality.

Chapter Three

Under the Skins of Things

Material Interiority and Meret Oppenheim's *Object*

As anyone who has ever moved house, ventured into an overstuffed wardrobe, or dared to tackle the dreaded cupboard-under-the-stairs will know, our homes are filled with *things*. Simply put, objects are how we domesticate the domestic space. To turn the nonhuman dwelling into the human home, Susan Stewart writes, we must "declare" the "essential emptiness" of the environment "by filling it. Ornament, décor, and ultimately decorum define the boundaries of the private space by emptying that space of any relevance other than that of the subject".[1] Things bolster our sense of self, affirming our human subjectivity as they form an objective backdrop for our lives. B. Russell Herts, writing on *The Decoration and Furnishing of Apartments* in 1915 declares that, "Compared with the person who is to occupy it, everything else in a room constitutes a background".[2] For Hannah Arendt, "The things of the world have the function of stabilizing human life, and their objectivity lies in the fact that [...] men, their ever-changing nature notwithstanding, can retrieve their sameness, that is, their identity, by being related to the same chair and the same table."[3] Ordinary, domestic things form the foundations of our lives.[4]

Towards the latter half of the nineteenth century, however, the presence and power of objects within the domestic interior came under increasing scrutiny. As mass production techniques improved, furniture and objects which previously could only be made meticulously and expensively by hand could now be produced and reproduced with relative speed, making things – furniture, ornaments, *objet*, knick-knacks – more readily available than ever before. Americans embraced these mass-

[1] Susan Stewart, *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, The Collection* (Durham, NC and London: Duke University Press, 1993), p. 157.

[2] B. Russell Herts, *The Decoration and Furnishing of Apartments* (London: G. P. Putnam's Sons, 1915), p. 41, *Home Economics Archive: Research, Tradition and History* (*HEARTH*) (Ithaca, NY: Albert R. Mann Library, Cornell University) <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4614138> [accessed 25 March 2016].

[3] Hannah Arendt, *The Human Condition* [1958] 2nd edn (Chicago, IL: University of Chicago Press, 1998), p. 137.

[4] These conceptualisations, "wherein the human subject constitutes itself in an act of externalization that transforms the material world", are all fundamentally existentialist. Bill Brown, *A Sense of Things: The Object Matter of American Literature* (London: University of Chicago Press, 2003), p. 33.

produced objects with gusto. An aesthetic of object abundance characterises the American home in the late nineteenth century (see, for example, Fig. 3.1): things are *everywhere*. Rooms bloom with objects. The interior, as William Seale describes, became a space where a plaster bust of Bach atop a piano might compete with "a flock of Japanese paper fans on the wall" and a "rainbow of hand-painted china plates" for attention, or where fashionable "oriental-style carpeting" could jostle against "New Grecian" style gas fixtures, complete with "wine pitchers as finials, and Grecian wine crates as counterweights on the arms of the gasolier".[5] "So dense is the system of decorative signs in the period", Miles Orvell concludes, "that one might think that the most characteristic expression of the Victorian mind was *matter*".[6]

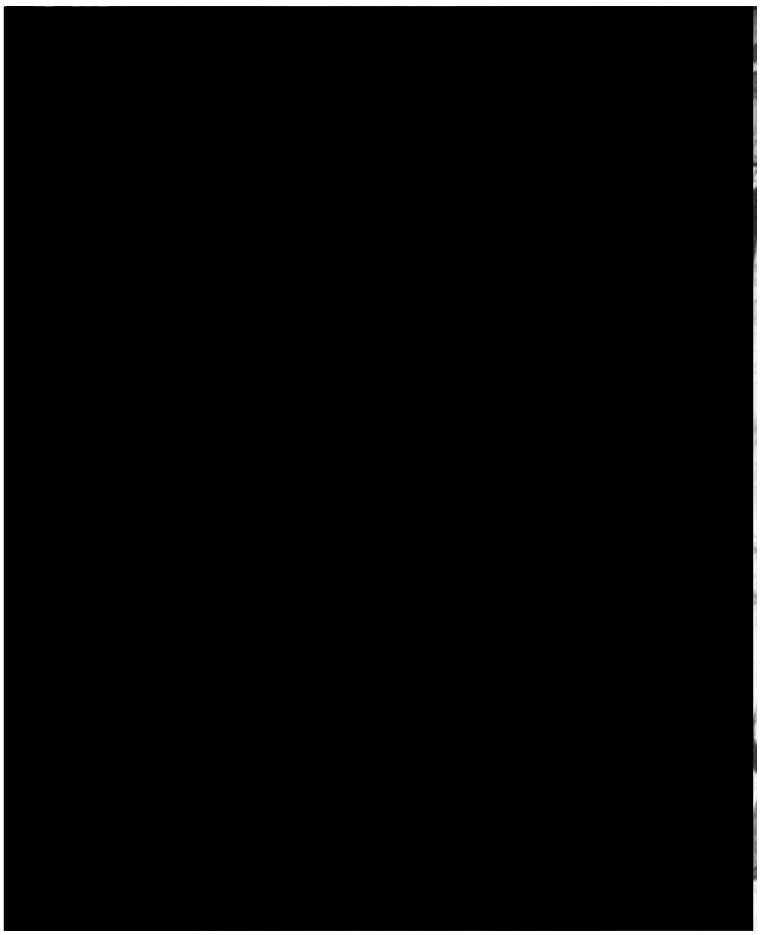

Fig. 3.1
Photograph of parlour, house of Blakely Hall, 11 West 45th Street, New York, NY 1896.

Seale's caption describes the scene: "Mr. Hall must have dazzled his guests with this Japanese parlor […] Against one basic background pattern of fabric many other patterns and textures fall and drape […] Hall has placed in his tent a mother-of-pearl gypsy table, a long curving seat, a china tea set, statues, and porcelains. While nothing here was expensive, the effect of it all in the dim gaslight must have been overwhelmingly rich." [7]

[5] William Seale, *The Tasteful Interlude: American Interiors Through the Camera's Eye, 1860-1917*, 2nd edn (Nashville, TN: American Association for State and Local History, 1982), p. 20, p. 103.
[6] Miles Orvell, *The Real Thing: Imitation and Authenticity in American Culture, 1880-1940* (Chapel Hill, NC, and London: University of North Carolina Press, 1989), p. 40.
[7] Seale, pp. 142–3. Fig. 3.1 taken from p. 143.

Around the turn of the century, however, the critical tide began to turn against the abundance of *stuff* which characterises the nineteenth century interior. A 1916 contributor to *House Beautiful* offers a scathing assessment of eclecticism: "Lack of emphasis [...] marks degeneracy [...] One of the characteristics of a [...] vigorous intelligence is the power to distinguish between important and unimportant."[8] Helen and John Gloag, writing on *Simple Furnishing and Arrangement* in 1921, denounce the decorative ornamentation of furniture as "repulsive" and declare the elimination of "bad ornament at all times and in all places" to be "a definite duty as well as an ideal".[9] In their guide to *The Decoration of Houses*, Edith Wharton and Ogden Codman Jr. describe mass-produced ornament, without a hint of irony, as the "worse curse of modern civilization".[10] In a 1917 essay, Elisabeth Morris rails against "The Tyranny of Things", lamenting how objects "demand care [...] claim attention [and] cumber [our] consciousness".[11] Far from domesticating the interior, there is the sense in the opening decades of the twentieth century that we are, once again, at war with nonhuman matter. We "must not relax our vigilance," Morris cautions, "or we shall be once more overwhelmed" by "the invading host of things".[12]

As germ theory, then, opened the doors to a lively world which coexists, uneasily, alongside our own, the sheer abundance of matter present in the domestic space simultaneously sparked re-evaluations of our relationship with the material world. Simplicity and clarity began to overtake "conspicuous consumption" as the aesthetic of the middle- and upper-class American home, as explorations of nonhuman matter within the interior once again provoked the desire to exercise material restraint.[13]

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[8] Elizabeth Stone McDonald, "Preventative Aesthetics: The Old Age of Art", *House Beautiful* (1916), p. 148, quoted in Bradley C. Brooks, "Clarity, Contrast, and Simplicity: Changes in American Interiors, 1880-1920", in *The Arts and the American Home, 1890-1930*, ed. by Jessica H. Foy and Karal Ann Marling (Knoxville, TN: University of Tennessee Press, 1994), pp. 14–43 (pp. 23–24).

[9] Helen Gloag and John Gloag, *Simple Furnishing and Arrangement* (London: Duckworth, 1921), p. 60, p. 158, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4118620> [accessed 20 February 2016].

[10] Edith Wharton and Ogden Codman Jr., *The Decoration of Houses* [1897] (New York, NY: Charles Scribner's Sons, 1914), p. 186 <https://archive.org/details/decorationofhous00whar> [accessed 17 May 2015].

[11] Elisabeth Morris, "The Tyranny of Things" [1917], *Quotidiana*, ed. by Patrick Madden (2008) <http://essays.quotidiana.org/morris/tyranny_of_things/> [accessed 19 April 2017].

[12] Morris.

[13] Brooks, p. 29.

The narrative arc of the voracious objecthood of nineteenth-century American consumer capitalism being met with equally voracious resistance in the opening decades of the twentieth is much-theorised. For Penny Sparke, the "new emphasis upon visuality over materiality and spatiality" within the modern domestic is related to a reclamation of aesthetic taste: if amassing a wealth of things is no longer the province of the wealthy, but now available to most, then exercising material restraint and exhibiting refined taste, rather than thingly abundance, became key to showcasing a "self-consciously aesthetic domestic interior".[14] Bradley Brooks connects this decluttering of the domestic interior to the growing awareness of the germ theory of disease transmission and the rise of the hygienic reform movement, which advocated brighter, lighter interiors for a more healthful home.[15] Eradicating unnecessary ornaments and objects, and moving towards less heavy fabrics within the home, Brooks notes, worked to eliminate prime habitats for dust and dirt. Ellen Lupton and J. Abbott Miller similarly emphasise a growing concern with hygiene as a motivation for the "vigorous new physique" of the interior, but also connect this move towards a more "streamlined" home to "the period's twin obsessions with *bodily* consumption and *economic* consumption": America's "fascination with new products and regimes for managing the intimate processes of biological consumption" and its "euphoric celebration of planned obsolescence and an economy dependent on a cycle of continually discarded and replenished merchandise".[16] For Lupton and Miller, then, modernising the domestic space doesn't necessarily involve possessing fewer things, but simply fewer things at any given time.

Over the next two chapters, I situate material developments within modernism and modernity against this backdrop of the nineteenth-century proliferation of things. In "Domestic Glassworlds" (Chapter 4), I explore how glass, shrouded in a language of dazzling immateriality and sheer mystique, is lauded and represented as a material capable of countering this turn-of-the-century object nimiety. In this chapter, rather than focusing on a specific modern material, I instead read a specifically modern concern with object *materiality*, and examine how material imitation – widely practiced in the nineteenth-century home; widely rejected in

[14] Penny Sparke, *The Modern Interior* (London: Reaktion Books, 2008), pp. 35–36.
[15] Brooks, p. 38.
[16] Ellen Lupton and J. Abbott Miller, *The Bathroom, The Kitchen, and The Aesthetics of Waste: A Process of Elimination* (Cambridge, MA: MIT List Visual Arts Center, 1992), p. 2, emphasis in original.

twentieth century accounts of the domestic space – once again leaves inhabitants of the modern interior facing a world of unseen, unknown, yet profoundly affective, nonhuman matter.

Throughout this chapter, I read these imitative materialities – where things fashioned from one material (or materials) are covered, coated, ornamented, painted, and veneered so that they appear to be made from (or possess qualities related to) another material entirely – as a form of skin, grafted onto things. I begin by analysing critiques of this object adornment offered in turn-of-the-century housekeeping guides, popular magazines, and contemporary fiction, before moving on to a more sustained examination of the relationship between this modern aversion to material imitation and philosophical interpretations of object interiority. I approach the modern rejection of imitative materialities as a reactionary response to these profoundly unsettling skins of things; a necessary defence against the threat that these object interiors pose to the ontological divide between human subject and nonhuman object. Next, against this backdrop of material excess and imitation, I set a modernist artwork which dramatizes these overlapping contexts of object excess, material imitation, and thingly interiority, through its intersections with the material conditions of mass production, parody of object ornamentation, and orientation around this idea of skins on things: Meret Oppenheim's 1936 Surrealist assemblage of a cup, saucer, and spoon, all covered in fur, known as *Object*.

Tracing this line between the nineteenth-century interior and the twentieth century domestic is not designed to reduce the relationship between the material conditions of early modernity in the mid-nineteenth century and the high modernism of the 1910s onwards to a simple chain of cause-and-effect. Exploring this connection instead opens up a vital perspective on the modern concern about the frangibility of the boundaries between the human subject and nonhuman objects, which in turn speaks to one of the key projects of twentieth-century modernity: to increase human control over, while simultaneously distancing ourselves from, the nonhuman, material world. As I detail throughout the next two chapters, however, modernism doesn't simply support this implicit aim of modernity, but both conceptualises and critiques this modern ambition towards immateriality, repeatedly testing the theoretical ideal against the comparative messiness of lived reality.

Imitation and the Interior

Within the growing rejection of the material excesses of the mid-nineteenth century, a profound strain of concern emerged surrounding the proliferation of decorative but deceptive materials in the domestic space. Although, as Orvell observes, material imitation was practiced well before the industrial revolution – in the Colonial period "canvas floor coverings were painted in black and white alternating squares to resemble marble tiles, while wooden stairs were often painted in swirling marble patterns" – by the mid- to late-nineteenth century such imitative materialities were common practice, "pervading both houses and furniture" alike.[17] American cabinetmakers, Seale notes, embraced the popularity of the mid-century "Grecian" furniture trend, producing a "boxy basic form [...] executed in soft wood" which was then overlaid with "a thin veneer of expensive imported mahogany, whipping wildly beautiful flames of reddish woodgrain over the bulky and architectural Grecian shape".[18] The domestic interior became a site of material deception and blurring, where "statues in real and imitation marble" were treated with equal pride in display.[19]

See, for example, the turn-of-the-century French parlour of Edward Lauterbach, realised in New York [Fig. 3.2]. Everything in this room is so thoroughly oriented around imitation and effect that the room appears as an elaborate masquerade, with objects and ornamentation each pretending to be what they are not: this "French parlor" is "furnished in entirely new period sets"; the electric wall lights ("sconces") are fashioned as candles in candelabras; the "rich architectural embellishments" are of "gilded plaster and wood, which itself might actually have been grained plaster"; even the grand piano in the bottom right corner of the frame is draped in an illusion of soft, shiny, sumptuousness, covered with a precisely arranged and delicately tasselled silk throw.[20]

[17] Orvell, p. 50.
[18] Seale, p. 14.
[19] Seale, p. 15.
[20] Seale, pp. 161–163.

Fig. 3.2 Photograph of drawing room, house of Edward Lauterbach, 2 East 78th Street, New York, NY, 1899.

By the dawn of the new century, however, consumers were increasingly urged to abandon their efforts towards such ornamentation, and material imitation was met with growing disdain.[21] Bemoaning the erosion of material standards, Wharton and Codman write:

> The bronze formerly chiselled is now moulded; the iron once wrought is cast; the patina given to bronze by a chemical process making it a part of the texture of the metal is now simply applied as a surface wash; and this deterioration in process has done more than anything else to vulgarize modern ornament.[22]

To this list, critics of Lautenbach's French parlour aesthetic might add, "the wood once wooden is now plaster."

[21] Jean-Christophe Agnew, "A House of Fiction: Domestic Interiors and the Commodity Aesthetic", in *Consuming Visions: Accumulation and Display in America, 1880-1920*, ed. by Simon J. Bronner (Wintherthur, DE, New York, NY and London: The Henry Francis du Pont Winterthur Museum and W.W. Norton & Company, 1989), pp. 133–55 (p. 139).
[22] Wharton and Codman Jr., p. 190.

Writing for *Good Housekeeping* in 1924, Mildred Maddocks Bentley echoes this caution against material imitation:

> Linoleum is attractive in appearance even for living room use if you choose the neutral brown shades or tile patterns but don't make the mistake of using parquet wood patterns. They deceive no one, and in house decoration as in life it is the attempt to deceive that most offends.[23]

Advising on how to *Be Your Own Decorator* in 1923, Emily Burbank similarly cautions: "Cheap gilt furniture with clumsy shapes and inartistic or gaudy coverings is the worst possible style of house furnishing. It is 'imitation' in the same way that glass 'diamonds' are!"; "do not let any dealer sell you a mirror which is an imitation of an old glass, with discolorings made by man, not time! Better by far a modern glass."[24] In *Interior Decorating for Everybody*, Laura Thornborough notes that is "Far better [...] to have a simple cheesecloth curtain in simple surroundings than imitation lace curtains".[25] The modern home, then, is marked not just by a drive towards material austerity, but a corresponding need for material honesty, too.

For Wharton and Codman, the concern surrounding imitative materialities in the interior appears to stem from the unwelcome blurring of class distinctions such deception affords. Gilt, once the reserve of the wealthy alone, Wharton and Codman lament, has been debased into a "plague of liquid gilding" on "cheap gilt furniture" to be bought by anyone who might desire it.[26] "The prevalence of liquid gilding," they conclude, "doubtless explain[s] the aversion of many persons to any use of gilding in decoration."[27] The material signifiers of social status, Wharton and Codman imply, are no longer to be trusted: gilt doesn't mean wealth; bronze-effect doesn't mean bronze; statuettes no longer mean skilled craftsmanship. Their critique, as Paul R.

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[23] Mildred Maddocks Bentley, *Good Housekeeping's Book on the Business of Housekeeping: A Manual of Method* (New York, NY: Good Housekeeping, 1924), p. 85, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4301958> [accessed 9 April 2017].

[24] Emily Burbank, *Be Your Own Decorator* (New York, NY: Dodd, Mead & Co., 1923), pp. 29, 211–212, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4116495> [accessed 14 June 2017].

[25] Laura Thornborough, *Interior Decorating for Everybody: How Jane Norton Furnished a Room, an Apartment, and then a House for Herself and John. Their Problems in Home Furnishing and How They Solved Them* (New York, NY and Newark, NJ: Barse & Hopkins, 1925), p. 133, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4118514> [accessed 14 June 2017].

[26] Wharton and Codman Jr., p. 193.

[27] Wharton and Codman Jr., p. 193.

Mullins and Nigel Jeffries argue, is rooted in the "apprehension that mass-produced goods risked erasing the visible class distinctions once rendered in the material world".[28] At the heart of these concerns about the practice of material deception, then, lies a fear of a noticeable gap emerging between appearance and reality, as Orvell concludes:

> At every level of society individuals sought an elevation of status through the purchase and display of goods whose appearance counted for more than their substance. The result was a factitious world in which the sham thing was proudly promoted by the manufacturer, and easily accepted by the consumer, as a valid substitute for authenticity.[29]

In his analysis of *Design and Society Since 1750*, Adrian Forty positions this turn-of-the-century rejection of "sham things" as a fundamentally moral concern, reading it as part of a broader sociocultural transition away from organised religion in the public sphere and towards a Christian moral framework instilled within the home.[30] As Maddocks Bentley's adage implies ("in house decoration as in life it is the attempt to deceive that most offends"), the move away from duplicity in the interior can be seen as a move away from duplicity in life.[31] There is, then, a morality at work in the materiality of the home. Correspondingly, Mullins and Jeffries note, towards the latter end of the nineteenth century, material imitation increasingly functioned as a prevalent symbol of appreciable falsity: "dramatic materiality masked character shortcomings, modest material standing, or an absence of educated style and taste".[32]

In his 1893 novella, *Maggie: A Girl of the Streets*, for example, Stephen Crane crowds a saloon with images of veneers and imitation as a sure sign of the moral turpitude that lies beneath:

> The interior of the place was papered in olive and bronze tints of imitation leather. A shining bar of counterfeit massiveness extended down the side of the room. Behind it a great mahogany-appearing sideboard reached the ceiling. Upon its shelves rested pyramids of shimmering glasses that were never disturbed. Mirrors set in the face of the sideboard multiplied them [...]

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[28] Paul R. Mullins and Nigel Jeffries, "The Banality of Gilding: Innocuous Materiality and Transatlantic Consumption in the Gilded Age", *International Journal of Historical Archaeology*, 16 (2012), 745–60 (pp. 754–755) <https://link.springer.com/article/10.1007%2Fs10761-012-0206-x> [accessed 16 May 2017].
[29] Orvell, p. 49.
[30] Adrian Forty, *Objects of Desire: Design and Society Since 1750* (London: Thames and Hudson, 1992), pp. 108–113.
[31] Maddocks Bentley, p. 85.
[32] Mullins and Jeffries, p. 751.

> A nickel-plated cash register occupied a position in the exact centre of the general effect. The elementary senses of it all seemed to be opulence and geometrical accuracy.
>
> Across from the bar a smaller counter held a collection of plates upon which swarmed frayed fragments of crackers, slices of boiled ham, dishevelled bits of cheese, and pickles swimming in vinegar. An odor of grasping, begrimed hands and munching mouths pervaded.[33]

Crane's description shifts from the brazenly illusory detail of surface appearance to the more tangible lived reality, moving from the abstraction of "general effect" to the "odor of grasping, begrimed hands" and "swarming" food. There is a bodiliness, a lived aspect granted to the substance crafted by Crane's visceral mixed metaphor, "An odor of grasping, begrimed hands", which the surfaces, although rendered materially in "imitation leather" and nickel plate, lack. The saloon itself is rendered as a thin, theatrical set that will falter under the slightest force: the repeated emphasis on dramatic, deceptive surface here reveals a glaring lack of corresponding substance. The "mahogany-appearing" sideboard isn't a mahogany veneer supported by a solid oak base, but simply the veneer itself; the nickel-plate of the cash register isn't filled with cast iron, but exists solely as a case. Any substance present beneath is inaccessible, lost to our attention through the intentional distraction of its surface. In the immediate context of the unappealing description that follows, the implications of Crane's erasure of substance through emphasis on surface are clear: this "gilded" environment is rife with unpalatable deception; there is, quite literally, no substance beneath this "counterfeit" surface.

But what makes this revelation of absence – this exposure of the gap between visible surface and unknown substance – so unsettling? How, in short, is material imitation able to operate as a recognisable symbol of "character shortcomings, modest material standing, or an absence of educated style and taste"?[34] The answers, I believe, lie in modern conceptions of materiality, and this fixation on the imitative skins laid over ordinary things.

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[33] Stephen Crane, *Maggie: A Girl of the Streets (A Story of New York)* [1893] in *Stephen Crane, Prose and Poetry* (New York, NY: Library Classics of United States, 1984), pp. 5-78, p. 46.
[34] Mullins and Jeffries, p. 751.

The Matter of Object Interiority

These turn-of-the-century representations of matter are rooted in an ontology where matter is thoroughly dull and wholly inert. Nonhuman, nonbiological matter, here, is rendered in implicitly Cartesian terms as "sheer exteriority [...] devoid of interiority or ontological depth".[35] As initially appears in Crane's saloon, these accounts of material experience conceive the substance of matter only in terms of its surface: there is nothing hidden, complex, or concealed about nonhuman matter; it is, as Diana Coole describes, "laid out before the searchlight of reason, the *lumen naturale*, without dark recesses, crevices or hollows".[36] Within these conceptions of the material world, there is nothing about matter to be known or discovered beyond what we can see on its surface. Matter simply *is*: it has no intrinsic value or significance, no purpose or propensities. It is a dull mass, and, therefore, justifiably subject to our human order and control; without human input or influence, matter would have no real worth at all. As Karen Barad notes, "the Cartesian division between 'internal' and 'external' [...] breaks along the line of the knowing" – human – "subject".[37] In this ontology, we alone possess qualities both interior and exterior, immaterial and material, and it is the condition of our interiority that places us over and above nonhuman matter. Where matter is profoundly physical, our interior subjectivity is, in contrast, "immaterial (disembodied), potentially omniscient, and legitimately omnipotent".[38] In short, then, interiority separates *us* from *it*.

Yet, this ontology of material dullness and strictly human liveliness doesn't always correspond to our lived experience of objects. Turning his attention to a hammer, Martin Heidegger describes how objects possess the capacity to surprise us, despite their material inertia, as Graham Harman summarises:

[35] Diana Coole, "The Inertia of Matter and the Generativity of Flesh", in *New Materialisms: Ontology, Agency, and Politics*, ed. by Diana Coole and Samantha Frost (Durham and London: Duke University Press, 2010), pp. 92–115 (p. 94).
[36] Coole, p. 94.
[37] Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham and London: Duke University Press, 2007), p. 48.
[38] Coole, pp. 94–95.

> When using a hammer, for instance, I am focused on the building project underway, and I am probably taking the hammer for granted. Unless the hammer is too heavy or too slippery, or unless it breaks, I tend not to notice it at all. The fact that the hammer *can* break proves it is deeper than my understanding of it.[39]

For Jacques Lacan, this moment of object alterity manifests when a sardine can, guilelessly floating in water, suddenly "looks back": "It was looking at me at the level of the point of light, the point at which everything that looks at me is situated – and I am not speaking metaphorically."[40] Maurice Merleau-Ponty similarly notes that our perception, "in the context of everyday concerns, alights on things sufficiently attentively to discover in them their familiar presence, but not sufficiently attentively to disclose the non-human element which lies hidden in them."[41] Objects, then, can *look back* at us, conceal aspects of themselves from us, and demand things from us; they can, in short, *behave like subjects*, and, in doing so, confront us with the knowledge that the combinations of matter at play in the world around us are, fundamentally, *deeper than our understanding of them.*

Faced with this objective otherness, approaches to object philosophy frequently make an ontological distinction between "objects" and "things". Where, as W. J. T. Mitchell summarises, objects are "the way things appear to a subject – that is, with a name, an identity, a gestalt or stereotypical template", "things" encompass the unrulier side of nonhuman object matter: "the moment when the object becomes the Other, when the sardine can looks back, when the mute idol speaks, when the subject experiences the object as uncanny."[42] Heidegger, in a more riddling style, similarly argues that "the thingly character of a thing does not consist in its being a represented object, nor can it be defined in any way in terms of the

[39] Graham Harman, "The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism", *New Literary History*, 43.2 (2012), 183–203 (p. 186) < http://muse.jhu.edu/article/483016> [accessed 25 March 2015], emphasis added.
[40] Jacques Lacan, *The Four Fundamental Concepts of Psycho-Analysis* [1973] ed. by Jacques-Alain Miller, trans. by Alan Sheridan (New York, NY and London: W. W. Norton & Company Ltd., 1981), p. 95.
[41] Maurice Merleau-Ponty, *Phenomenology of Perception* [1945] trans. by Colin Smith (London and New York, NY: Routledge, 2005), pp. 375–376.
[42] W. J. T. Mitchell, *What Do Pictures Want? The Lives and Loves of Images* (Chicago, IL: University of Chicago Press, 2005), pp. 156–157.

objectness [...] of the object", and concludes, tautologically, that "The thing things".[43] For Heidegger, the object is only the accessible tip of the thingly iceberg.

In his analysis of *The Object Matter of American Literature*, Bill Brown positions this transition from obedient objects to wilder things as central to the flourishing of consumer capitalism within modernity:

> the doubleness of the commodity (its use value and exchange value) might be said to conceal a more fundamental difference, between the object and itself, or the object and the thing, on which the success of the commodity, the success of capitalism, depends. Put differently: value derives from the appropriation of a pre-existing surplus, the material object's own excessiveness.[44]

Modernisation effects a re-presentation of the material object by exploiting the "excessiveness" that is already present within the object itself: an otherness, an inaccessibility; some part of nonhuman objects that we, as human subjects, can't quite apprehend.

While for some philosophers of things this object resistance originates in a complex fusion of material histories, thingly form, and cultural symbolism – in Heidegger's attempts to access the "jug-character" of a jug, for example – for Brown, Timothy Morton, and Harman alike, this excess is profoundly and bluntly material.[45] "An object," Morton writes, "is profoundly 'withdrawn' – we can never see the whole of it, and nothing else can either."[46] Morton's example – "no matter how many times we turn over a coin, we never see the other side *as* the other side" – indicates that there is an inherent, material otherness always present, even in our encounters with the most reliably familiar of objects.[47] The "thing", then, can be conceptualised as the

[43] Martin Heidegger, "The Thing", in *Poetry, Language, Thought* [1971] trans. by Albert Hofstadter (New York, NY: Perennial Classics, 2001), pp. 161–80 (pp. 164–165, 171–172).
[44] Brown, pp. 13–14.
[45] In his exploration into the essence of a jug, for example, Heidegger concludes at various stages that he has determined the "jug's jug-character". This innate thingness moves from the jug's functional definition as a vessel, to the inner hollow or void at the heart of the jug which can hold fluid, to the action of "outpouring" of fluid which is the vessel's "gift", to the fusion of sky and earth which "dwell", literally and figuratively, in the "gift of water, in the gift of wine", which the jug-as-vessel-as-void-as-outpouring provides. Heidegger's ruminations reveal the jug to be a finely- and emotionally-wrought object which, although formed by human hands, exceeds both our apprehension and our understanding. See Heidegger, "The Thing", esp. 169–170.
[46] Timothy Morton, "Here Comes Everything: The Promise of Object-Oriented Ontology", *Qui Parle: Critical Humanities and Social Sciences*, 19.2 (2011), 163–90 (p. 165) <http://www.jstor.org/stable/10.5250/quiparle.19.2.0163> [accessed 28 March 2015].
[47] Morton, p. 165, emphasis in original.

material otherness of the object; the part of an object's physicality that we, as equally physical, embodied human beings, cannot access.

For Brown, this material withdrawal expresses itself most clearly in fascinations with material interiority: in Georges Poulet's circling of statues and handling of vases "in order to detect some interior", or in Walter Benjamin's childhood adventures in drawers of rolled-up socks, where he recalls how, "Nothing was more pleasurable than to sink my hand as deeply as possible into their insides [...] It was the Possession (*Das Mitgebrachte*) that I held always in the rolled-up interior in my hand, which drew me into their depths."[48] These ideas of object interiority are, however, rapidly dispelled.[49] Poulet's desire to discover "the entrance to a secret chamber" is thwarted: "the vase and the statue are closed. They oblige me to remain outside. We can have no true rapport"; unrolling the sock destroys, for Benjamin, the soft appeal of their "depths".[50] *We can never see the other side as the other side.*

Imitative materialities, however, make these suspicions of object interiority – of thingly otherness and uncanniness – uncomfortably literal. Where statues and socks resist us with their solidity or disappoint us with their ultimate hollowness, the practice of material imitation grants an obvious, yet still inaccessible, interior to objects. Wrapped carefully or carelessly in skins of imitation, these things *become* the elusive object interior. That the surface of matter can deceive, or even attempt to deceive, by claiming to be what it is not, forces us to acknowledge the fact that that matter possesses a previously denied or overlooked interiority. What appears to be solid gold is only liquid gilt; what looks like leather is revealed as paper under touch; what seems to be bronze is only a surface patina. We cannot be sure what lies beneath, but we are sharply aware of its presence.

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[48] Brown, pp. 9–11, quoting from Georges Poulet, "Criticism and the Experience of Interiority", in *The Structuralist Controversy: The Languages of Criticism and the Sciences of Man*, ed. by Richard Macksey and Eugenio Donato (Baltimore, MD: The Johns Hopkins Press, 1972), pp. 56–72 (p. 57); Walter Benjamin, *Berliner Kindheit um neunzehnhundert*, in *Gesammelte Schriften*, ed. by Rolf Tiedemann and Hermann Schweppenhäuser (Frankfurt am Main: Suhrkamp Verlag, 1989), VII, pp. 416–417, translation by Brice Cantrell.

[49] Charles Baudelaire's description of children's desire to pull their toys apart to expose their object interiors is perhaps the paradigmatic example of our urge to apprehend the inside of things. For Baudelaire, the revelation of emptiness is a "'first metaphysical tendency'" which "initiates the child [...] into the 'melancholy and gloom' that characterizes the human response to the soulessness of modern life." Brown, p. 7, quoting from Charles Baudelaire, "A Philosophy of Toys", in *The Painter of Modern Life and Other Essays*, trans. by Jonathan Mayne (London: Phaidon Press, 1964), pp. 202–203.

[50] Poulet, pp. 56–57.

When turn-of-the-century commentators turn against material duplicity in the domestic interior, then, they are also effectively advising a rejection of these undeniable signs of material *interiority* – they are seeking a return to "objects", and a displacement of "things". They are advocating a return to an experience of nonhuman matter which never threatens to unsettle or disturb the ontological divide between human subject and nonhuman object. With the domestic space already revealed at the close of the nineteenth century as a site of lively nonhuman activity, as bacteria swarm and thrive, unseen and unchecked, the twinned doctrines of material restraint and resistance to material imitation – "we must not relax our vigilance, or we shall be once more overwhelmed"; "it is the attempt to deceive that most offends" – effect a form of retaliatory human control over the nonhuman world which reaffirms the fractious boundary between human subject and nonhuman object.[51] Rejecting material imitation may not counter object interiority – *we can never see the other side as the other side* – but can at least remove the most offensively obvious signs of the material complexity of nonhuman matter.

An Object *en Fourrure*

I now want to turn to a modernist artwork that operates at the intersection of these concerns about thingly materiality: Meret Oppenheim's 1936 assemblage of a cup, saucer, and spoon, all covered in soft fur, known as *Object*. The origins of Oppenheim's (in)famous *Object* are somewhat of a Surrealist legend, repeated and retold in various accounts of Surrealism, Dadaism, and Oppenheim's own career, as well as explorations of object art. As the slightly dismissive tone of Mary Ann Caws's opening to a 2011 article on *Object* suggests – "It came about this way, as almost everyone who might give a toss knows all too well…" – the story behind its conception is well-worn, perhaps even beginning to feel a little threadbare.[52] It bears repeating, though, and Oppenheim herself tells it best:

[51] Morris; Maddocks Bentley, p. 85.

[52] Mary Ann Caws, "Meret Oppenheim's *Fur Teacup*", *Gastronomica*, 11.3 (2011), 25–28 (p. 25) <http://gcfs.ucpress.edu/content/11/3/25> [accessed 17 May 2017].

> André Breton had asked me to create an object for an exhibition (at the *Cahiers d'Art*?). Shortly before, I had made a bracelet; it was a brass tube covered with fur. I wore it when I went to the *Café de Flore*, where I met up with Dora Maar and Picasso. They looked at the bracelet. Picasso said: one could cover everything with fur. We laughed and said: yes, this, and that and this cup. When Breton asked me to make something, that is what came to mind. I went to Uniprix and bought a cup, saucer and spoon and I covered them with a small piece of fur that I had bought at some point; I think they told me it was a Chinese gazelle.[53]

From these seemingly innocuous beginnings, then, this "iconic" *Object* was born.[54]

Fig. 3.3 Meret Oppenheim, *Object*, 1936. Fur-covered cup, saucer, and spoon: cup 11.1 cm in diameter; saucer 23.8 cm in diameter; spoon 20.3 cm long; overall height 7.3 cm. Museum of Modern Art, New York, NY.

After its first showing in Paris at the 1936 *Surrealist Exhibition of Objects*, *Object* was translated to New York for the Museum of Modern Art's *Fantastic Art, Dada, Surrealism* show, where it was purchased by Alfred J. Barr, the director of MoMA, for the museum's permanent collection. As Barr recalls, Oppenheim's work was the hit of the show, and captured the public's imagination: "Very few works of art have

[53] Conversation between Meret Oppenheim and Alain Jouffroy [1973] in *Meret Oppenheim: Mirrors of the Mind*, ed. and trans. by Belinda Grace Gardner, ed. by Thomas Levy, and Marleen-Christine Linke (Bielefeld: Kerber, 2013), pp. 9–18 (p. 15).
[54] Caws, p. 26.

stimulated the fantasy in recent years [...] as much as Meret Oppenheim's Surrealist object [...] The thrill and excitement that this object triggered in tens of thousands of Americans were expressed in outbursts of rage, laughter, disgust, and delight."[55] Today, Oppenheim's artwork is perhaps the "single most famous Surrealist object", and, as such, is "one of the most cited and reproduced object lessons of Surrealism".[56]

Since its creation, Oppenheim's work has troubled the boundary between subject and object. While, for Oppenheim, the primary interest of the piece is found "only" in "the contrast of material textures" generated by the combination of smooth, hard, china, and smooth, soft, fur, critical reception frequently fixates on the sexual suggestiveness of this combination of a curved, concave vessel, and its covering of fur.[57] As Renée Riese Hubert suggests, while "[t]he fur suggests an expensively decked-out woman[,] the cup, hollow yet round, can evoke genitalia"; for Robert J. Belton, the cup's "concavity" "pun[s] with the rigidity of the spoon which would be inserted into it, while the hairy gustatory sensation that accompanied the act resonate[s] with the sophomoric humor that the male Surrealists found so endearing".[58] For Janine Mileaf, Man Ray's photograph [Fig. 3.4] exacerbates this vaginal association: "the furry lip of the cup casts jagged shadows on the ground. We look down inside its cavity as if approaching the sex of a female lover."[59]

The erotic overtones of *Object* are emphasised in no small way by its better-known, alternative title, *Déjeuner en fourrure*, or *Breakfast in Fur*. By Oppenheim's account, this title and its scandalous overtones came from the "word-games of critics, the power struggles of men!"[60] More specifically, the title came from Breton, "playing on the associations with queer sexuality" found in Edouard Manet's painting of a

[55] Barr, quoted in Angela Lampe, "'Prenez Garde Aux Objets Domestiques' or Female Home Advantage in Surrealism", in *Surreal Objects*, in *Surreal Objects: Three-Dimensional Works from Dalí to Man Ray*, ed. by Ingrid Pfeiffer and Max Hollein (Ostfildern, Germany: Hatje Cantz Verlag, 2011), pp. 77–81 (p. 79).

[56] Henry Okun, "The Surrealist Object"(unpublished PhD, New York University, 1981), p. 82; Ingrid Pfeiffer, "Surreal Objects Yesterday and Today", in *Surreal Objects*, pp. 15–33 (p. 15).

[57] Robert J. Belton, "Androgyny: Interview with Meret Oppenheim" [Paris, 7 November 1984] in *Surrealism and Women*, ed. by Mary Ann Caws, Rudolf Kuenzli, and Gwen Raaberg (Cambridge, MA and London: MIT Press, 1991), pp. 63–75 (p. 68).

[58] Renée Riese Hubert, "From *Déjeuner En Fourrure* to *Caroline*: Meret Oppenheim's Chronicle of Surrealism", in *Surrealism and Women*, pp. 37–49 (p. 39); Robert J. Belton, "Speaking with Forked Tongues: 'Male' Discourse in 'Female' Surrealism?", in *Surrealism and Women*, pp. pp. 50–62 (p. 53).

[59] Janine Mileaf, *Please Touch: Dada and Surrealist Objects After the Readymade* (Hanover, NH: University Press of New England, 2010), p. 147.

[60] Belton, "Interview with Oppenheim", p. 68.

scandalously unclothed woman seemingly at lunch with two thoroughly-clothed men, *Déjeuner sur l'herbe* (1863) (*Luncheon on the Grass*), and Leopold von Sacher-Masoch's novel in which the narrator dreams of speaking with the titular *Vénus en fourrures* (1870) (*Venus in Furs*).[61] As Edward D. Powers observes, Breton's title refers "not to the china and fur contrast we might touch in and of itself, but *like it*, the fur wrap of Sacher-Masoch's Venus – and prior to it, the porcelain-like skin concealed by that fur wrap, which Manet's Victorine in turn reveals."[62] With its shift from *Object* to *Déjeuner en fourrure*, Powers argues, the work moves from literal to metaphor, away from the initial clash of textures, of the ordinary and functional with the exotic and luxuriant, and towards a rendering of, as Caws writes, "the erotic possibilities of supping and sipping and sexualizing".[63] Under Breton's title, then, Oppenheim's *Object* is explicitly gendered and implicitly positioned in an artistic tradition of the female nude, thoroughly objectified and rendered all too materially graphic in its combination of curved, expectant form and furred texture.

Fig. 3.4 Man Ray, *Déjeuner en fourrure,* 1936. Photographic print. Man Ray Trust, Société des Auteurs dans les Arts Graphiques et Plastiques.

[61] Belton, "Interview with Oppenheim", p. 68.
[62] Edward D. Powers, "Bodies at Rest: Or, the Object of Surrealism", *RES*, 46 (2004), 226–46 (p. 241) <http://www.journals.uchicago.edu/doi/abs/10.1086/RESv46n1ms20167650> [accessed 5 May 2017].
[63] Caws, p. 25.

While some critics laud the overt eroticisation of Oppenheim's work as a welcome assertion of a physical, female sexuality in the face of a Surrealism that is all too often "addressed to men" – for example, Robert Hughes describes *Object* as "the most intense and abrupt image of Lesbian sex in the history of art" – as Belton reminds us, this title and its connotations, assertively feminist or otherwise, were "*not* Oppenheim's choice".[64] Oppenheim herself either refers to the piece descriptively, as *Fur-covered saucer, cup and spoon* – Barr uses similar terms in his letter of acquisition, referring to the work only as "the fur-lined tea cup, spoon and saucer", rather than by any title – or nominally, as *Object*, just one of her "Things, my stuff. The stuff I have made."[65] (This is how the work is referred to in the MoMA catalogue, too; simply, *Object*). Although Oppenheim dismisses the importance of *Object*'s designation – "I didn't care about any title at all", she concludes, "I don't really care that it is now known by Breton's title" – the attachment of *Déjeuner en fourrure* to the furred cup, saucer, and spoon effectively neutralise the unruly materiality of *Object* itself.[66] In turning *Object* into a metaphor, the entities in Oppenheim's assemblage cannot become *things*. They cannot assert their thoroughly material otherness, because these items are inevitably abstracted away from their own materiality. Anything potentially lively, unsettling, or other about this combination of crockery and coating is attributed to its metaphorical humanhood, *not* to its innate material alterity. Objects, here, hold no interest in their own right; dull object matter isn't enough to capture and retain our attention.

What happens when we emphasise the materiality of *Object*, and resist the urge to focus on its eroticisation, though, is fascinating. What we see then is not an elaborate vaginal symbol, but an artwork oriented around the presentation of overly-adorned, mass-produced objects; an artwork which satirises both the nineteenth-

[64] Rudolf Kuenzli, "Surrealism and Misogyny", in *Surrealism and Women*, pp. 17–25 (p. 18); Robert Hughes, *The Shock of the New: Art and the Century of Change*, enlarged edn. (London: Thames and Hudson, 1991), p. 243; Belton, "'Male' Discourse in 'Female' Surrealism?", p. 53, emphasis in original.
[65] Belton, "Interview with Oppenheim", p. 68; Rudolf Schmitz, "Meret Oppenheim in Conversation with Rudolf Schmitz", in *Meret Oppenheim: Book of Ideas: Early Drawings and Sketches for Fashions, Jewelry, and Designs*, ed. by Christine Meyer-Thoss (Bern, Switzerland: Gachnang and Springer, 1996), pp. 134–135; Letter from Barr to Oppenheim in Thomas Levy, "Biographical Legend(s)", in *Mirrors of the Mind*, pp. 90–191 (p. 114).
[66] Belton, "Interview with Oppenheim", p. 68; Belton himself observes that "the way the male Surrealists understood the work is very much an elaboration of its title." See Belton, "'Male' Discourse in 'Female' Surrealism?", p. 53.

century doctrine of material imitation and the twentieth-century desire to render such vibrant, interiorised objects docile once again. When we look at what Oppenheim's *Object is*, rather than what it might figuratively represent, we see a modernist icon of material excess, produced in an era of material restraint and anxiety.

Excess and Obsolescence

The material components of *Object* often get lost in the haze of sexual suggestion, too readily abstracted into metaphor to emerge as physical entities with their own thoroughly material histories. Summaries of *Object*'s origin often emphasise Picasso's "quip" that "anything" could be covered with fur, rendering the cup, saucer, and spoon purely incidental to the artwork's success. For me, however, reading the cup and saucer themselves is integral to unpicking the material intricacies of *Object.*

Oppenheim bought the cup and saucer for *Object* from Uniprix.[67] Established in 1928 by the department store Nouvelles Galeries de Paris (with the backing of Le Printemps, another Parisian department store, and "the technical aid of Karstadt, the German consortium of department stores"), Uniprix was a "cheap, fixed-price" store, whose selling model was "directly derived from American 'five and dime' stores".[68] Where department stores, with their glittering window displays of desirable goods, "resisted selling mass-produced machine-made items since they were considered offensive to bourgeois consumers' desire for tastefulness", *prix uniques* stores had no such reservations: a French study of the *prix uniques* phenomenon in 1936 summarised their function as "department stores that sell mass produced articles for mass consumption at low and limited prices".[69] *Prix uniques* were, Ellen Furlough writes, "'poor people's department stores' (*les grands magasins de pauvres*)", designed for

[67] Jouffroy, p. 15.

[68] Ellen Furlough, "Selling the American Way in Interwar France: 'Prix Uniques' and the Salons des Arts Ménagers", *Journal of Social History*, 26.3 (1993), 491–519 (p. 497) <https://doi.org/10.1353/jsh/26.3.491> [accessed 3 May 2017] ; Robert Fitzgerald, "Marketing and Distribution", in *The Oxford Handbook of Business History*, ed. by Geoffrey Jones and Jonathan Zeitlin (Oxford: Oxford University Press, 2008), pp. 396–419 (p. 414); Furlough, p. 492.

[69] Furlough, p. 494; Marguerite Enselme, *Magasins à Prix Uniques: Leur Fonction dans le Commerce de Detail* (Bordeaux, 1936), p. 26, quoted in Furlough, p. 497).

customers "who would consume standardized products and who were not accustomed to luxury".[70] Criticism of *prix uniques* echoes the earlier concerns of Wharton and Codman about the erosion of skilled production in favour ready availability and affordable standardization, with writers observing that "artisans were complaining that *prix uniques* encouraged consumer taste for objects of mediocre quality".[71] The wares of Uniprix were destined for a "planned obsolescence" in an economy, translated from America to interwar Europe, that was "dependent on a cycle of continually discarded and replenished merchandise".[72] *Object*'s objects, then, were not meant to last.

At the heart of Oppenheim's work lie entities entrenched in modern concerns about material proliferation. Mass-produced, standardised in design, available cheaply, poorly finished, and emphatically functional, the cup, saucer, and spoon are rooted in modernity's worst fears about object abundance. Their significance, it seems, lies solely in their transformative covering of fur, which alleviates their functionality and elevates these ordinary things to the status of art. As Bice Curiger points out, in many ways Oppenheim's *Object* participates in the same legacy as Marcel Duchamp's upturned urinal, *Fountain* (1917), escaping its own banality and planned obsolescence by translating use value into fetishistic desirability:

> How ironic the twist of fate that subjects the "fur cup", a chef d'oeuvre in its own right, to those very mechanisms that Duchamp's urinal sought to expose. A mass-produced object, deprived of its function and declared to be a work of art, finds its way into a museum and makes us question our basic understanding of art and its reception.[73]

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[70] Furlough, p. 498, quoting Pierre George, *Géographie Economique et Sociale de La France* (Paris, 1946), p. 202, and Enselme, p. 750.

[71] Furlough, p. 501, referencing Dante Rosenthal, "Les Magasins à Prix Uniques", *Grande Revue*, January 1934, p. 220.

[72] Lupton and Abbott Miller, p. 2.

[73] Bice Curiger, *Meret Oppenheim: Defiance in the Face of Freedom* (New York, NY: Parkett Publishers Inc., 1989), p. 40. This engagement with commodity fetishism aligns *Object*, in some ways, more with Dadaism and its emphasis on anti-art than with Surrealism; Ulrich Lehmann, however, argues that, despite the seeming overlap between Dada and Surreal objects, Surrealism sought to "counter the allegation previously raised against Dada that it simply sold found items or 'exotic' goods to the public as works of art" by emphasising "an irrational, creative subjectivism […] that manifests itself in the object". This creative subjectivity, Lehmann concludes, "represents an artistic object and a structural protest that […] would withdraw the work from the present economic system". Where the found Dada object emphasises its utter ordinariness, then, the Surreal object showcases subjective, artistic transformations and creativity, allowing the Surreal object to stand "in contradiction to previously existing objects". See Ulrich Lehmann, "The Surrealist Object and Subject in Materialism: Notes on the Understanding of the Object in Surrealism", in *Surreal Objects*, pp. 129–35 (pp. 133–135). Although

It is somewhat ironic, too, that there may be a more material aspect to Breton's choice of title which perpetuates such fetishistic desirability. Although the piece is often described as a teacup, the vessel in *Object* – at 11.11 centimetres in diameter (4 3/8 inches) – is larger than a standard teacup, which is only 8.3 to 9.5 centimetres in diameter (3 1/4 to 3 3/4 inches).[74] Oppenheim's cup is far closer in size to the breakfast cup – a vessel created in the early nineteenth century as demand for coffee increased, which measures between 11.4 and 14.6 centimetres in diameter (4 1/2 and 5 3/4 inches).[75] Part of Breton's punning title – *Breakfast in Fur* – then, might also lie in Oppenheim's specific choice of object.

Fig. 3.5 Brigitte Hellgoth, *Meret Oppenheim mit Pelztasse* (at Oppenheim's retrospective in Germany, Lehmbruck Museum, Duisburg) 1975. Photograph. VG Bild-Kunst, Bonn. Seeing the cup and saucer in the context of the human figure, rather than in museum isolation, gives a sense of their outsized forms.

Oppenheim's *Object* is most frequently characterised as Surrealist, as reflected in the summary of its critical reception, Curiger and Caws both position Oppenheim's work as simultaneously Dada and Surrealist, engaging with both ideas of commodity fetishism and subjective transformation. (Curiger, p. 39; Caws, p. 27). For more on the difference between Dada and Surreal objects, see Okun.

[74] Suzanne Von Drachenfels, *The Art of the Table: A Complete Guide to Table Setting, Table Manners, and Tableware* (New York, NY: Simon & Schuster, 2000), p. 112.

[75] Von Drachenfels, p. 108.

Covering crockery with fur, however, doesn't just render the ordinary as art: it also satirises the rise and fall of material imitation within modernity. The items at the heart of *Object* are thoroughly ordinary: mass-produced, each sold separately as purely functional items, rather than as part of the decorum and display of a dinner set.[76] Dressing these items up in the finery of fur is the ultimate act of object adornment. If mirrors can be falsely flecked with signs of age to lend them an artificial antiqueness, and paper can be made to resemble leather, then why can't an outsized cup, saucer, and spoon become as dainty and alluring as fur? *Object* operates within this tradition of the ordinary borrowing skins from the luxurious, the mundane using material coverings to situate itself in narratives of grandeur and opulence. Oppenheim's *Object* wouldn't be too out of place amongst the furious ornamentation of Lauterbach's fur-covered, silk-draped, wood-effect-plastered French parlour [Fig. 3.2], or ready for implicit critique in Crane's saloon.

Fig. 3.6 Alternative view of Meret Oppenheim, *Object,* 1936. Museum of Modern Art, New York, NY.

The criticism surrounding material imitation stems from its potential to pass as the real thing, but there is no chance that *Object* could achieve such levels of

[76] Aside from the "seemingly low prices", Furlough notes, Uniprix also offered another advantage over its bourgeois competitors, giving consumers "the ability to buy single items of sets [...] For example one could buy a single spoon rather than an entire place setting, or even a single shoe rather than a pair", (p. 498, 501).

deception: its covering of fur is actually slightly shoddy, with the sides and inner of the handle and the underside of the saucer both left bare [Fig. 3.6]. While it borrows from the practice of material imitation, then, *Object* parodies the prior fixation with draping the everyday items of the domestic interior in false refinement by advertising its failure to pass convincingly as anything other than thoroughly ordinary crockery stuffed into a fur coat. We are never allowed to see *Object* as a cup, saucer, and spoon all *made of fur*; we only ever see it as a *fur-covered* cup, saucer, and spoon. As an act of material ornamentation and imitation, then, *Object* is somewhat of a ludicrous failure; as a result, however, it is a successful satire of modernity's adorned objects.

Fittingly, for an artwork steeped in concerns about material proliferation, its adornment with fur is also thoroughly unnecessary: *Object* further dramatizes this outmoded practice of object dressing by giving us an excess of exterior surfaces. The Chinese gazelle fur covers materials – the china of the cup and saucer – which are already covered with their own "skin" – a glaze.[77] Although Riese Hubert identifies the cup and saucer as porcelain – an idea which Powers echoes in his analysis of the allusions at work in the renaming of *Object* as *Déjeuner en fourrure*, comparing Oppenheim's "china" to "the porcelain-like skin" of Manet's Victorine – the form, colour, and provenance of the cup and saucer make it more likely that they are earthenware, rather than porcelain.[78] Porcelain, formed of kaolin clay, is typically used to make fine crockery or decorative ornaments – the wares found in the department stores of Paris, rather than its *prix uniques*.[79] Earthenware, made of sedimentary or secondary clay, is more commonly used to produce "dinnerware and utilitarian items".[80] The colour of the cup in *Object* is also inconsistent with the colour of porcelain, which appears white with a "slight bluish-white cast" under direct sunlight; the handle of Oppenheim's cup is a dull, creamy yellow.[81] While porcelain is coated with transparent, glassy, feldspathic glaze which fuses with the body of the kaolin clay when firing, preserving its whitish colour, earthenware is often initially

[77] Jouffroy, p. 15; Edward D. Powers, "Meret Oppenheim - Or, These Boots Ain't Made for Walking", *Art History*, 24.3 (2001), 358–78 (p. 368) <http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?vid=5&sid=e45e761b-6cc8-4519-8999-57c23971de6b%40sessionmgr102> [accessed 16 January 2017].
[78] Hubert, p. 39; Powers, "Bodies at Rest", p. 214.
[79] Von Drachenfels, p. 70.
[80] Von Drachenfels, pp. 71–72.
[81] Von Drachenfels, p. 71.

covered with lead glaze, which only "partially sinks into the body" of the sedimentary clay, "or rests on top", giving "a covering that is thicker and richer than feldspathic glaze".[82] The peak or flaw clearly visible on the handle of the cup [Fig. 3.7] suggests a thicker glaze resting on top rather than bonding with the clay underneath, imperfectly applied and improperly finished.

Fig. 3.7
Detail of Meret Oppenheim's *Object,* 1936. Museum of Modern Art, New York, NY.

The fur-covered cup and saucer, then, are already covered with their own glazed skin, as Powers notes:

> the meeting of fur and china [...] is decidedly not by chance. Rather, each object specifically plays off fur as a second skin, not only representing its use as a covering, but also re-presenting that use as useless, where what the fur covers is already more impermeable, indeed, intractable, than the fur itself.[83]

The spoon, most likely made of stainless steel, has no need of its fur coat either, already being resistant to corrosion. In *Object*, then, Oppenheim turns the most banal objects of modernity – mass-produced, poorly-finished, *prix uniques* crockery – into obnoxiously faux-opulent items, which never even *try* to pass for thoroughly luxurious, leaving them fit for neither drinking nor décor.[84] Revelling in its material obsolescence and excess, *Object* is a presentation of everything that offends modern object sensibilities.

[82] Von Drachenfels, p. 73.
[83] Powers, "Meret Oppenheim", p. 368.
[84] Caroline O'Donnell cites *Object* as a prime example of "fugly" art. See Caroline O'Donnell, "Fugly", *Log*, 22 (2011), 90–100 (pp. 97–98) <http://www.jstor.org/stable/41765714> [accessed 30 January 2017].

Exposing *Object* Interiority

Object's fur coat, however, doesn't just satirise modernity's prior fixation with material adornment, but also interrogates its contemporary fascination with a return to material honesty; the modern drive towards more streamlined, more efficient, more hygienic objects that never threaten to become *things.* Far from being cleaner, brighter, leaner, Oppenheim makes the component parts of *Object* each more excessive, far less efficient, less functional, decidedly *un*hygienic, and more thingly than they were before.

Although, for Curiger, the items of *Object* are "deprived of [their] function" through their elevation to "art", for many critics the elements of *Object* retain a sense of their prior usage.[85] "Faced with the incongruous pairing of dimestore dishware and the pelt of a gazelle," Mileaf writes, "the viewer would likely imagine the taste of this object in his or her mouth."[86] When wrapped in sexual abstraction, this imagining offers "sensual pleasure": "What could be more exotic and erotic than to drink from something that is already ready, as it were, and wonderfully, surprisingly, horribly, invitingly so?" Caws asks.[87] For Powers, it is the act of imagining *Object*'s use which forces its abstraction into sexual metaphor: "As we imagine raising the fur teacup or maybe the spoon to our lips, the sheer materiality of the object thus passes from the realm of the generally sensual to that of the specifically erotogenic."[88] When confronted as things apart from their trappings of fur and fetish, however, this sensation becomes repulsive. Think of the texture of damp hair against the lips; liquid caught in the drying, matting, tendrils of fur; stray hairs sticking to the sides of the mouth. *Disgusting.*[89]

[85] Curiger, p. 40.
[86] Mileaf, pp. 146–147.
[87] Mileaf, p. 147; Caws, p. 25.
[88] Powers, "Bodies at Rest", p. 241.
[89] In one of the first treatments of disgust as a human emotion, Charles Darwin identifies how "A smear of soup on a man's beard looks disgusting"; Winfried Menninghaus argues that hair "is at some level the universal disgust substance", citing evidence that, in an experiment, children under two would eat imitation dog faeces "realistically crafted from peanut butter and smelly cheese", and even a whole grasshopper, but the overwhelming majority refused to eat a lock of human hair. Charles Darwin, *The Expression of the Emotions in Man and Animals* [1872] ed. by Paul Ekman (London: HarperCollins Publishers, 1998), p. 255; Winfried Menninghaus, *Disgust, Theory and History of a Strong Sensation*, trans. by Howard Eiland and Joel Golb (Albany, NY: State University of New York Press, 2003), pp. 55–56, citing Paul Rozin et al. "The Child's Conception of Food: Differentiation of Categories of Rejected Substances in the 1.4 to 5 Year Age Range", *Appetite*, 7 (1986), pp. 141-151.

This aversive reaction is a further element to *Object*'s interrogation of the material conditions of modernity. Where the concerns about object adornment and material imitation raised in turn-of-the-century housekeeping literatures draw on a language of moral disgust, branding such practices "vulgar" and "offensive", *Object*'s fur coat compounds this sensation by rendering this disgust visceral.[90] In doing so, Oppenheim's artwork reiterates what is at stake in our encounters with objects that advertise their material interiority: the boundary between subject and object.[91] When faced with this fur-covered cup, saucer, and spoon, we want to abstract *Object* away from the material experience it offers – drinking – and retreat into the abstraction of metaphor: we want to contain its unsettling material otherness by figuring *Object* as a sexualised female subject, so we strive to neutralise the threat it poses to our material ontology by assimilating these inanimate, nonhuman objects into discourses of the human subject.

Yet, *Object* refuses such an abstraction. It asks to be handled, (not least because of its actual handle). Each of the component parts of Oppenheim's artwork are oriented around the human body, from the saucer, designed to make the cup itself easier to hold when full of hot liquid, to the wide opening of the cup, designed to allow the beverage to cool before drinking, to the fur itself.[92] Writing on fur, Chantal Nadeau argues that "fur *per se* has no value without the raw materiality of skin".[93] While, for Nadeau, this interplay of skins, human and animal, is inherently sexual and sexualising in ways which certainly support *Object*'s metaphoric abstraction ("the constant rearticulation and sexualized negotiation between [...] the apparent mobility of the body and the aberrant stillness of fur," Nadeau writes, "creates [a] sexual economy"), the use of fur as a decorative adornment here acts as a further invitation to touch, to hold, to handle these now-functionless objects.[94] *Object* is an artwork of direct bodily implication, even apart from its erotic potential.

[90] For a discussion of the distinction between moral and visceral disgust, see Chapter 2, esp. pp. 76-77.
[91] "It is the self," Susan B. Miller argues, "whose vulnerability to invasion or degradation is at issue when disgust arises". See Susan B. Miller, *Disgust: The Gatekeeper Emotion* (Hillsdale, NJ: The Analytic Press, 2004), p. 4.
[92] Von Drachenfels, pp. 110–111.
[93] Chantal Nadeau, *Fur Nation: From the Beaver to Brigitte Bardot* (London and New York, NY: Routledge, 2001), p. 17.
[94] Nadeau, p. 17.

What we have, then, in Oppenheim's artwork is a dynamic interplay of surface and interior. The work itself is a layering of objects and interiority: a skin of fur, with its own interior or underside, is laid over stainless steel, interiorising the object, and glazed china, which in turn has its own interior, materially distinct from its surface. Next, add to this a further layer of human contact. Add the curl of fingers around the curve of the handle: our skin touching the smooth glaze of the china's skin, brushing against the strands of fur, perhaps even breaking through the hair to the animal skin underneath. Add our hand on the cold, bare underside of the saucer. Add our mouth, supping from the cup. Hairs on the lips, the solidity of china underneath. Where in this thorough mixing does surface stop and interior begin?

The unsettling, discomforting sense of bodily implication that *Object* invites, then, can be explained apart from its sexual fetishisation. As an artwork, *Object* operates around a confrontation between *us* and *it*, where the line between *us* and *it* is thoroughly blurred, in a physical, ontological sense. The even more disturbing reality, however, is that this isn't unique to Object, but is a property of all our physical encounters with things. Writing on the idea of physical boundaries, Karen Barad uses – in an apt coincidence – the example of a coffee mug:

> At first glance, the outside boundary of a body may seem evident, indeed incontrovertible. A coffee mug ends at its outside surface just as surely as people end at their skins. On the face of it, reliance on visual clues seems to constitute a solid approach, but are faces and solids really what they seem? In fact, an abundance of empirical evidence from a range of different disciplines, considerations, and experiences strongly suggests that visual clues may be misleading. What may seem evident [...] is not simply a result of how things are [...] [but] is a result of the repetition of (culturally and historically) specific bodily performance [...] When it comes to the "interface" between a coffee mug and a hand, it is not that there are *x* number of atoms that belong to a hand and *y* number of atoms that belong to the coffee mug.[95]

The "specific bodily performance" of this modernity is grounded in an ontology which seeks to distinguish as clearly and cleanly as possible between the human subject and the nonhuman object, and to reiterate this distinction at every possible opportunity, to anticipate and counter even the most seemingly innocuous of threats. With *Object*, however, this specific bodily performance is no longer possible: we are implicated; we

[95] Barad, p. 155. Barad cites "Neurophysiologists, phenomenologists, anthropologists, physicists, postcolonial, feminist, queer, science, and disability studies scholars, and psychoanalytic theorists" as examples of those who question the "presumably inherent nature of bodily boundaries".

are entangled; our bodies and our interiors are participant in an ontological dance with the equally material bodies and interiors of the *Object* before us. To paraphrase from Barad, it is not that there are *x* number of atoms in *us* and *y* number of atoms in *Object*, but simply *atoms*, simply *matter*, which at any given time has more properties akin or physical proximity to one entity – human subject *or* nonhuman object – than another.

In Oppenheim's artwork, then, *Object* interiority isn't a trick that disappears, like Poulet's "closed" statues, or the vanishing illusion of an inside with Benjamin's rolled-up socks. *Object* lets us *see* its interior, reveals the material difference between its outside and its inner by exposing its china insides. Further, Oppenheim's work thoroughly complicates the idea that at some point the interior stops and an exterior begins by layering skins on skins. Further still, through this layering, and the thorough sense of bodily implication inherent in the artwork itself, *Object* teases at the boundary between *us* and *it*, by both confronting us with a thoroughly material presentation of object interiority and blurring the boundaries between surface, interior, subject, and object. It is through this entanglement of exterior and interior, I believe, that *Object* makes its most direct and profound assault on the material values of modernity by undermining the rejection of material interiority on which ontological distinction between subject and object is built. *Object*'s objects are an unwelcome reminder of the uncanniness of material adornment and imitation, and an unwanted revelation of the profound, and profoundly material, entanglement between us and things. *Object*, then, is both a product of, and an affront to, the values of thoroughly modern matter.

Chapter Four

Domestic Glassworlds

The Still Life Photography of Margaret Watkins

Open your crockery cupboard. Open your refrigerator. Look around you. Look at the storage jars on your counter; the mirrors hanging on your wall, or standing on your sideboard. Look at the photographs in frames, the ornaments posed on the mantelpiece or bookshelf. Look at the windows; the patio doors; the screens of your television, your laptop, your mobile phone. In the modern domestic, glass surrounds.

Glass has been part of human history for over five thousand years. Small glass vessels have been in use since the sixteenth century BCE, and glass tableware has participated in our daily lives since the Roman Empire.[1] Glass is humankind's "first synthetic creation", but glass is not "an exclusive invention of mankind", and appears in nature in various forms.[2] Despite its extensive history and presence within our daily lives, as Alan MacFarlane and Gerry Martin note in their analysis of *How Glass Changed the World*, "Most of us hardly give glass a thought".[3]

In many ways, glass is the unacknowledged material protagonist of Western modernity, as MacFarlane and Martin demonstrate by inviting us to "imagine waking in a world where glass has been stripped away or uninvented" and all "objects, technologies and ideas that owe their existence to glass have gone":

> We feel for the alarm clock or watch: no clock or watch however, for miniaturised clocks and watches cannot exist without the protective facing of glass [...] When we draw back the curtains a blast of air strikes us through the glassless windows [...]
>
> There would almost certainly be no electricity, since its first generation depended on gas or steam turbines, which required glass for their development [...] Our fields would produce less than one twentieth of their current yield without the fertilisers discovered by chemists using glass tools. In our hospitals, medicine would be killing more people than it cured. There would be no understanding of bacteria and viruses, no antibiotics [...] there would be little control of epidemic and endemic diseases [...]

[1] Isobel Armstrong, *Victorian Glassworlds: Glass Culture and the Imagination 1830-1880* (Oxford: Oxford University Press, 2008), p. 1; Stephen L. Sass, *The Substance of Civilization: Materials and Human History from the Stone Age to the Age of Silicon* (New York, NY: Arcade Publishing, 1998), ebook.

[2] Keith Cummings, *A History of Glassforming* (London and Philadelphia, PA: A & C Black and University of Pennsylvania Press, 2002), p. 2; Koen Vanderstukken, *Glass: Virtual, Real* (London: Black Dog Publishing Ltd., 2016), p. 105.

[3] Alan MacFarlane and Gerry Martin, *The Glass Bathyscaphe: How Glass Changed the World* (London: Profile Books, 2003), p. 1.

> Our understanding and control of space would be very limited. We might not even be able to prove that the earth goes round the sun. Our astronomy would be ancient and our weather prediction haphazard [...]
>
> The artistic and aesthetic world would also be entirely different [...] There would have been no Renaissance discovery of how to represent three-dimensional space and our systems of representation might not be far removed from those of the twelfth century.[4]

As MacFarlane and Martin's wide-ranging historical undoing indicates, glass is both materially and symbolically significant, physically vital for its non-porous, transparent stability, and conceptually invaluable due to its role in the visual developments which underpin the progression of science, art, and philosophy in Western culture.

For all its ubiquity, familiarity, and history, however, there is something unfathomable – something otherworldly – about glass. For all its much-celebrated stability and clarity, glass repeatedly blurs the boundaries of our conceptualisations and categorisations of matter: "glass", as Gertrude Stein succinctly puts it in *Tender Buttons*, "is confusing".[5] Koen Vanderstukken details the still-ongoing difficulties surrounding the classification of glass: "Even after more than four thousand years," he observes, "we have still not succeeded in formulating a satisfactory definition."[6] While we mainly experience glass as a brittle, transparent or translucent solid, glass is more accurately described as a frozen liquid that is so viscous that its "atomic motions have slowed to the extent that characteristic relaxation time exceeds the observation period".[7] Despite popular theories about glass retaining identifiably liquid properties – most notably, the observation that the glass in many medieval windows is noticeably thicker at the bottom than the top, implying that, over time, this viscous liquid has flowed, pooling at the base of its frame – glass actually "behaves totally like a solid substance", despite having "the amorphous structure of a liquid": in reality, "glass does not in fact flow."[8] Yet, even "as a viscous liquid," Keith Cummings writes, glass "does not behave exactly as it should", noting that, "until

[4] MacFarlane and Martin, pp. 1–3.
[5] Gertrude Stein, "Rooms", in *Tender Buttons, The Corrected Centennial Edition*, ed. by Seth Perlow (San Francisco: City Lights Books, 2014), p. 66.
[6] Vanderstukken, p. 186 For more on the historical definitions and difficulties of defining glass, see pp. 167-169.
[7] Eric Le Bourhis, *Glass: Mechanics and Technology* (Weinheim: Wiley-VCH Verlag GmbH & Co. KGaA, 2008), p. 8.
[8] Vanderstukken, p. 182.

recently scientists created a fourth state of matter to encompass its contradictory behaviour," known as "the glassy state".[9]

Further, the term "glass" is itself somewhat ambiguous. When describing the material, we most likely mean soda-lime glass, as this accounts for more than ninety percent of the glass that is produced, but "glass" also refers to the objects it forms, such as drinking vessels (which may or may not be made of soda-lime glass), spectacles (in its plural form), and mirrors.[10] In our everyday lives, glass is both material and object. On a physical level, however, "glass" is neither of these things: technically, the term "glass" "does not define a material but rather a state in which a material exists".[11] As Heinz G. Pfaender summarises in the *Schott Glaslexicon*, "Glass is all the substances that resemble a liquid structurally but which have such a high viscosity at normal ambient temperatures that they can be regarded as solid substances"; "Glass is, from a material perspective, a collective term for an almost incomprehensible number of materials of the most diverse composition, which are in a glassy state."[12] J. E. Selby notes that "Virtually any material can be formed as a glass under the proper experimental conditions"; Vanderstukken observes that "Metals, too, are able to make the transition to glass", given the right environment.[13] In short, "talking about a glass is actually the same as talking about a liquid, a gas or a solid."[14] Glass is a state of material existence, not the material or the object itself. For the purposes of this chapter, however, I use the term "glass" in its everyday incarnation, to describe the transparent soda-lime material created under intense heat, and to identify everyday objects found within the home. It's worth remembering throughout the examinations of this matter, though, that even today, "glass" still refers to an entity that we can't quite yet define.

On a more practical note, part of the complexity and unfathomability of glass lies in its mundane material origins. The very materiality of glass feels like a paradox. Glass takes the coarsest stuff of the earth – sand (silicon dioxide or silica, SiO_2), soda

[9] Cummings, p. 11; See Vanderstukken, pp. 183–187 for an overview of the scientific debates surrounding the glassy state as a fourth phase of matter.
[10] Vanderstukken, p. 175.
[11] Vanderstukken, p. 184.
[12] Heinz G. Pfaender, *Schott Glaslexicon*, 4th edn (Munich: Moderne, 1989), pp. 26, 24, quoted in and trans. by Vanderstukken, pp. 169, 184.
[13] J. E. Shelby, *Introduction to Glass Science and Technology* (Cambridge: Royal Society of Chemistry, 2005), p. 3, quoted in Vanderstukken, p. 185; Vanderstukken, p. 185.
[14] Vanderstukken, p. 186.

(or sodium carbonate, Na_2CO_3, used to reduce the melting point of pure silica from 1713°C to 850°C), and lime (calcium oxide, CaO, used to prevent this sodium silicate glass from collapsing on contact with water) – and turns it into shimmering, crystalline matter.[15] Grains of sand become molten liquid; rough textures are fired smooth; the abundant becomes luxurious; the resolutely mundane becomes material perfection. Held in its state of smooth, liquid solidity, brittle and fragile, glass is perhaps the closest we can get to lively, inanimate matter; in its material translations of coarse sand into delicate transparency, glass is also, perhaps, the closest we get to material magic.

In this chapter, I hold the material complexities of glass up to the light. I explore how its radical transformations of matter, its promises of transparency, its ability to deny and assert its very materiality seemingly at will, switching between a physical boundary and a mere illusion, a trick of pure light, captivate the modern imagination. Caught in a language of promise and mystique, I detail how this powerfully affective, quixotic, but chemically inert modern matter became an iconic materiality of modernity, and an aesthetic fascination within modernism.

To do this, I turn to various literary and artistic encounters with glass from the opening decades of the twentieth century: the writings of Virginia Woolf and Walter Benjamin, Paul Scheerbart and Le Corbusier. Primarily, however, this chapter focuses on the still life photography of Margaret Watkins. In her celebrated commercial photography, produced in New York throughout the 1920s, Watkins transforms everyday glass objects – wine glasses, plates, and bowls – into immaculate matter; glorious, shining, and resplendent. In her critically-divisive artistic still lifes, however – *The Kitchen Sink* (1919) in particular – she traps glass in a sharply contrasting vision of scuzzy domesticity, mired in grime, and flecked with dirt. Drawing on conceptualisations of glass and theorisations of the subject-object encounter depicted within the artistic tradition of still life, I examine how Watkins's commercial presentations of glassware implicate the modern home in the larger aims of twentieth-century modernity: to create a world of transcendent immateriality; to distance ourselves once and for all from the messiness of the material world; and to impose a decidedly human order on nonhuman matter. Yet, by teasing out the complexities of treating glass as thoroughly modern matter in Watkins's commercial

[15] Sass.

and artistic work alike, I detail how these visions of glass as near-magical matter rely on a wilful denial of its very materiality. At this chapter's close, I use Watkins's work to expose and explore the irreconcilable gulf between modernism's material ideal and the inevitable messiness of the lived reality, and to examine how even the most coolly visual of modern materials can work to remind us that – no matter how fiercely we try to deny it – we are material, too.

Traceless Matter

Although there is nothing new or modern about glass itself – its basic composition and the principles underlying its production have remained the same for centuries – glass is frequently diagnosed as both the medium and the message of modernity. From the "Victorian glassworlds" of the nineteenth century – to use Isobel Armstrong's term, which also inspires the title of this chapter – the glazed arcades, the Crystal Palace, the shimmering storefronts, to the avant-garde architecture of the early twentieth century which celebrates glass as "miraculously beautiful" and "theoretically perfect" matter – a symbol of utter openness and thorough transparency – glass is repeatedly positioned as a material uniquely capable, as architect Le Corbusier declares, of "perfectly" expressing "the spirit of the Modern Age!"[16]

Part of the modern fascination with glass stems from the near-miraculous transformation of matter that occurs during its creation. The production of glass appears to confirm, Armstrong argues, "the magic of a transition from nature to culture", as sand, "the 'useless' '*debris* of our globe'", is translated into "pure transparent matter" via a heady mix of human effort and ingenuity.[17] Crucially, the finished product retains no trace of these rough origins or its fiery transformation. Where sand is coarse and abrasive, almost virulent in its capacity to spread itself over and cling to surfaces, glass is, Walter Benjamin writes, "a hard, smooth material to which nothing can be fixed. A cold and sober material into the bargain", clear and

[16] Armstrong, p. 1; Le Corbusier, "Glass, The Fundamental Material of Modern Architecture" [1935] ed. by Tim Benton, trans. by Paul Stirton, *West 86th: A Journal of Decorative Arts, Design History, and Material Culture*, 19.2 (2012), 282–308 (p. 297) <http://www.jstor.org/stable/10.1086/668064> [accessed 3 June 2016].

[17] Armstrong, p. 6, with quotations from John Claudius Loudon, *Remarks on the Construction of Hothouses* (London: J. Taylor, 1817), p. 49.

refined.[18] "Objects made of glass", Benjamin concludes, "have no 'aura'", as glass offers no signs of its experiential materiality, no visible clues to "the essence of all that is transmissible from its beginning, ranging from its substantive duration to its testimony to the history which it has experienced."[19] Glass, then, as Maurizia Boscagli observes, is "the perfect material for a functionalist modernity which claims" – and aims – "to abstract matter [...] into a smooth nothingness".[20] Glass turns rough matter, without trace, into a sheer delight.

In her 1920 tale of thingly infatuation, "Solid Objects", Virginia Woolf explores this wondrous materiality of glass. Woolf's story begins on a beach, with her central character, John, idly toying with the sand, when his fingers curl "round something hard – a full drop of solid matter".[21] Pulling his find to the surface, and wiping off "the sand coating", the "solid matter" is revealed as "a lump of glass, so thick as to be almost opaque".[22] Glass, here, is presented as thoroughly magical matter, pulled pure and perfectly formed by a human hand from the "useless debris" of nature. As John examines his find, this glass "drop" appears as a "hard, smooth material to which nothing" – no traceable material history – "can be fixed": "the smoothing of the sea

[18] Walter Benjamin, *Selected Writings: 1927-1934*, ed. by Michael W. Jennings, Howard Eiland, and Gary Smith, trans. by Rodney Livingstone, and others, 4 vols. (Cambridge, MA and London: Belknap Press of Harvard University, 1999), II, p. 734.

[19] Benjamin, II, p. 734; This is just one of many conceptualisations of "aura" that appears in Benjamin's work. As Miriam Bratu Hansen argues, "Anything but a clearly delimited, stable concept, aura describes a cluster of meanings and relations that appear in Benjamin's writings in various configurations" (p. 339). See Miriam Bratu Hansen, "Benjamin's Aura", *Critical Inquiry*, 34.2, 336–75 <http://www.jstor.org/stable/10.1086/529060> [accessed 5 May 2016].

[20] Maurizia Boscagli, *Stuff Theory: Everyday Objects, Radical Materialism* (New York and London: Bloomsbury, 2014), p. 158.

[21] Virginia Woolf, "Solid Objects", in *A Haunted House and Other Stories* [1944] (Middlesex: Penguin Books Ltd., 1973), pp. 85–92 (p. 86). Critical readings of Woolf's story often focus on the collection John amasses after his initial find, rather than on the specific properties of the initial, glassy find itself. The critical consensus seems to be, as Beci Carver writes, that although "the specific discovery of an 'irregular lump' of glass is insisted upon", "any specific discovery would have served just as well as an incentive for obsession." For Peter Schwenger and Bill Brown, John's obsession with object collection stems not from this initial materiality of glass, but from the status of the objects more generally as outside the economic system. While Schwenger emphasises the objects' lack of functionality as the source of their appeal, for Brown, it is the postwar climate of material scarcity in which Woolf's story is set that fuels John's infatuation with broken, scavenged things. For me, however, Woolf's story hones in on the specific and quixotic materiality of glass itself, not least through John's obsession with seeking other objects to explain or unlock the mysterious origins of his original find. See Beci Carver, *Granular Modernism* (Oxford: Oxford University Press, 2014), pp. 19–20; Peter Schwenger, *The Tears of Things: Melancholy and Physical Objects* (Minneapolis, MN and London: University of Minnesota Press, 2006), pp. 82–83; Bill Brown, *Other Things* (Chicago, IL & London: University of Chicago Press, 2015), pp. 49–77.

[22] Woolf, p. 86.

had completely worn off any edge or shape, so that it was impossible to say whether it had been bottle, tumbler or window pane; it was nothing but glass; it was almost a precious stone."[23] The impervious glass object resists interpretation, and its lack of definable "aura" allows the object to participate in the wildly exotic material histories of John's imagination:

> Perhaps after all it really was a gem; something worn by a dark Princess trailing her finger in the water as she sat in the stern of the boat and listened to the slaves singing as they rowed her across the Bay. Or the oak sides of a sunk Elizabethan treasure-chest had split apart, and, rolled over and over, over and over, its emeralds had come at last to shore [...] It pleased him; it puzzled him; it was so hard, so concentrated, so definite an object compared with the vague sea and the hazy shore.[24]

As he tries to ground his glass in a specific cultural history, John's fantastic speculations lead him everywhere and nowhere: the glass object opens up endless imaginative possibilities but offers no real prospect of answers. Glass is a flight of fancy, a puzzling, aesthetic delight.

John's immediate association of glass with the far-flung and unknowable harks back to a nineteenth-century discourse of glazed wonder. With the refinement of glassmaking techniques throughout the nineteenth-century, glass moved from being a "transparent media" – something to be looked through; something instrumental – and became something to be looked *at*; vital, glittering evidence of our human mastery of natural, nonhuman matter.[25] The apex of these Victorian glassworlds was the Crystal Palace. Visitors to the Great Exhibition of 1851 marvelled at the vast glass construction, with its immense glass roof and displays of shimmering spectacle tiered upon shimmering spectacle: mirrors and chandeliers and decorative glass; diamonds, and glass cut to look like diamonds; a 27-foot-high glass fountain decorated with "vitreous shells and crustacea".[26] In America, too, glass became a source of modern wonder. At the 1893 World's Columbian Exposition in Chicago, there were "more than seventy glass exhibits"; although most were housed in the Manufactures and Liberal Arts Building, the Libbey Glass Company gambled on the

[23] Benjamin, II, p. 734; Woolf, p. 86.
[24] Woolf, pp. 86–87.
[25] Andrew H. Miller, *Novels Behind Glass: Commodity Culture and Victorian Narrative* (Cambridge: Cambridge University Press, 1995), p. 2.
[26] Armstrong, p. 1. For a detailed account of the glass on display at the Exhibition and contemporary reactions, see pp. 222-250.

lure of glass and built its own pavilion to showcase its wares.[27] The exhibit, Charles L. Venable notes, "was wildly successful for both cut glass and Libbey" alike.[28]

For spectators, these feats of modern glasswork were nothing short of wondrous. Glass objects, from arcades to decanters, chandeliers to looking-glasses, were draped, repeatedly, reverently, in a language of exotic mysticism, much like John's glass gem. As Armstrong observes, the Crystal Palace was depicted in contemporary journalism as a fantasy lifted from the pages of a fairy tale "and superimposed on the terrestrial landscape".[29] The enormous glass structure, for critics and celebrants alike, was conceptualised as "an Arabian Nights structure, full of light, and with a certain airy insubstantial character about it which belongs more to [an] enchanted land than to this gross material world of ours".[30] By turns, the Crystal Palace was a "splendid phantasm" and a world of the "monster window"; a "sea of glass" and a place "where all materiality is blended into the atmosphere"; a structure by turns solid, then liquid; unsettling and ephemeral.[31] Even though John's "solid object" never threatens to disappear into the same sheer immateriality which surrounds the Crystal Palace, his lump of glass remains fundamentally unfathomable, and he too turns to allusion and metaphor in increasingly desperate attempts to account for its lack of "aura":

> John found himself attracted to the windows of curiosity shops when he was out walking, merely because he saw something which reminded him of the lump of glass. Anything, so long as it was an object of some kind, more or less round, perhaps with a dying flame deep sunk in its mass, anything – china, glass, amber, rock, marble – even the smooth oval egg of a prehistoric bird would do.[32]

As the initial glass object refuses to disclose "its testimony to the history which it has experienced", John turns to other matter, desperately trying to assemble an origins story by amassing things which resemble his first, "cold and sober" find.[33]

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[27] Charles L. Venable and others, *China and Glass in America 1880-1980: From Tabletop to TV Tray* (New York, NY: Dallas Museum of Art and Harry N. Abrams, Inc., 2000), p. 159.
[28] Venable and others, p. 159.
[29] Armstrong, p. 142.
[30] *The Times* (London), 15 January 1851, quoted in Armstrong, p. 117.
[31] *The Times* (London), 15 January 1851, quoted in Armstrong, p. 117; *The Illustrated London News*, 18 January 1851, p. 42, quoted in Armstrong, p. 146; Lothar Bucher, *Literaturhistorische Skizzen aus der Industrieausstellung Aller Völker* (Frankfurt: Lizius, 1851), pp. 10–11, quoted in Armstrong, p. 152.
[32] Woolf, p. 88.
[33] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction", in *Illuminations* [1968] ed. by Hannah Arendt, trans. by Harry Zohn (New York, NY: Schocken Books, 2007), pp. 217–52 (p. 221).

These subsequent scavenged items are more forthcoming about their material histories: John discovers shards of china, fractured by the "conjunction" of "a very high house, and a woman of such reckless impulse [...] that she flings her jar or pot straight from the window without thought of who is below"; a "remarkable piece of iron [...] almost identical with the glass in shape" that "was evidently alien to the earth and had its origin in one of the dead stars or was itself the cinder of a moon".[34] Yet, even as his collection grows, John gets no closer to unlocking the mysteries his first glass object contains:

> the china so vivid and alert, and the glass so mute and contemplative, fascinated him, and wondering and amazed he asked himself how the two came to exist in the same world, let alone to stand upon the same narrow strip of marble in the same room. The question remained unanswered.[35]

As Woolf's story indicates, the wonder of glass endured well into the opening decades of the twentieth century, even after the material traces of the Herculean human efforts involved in its manufacture – the "small blemishes, blisters, almost invisible striae, spectral undulations" found in hand-blown, "breath-created glass" – were erased in the transition to automated production.[36] In his 1914 treatise on *Glasarchitektur*, for example, Paul Scheerbart describes glass as "lustrous", "mystical," and "noble", and characterises the material as powerfully affective, asserting that "glass architecture will [...] improve mankind in ethical respects", as "the man who sees the splendours of glass every day cannot have ignoble hands".[37]

The nineteenth century mysticism surrounding the affective capacities of glass develops, in the early twentieth century, into to a vision of modern, utopian living, as the magical properties of glass become allied to ideas of openness and harmony. Writing in 1935, the architect Le Corbusier predicts that glass – "a characteristic feature of building in the new machine age" – will play a vital role in "restoring mankind to a harmonious relationship with nature, and with the human

[34] Woolf, p. 90.
[35] Woolf, p. 89.
[36] Armstrong, p. 4. As Armstrong notes, "Most glass in the nineteenth century was blown by human breath [...] Four out of the six types of nineteenth-century glass depended on exhalations from the glassworker's lungs acting on molten glass from the furnace [...] The prefabricated panels of the Crystal Palace in 1851 were made up of 956,000 square feet of such breath-created glass."
[37] Paul Scheerbart, *Glass Architecture* [1914] ed. by Dennis Sharp, trans. by James Palmes (New York, NY and Washington, D.C.: Praeger Publishers, 1972), p. 63.

and the cosmic".[38] Scheerbart, too, builds his vision of a modern utopia on a foundation of glass:

> The face of the earth would be much altered if brick architecture were ousted everywhere by glass architecture. It would be as if the earth were adorned with sparkling jewels and enamels. Such glory is unimaginable. All over the world it would be as splendid as in the gardens of the Arabian Nights. We should then have a paradise on earth, and no need to watch in longing expectation for the paradise in heaven.[39]

These ideal modernities, waiting to be realised by the new architectures of the twentieth century, position glass as something more than a mere material. In the visions of Le Corbusier, Scheerbart, and Hannes Meyer alike, glass simultaneously symbolises and instils a sense of "total openness" within society.[40]

For Benjamin, glass is the ideal solution to the problems presented by the nineteenth century domestic interior. Over-ornamented and overwrought, filled with "gigantic sideboards distended with carvings", "sunless corners where palms stand", and balconies "embattled behind balustrade[s]", the interior for Benjamin, as for many contemporary commentators, is stifling, isolating, and deadening, a "spider's web, in whose toils world events hang loosely suspended like so many insect bodies sucked dry"; a site which "fittingly houses only the corpse".[41] Glass, however, can alleviate the burdens of these interiors by allowing the inhabitants to lead traceless lives. Benjamin conceptualises glass as both "the enemy of secrets" and "the enemy of possession", a material which refuses to absorb and contain the personality of those who occupy its spaces.[42] Where the "ornaments on the mantelpiece, the antimacassars on the armchairs, the transparencies on the windows" that characterise bourgeois nineteenth-century interiors work to build an enclosed domestic world comprised of endless traces, glass, in contrast, is impervious to such signs, creating a domestic interior that is "completely indifferent to the life of its inhabitants".[43] Glass, for

[38] Le Corbusier, p. 292.
[39] Scheerbart, pp. 41, 45.
[40] Armstrong, p. 161.
[41] Walter Benjamin, *The Arcades Project*, trans. by Howard Eiland and Kevin McLaughlin (Cambridge, MA, and London: Belknap Press of Harvard University Press, 2002), pp. 216, [I6]; Walter Benjamin, "One-Way Street" [1933] in *One-Way Street and Other Writings*, trans. by Edmund Jephcott and Kingsley Shorter (London: NLB, 1979), pp. 45–104 (pp. 48–49).
[42] Benjamin, II, p. 734.
[43] Benjamin, II, p. 734; Pier Vittorio Aureli, "The Theology of Tabula Rasa: Walter Benjamin and Architecture in The Age of Precarity", *Log*, 2013, 111–27 (p. 116) 27

Benjamin, as Pier Vittorio Aureli argues, frees us "from the burden of personal identity" and allows us "to always start [our] daily experience afresh".[44] Rather than turning our attentions increasingly inward, in rooms that bear traces of only our own tastes and worst habits, glass denies these traces, much as it denies the traces of its own coarse material origins. Through this refusal of trace, then, glass forces us to look outward, to the social world beyond. Glass collapses the boundaries between interior and exterior, with its pure transparency and "invisible transitivity", allowing people to escape the confines of their individual experiences and "fully engage" with both "collective life" and the natural world.[45]

Advertising Immateriality

Beneath the wondrous public spectacles and glazed visions of harmonious living, however, glass was also taking on a more mundane role around the turn of the century, situating itself at the heart of the modern home. In the late-nineteenth century, as Venable describes, the delicate luxury of glassware appealed to America's emergent middle and upper-middle classes who "clamored for fancy cut, engraved, and blown wares, designed, produced, and marketed to satisfy their taste for opulence".[46] As glass-making technology developed, however, glass became more affordable than ever before. Around the turn of the century, the manufacturing process shifted away from the glass-pressing technology of the early nineteenth century – which in turn reduced the traditional processes of blowing and then cutting glass into a single action, as molten glass was blown into a shaped metal mould – and towards the introduction of tank furnaces which provided a continuous supply of molten glass, and "linear annealing lehrs (long conveyor ovens that reduced the temperature of glass slowly in order to stabilize it)".[47] By the 1880s, Venable estimates, around half of the American population, "could afford at least some" of these "middle-class 'decencies' and 'luxuries'", and after 1900, "inexpensive glass [...] was pressed entirely with patterns

<http://www.jstor.org/stable/41765790> [accessed 5 June 2016].

[44] Aureli, p. 116.

[45] Armstrong, p. 161; Aureli, p. 122.

[46] Venable and others, p. 157.

[47] Venable and others, pp. 114, 157.

that closely imitated rich cut glass".[48] Although this glass was "far inferior" to the high-end product, these cheaper, mass-produced pretenders came to dominate the American glassware market.[49] By the 1930s, the Jeannette Glass Company "turned out 50 tons of glass a day using continuous-melt tanks, mold and block cooling equipment, advanced polishing methods, and automatic lehrs"; during the Depression, the *Ceramic and Glass Journal* recorded, "Kitchen glass, glass dinnerware, stemware, tumblers, and decorative glass pieces" could be purchased at chain stores for "5¢, 10¢, or 20¢", or acquired free of charge as part of a promotion.[50] Whether functional or luxurious, brilliant-cut or factory-pressed, by the early twentieth century, glass was firmly established as part of the praxis of everyday life.

Margaret Watkins's still life photography showcases the extremes of the role of glass in the early-twentieth century domestic. In her characteristically cool, compositionally abstract advertising photography, Watkins presents glass as immaculate matter, resplendent with light and glittering with luxury. In her artistic still lifes, however, Watkins refuses to allow the ordinary things of her domestic space to succumb to such tantalising displays of desire. While her commercial photography was consistently in demand throughout the 1920s – with Watkins sought out by Macy's, Phenix Cheese, Johnson & Johnson, Woodbury's Soap, and Cutex, among others, to transform their everyday wares into "objects of desire" – Watkins's artistic still lifes confounded the art world with their combination of avant-garde abstraction and an unflinching refusal to sanitise and thoroughly aestheticise the objects of the domestic space.[51] The result, as one contemporary reviewer put it, are images that simultaneously serve as "a record of slovenly housekeeping" and "an exemplar of splendid technique"; a body of work in which glass dazzles and teases with modern

[48] Venable and others, pp. 21, 159.
[49] Venable and others, p. 159.
[50] Venable and others, p. 167; Jack Olsen, "Five and Ten Cent Glass Dinnerware Business", *Ceramics and Glass Journal*, 112.1 (1933), p. 17, quoted in Venable and others, p. 66; P. Bradley Nutting, "Selling Elegant Glassware during the Great Depression: A. H. Heisey & Company and the New Deal", *The Business History Review*, 77.3 (2003), 447–78 (p. 447) <https://www.jstor.org/stable/30041186> [accessed 22 May 2016].
[51] I take this phrase from both Adrian Forty, *Objects of Desire: Design and Society Since 1750* (London: Thames and Hudson, 1992) and Margit Rowell, *Objects of Desire: The Modern Still Life* (New York, NY: Museum of Modern Art, 1997).

promises of transcendent immateriality, but also attests to its own status as thoroughly mundane matter.[52]

Margaret Watkins is best known, when she is known at all, for her work as an advertising photographer in New York in the 1920s, as a "formidable" instructor at the Clarence White School of photography in the 1910s and 1920s, and for her investment in a pictorial aesthetic which, in accounts of modern photography, is often dismissed as outmoded, and consequently overlooked.[53] For all the consternation her artistic offerings caused contemporary commentators, her work is seldom mentioned in accounts of modern photography: as Joseph Mulholland notes, for nearly fifty years "Watkins did not merit even a footnote".[54] Recent published accounts of Watkins's life and work, such as Mary O'Connor and Katherine Tweedie's *Seduced by Modernity* and Lori Pauli's *Domestic Symphonies*, attribute her previous lack of critical recognition to personal circumstance. After an emotionally-draining legal dispute with Clarence White's widow in 1926 over ownership of his works, Watkins left New York in 1928 for a European vacation.[55] Upon her arrival in Glasgow, however, Watkins discovered her elderly, ailing, maternal aunts living in appalling conditions, unable to cope on their own. As the lone unmarried female relative in the family, it fell to Watkins to look after her aunts. Although Watkins continued to photograph and exhibit in the 1930s – her subjects included the reconstruction of Stalinist Moscow and the 1931 International Colonial Exhibition in Paris – she gradually withdrew from the world of photography. As O'Connor and Tweedie write, what was ostensibly a four-month holiday turned into "forty years of exile", from America and the art world alike.[56]

Despite her prolonged physical absence and critical omission from the realm of modern photography, Watkins's work offers a vital insight into the divergent experiences of the early twentieth century domestic, capturing both the shimmering, idealised visions, and the baser, more brutish, reality. The succession of still lifes

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[52] Sigismund Blumann, "Howling the Critic Down", *Camera Craft*, 29 (1922), 568–72 (p. 570), quoted in Mary O'Connor and Katherine Tweedie, *Seduced by Modernity: The Photography of Margaret Watkins* (Montreal and London: McGill-Queen's University Press, 2007), p. 105.

[53] Lori Pauli, *Margaret Watkins: Domestic Symphonies* (Ottawa: National Gallery of Canada, 2012), p. 12.

[54] Joseph Mulholland, 'Preface', in O'Connor and Tweedie, pp. xvii–xx, (p. xix, xx). Mulholland, Watkins's neighbour, describes his encounters with Watkins in Glasgow in the 1960s, and details his efforts to bring her work to wider critical attention in his "Preface".

[55] For a thorough account of the Clarence White dispute, see O'Connor and Tweedie, pp. 158–163.

[56] O'Connor and Tweedie, pp. 165–166.

Watkins created in 1919 inside her apartment in Greenwich Village, New York, offer, as O'Connor and Tweedie describe, "sensuousness, aesthetic beauty, and a sense of being 'at home'": the material things of *Still Life – Bath Tub*, *Still Life – Shower Hose*, *The Kitchen Sink*, and *Domestic Symphony* are mired in signs of use; edges worn, fabric frayed, metal tarnished, glass dirty.[57] Although, for O'Connor and Tweedie, Watkins's advertising photography translates the objects of the domestic interior into "commodities that might promise such fulfilment" by offering a similar sense of "being 'at home'", her commercial work is much more strongly aligned with a heavily sanitized, thoroughly aestheticised vision of the modern domestic that began to emerge in housekeeping literature, magazines, journals, and department stores in the opening decades of the twentieth century.[58] Despite Watkins's private declaration that "Living is a most vital and untidy business", and her corresponding dismissal of such a tightly-controlled vision of the modern home – "I don't want it all slicked up and streamlined and illuminated like some Housing and Home Exhibition" – Watkins's commercial glassware studies deny any possible trace of the vital messiness of everyday life, advertising instead a spectacular immateriality.[59]

In *Ellipse & Triangle* (1924-1928) [Fig. 4.1], for example, a glassware study undertaken for Macy's, Watkins aligns her ordinary, domestic objects with the glittering legacy of the wondrous magic of Victorian glassworlds. Here, "Substantial (usable) objects disappear" as Watkins transforms three glasses and a plate into radiant geometric forms: all angles, shine, and visual delight.[60] Through the angle of the shot and her positioning of bright, artificial light, Watkins collapses the three-dimensional forms of the glassware into two-dimensional shapes, offering not objects, but "a coliseum shape created entirely out of light rays: radiating lines, triangles, and arches".[61] The bowls of the glasses all but vanish, their transparent forms only distinguishable from the plain, horizonless background through scant hints of fractionally darker shadow. The plate, standing vertically between the three glasses, also disappears. All that remains of these objects are their outlines, the pure geometry of the dark circular rim and base. The transparency of glass, then, evacuates all sense

[57] O'Connor and Tweedie, p. 130.
[58] O'Connor and Tweedie, p. 130.
[59] Margaret Watkins, "Notes", Margaret Watkins Fonds, William Ready Division of Archives and Research Collections, Mills Memorial Library, McMaster University, Hamilton, Ontario, quoted in O'Connor and Tweedie, p. 10.
[60] O'Connor and Tweedie, p. 148.
[61] O'Connor and Tweedie, p. 148.

of potentially-troubling interiority from these objects. As the forms of tangible things and object interiority disappear in *Ellipse & Triangle*, however, glass itself sparks into life. Glittering refractions of light and shadow spill out in kaleidoscopic radiations: the circular forms of the glasses' bowls stream outward as their ridged detail casts an ornate net of radial lines of light woven between pools of shadow. Everything is clear and everything glistens: as O'Connor and Tweedie conclude, "With the medium of photography, Watkins's subject is not usable glassware. It is light."[62]

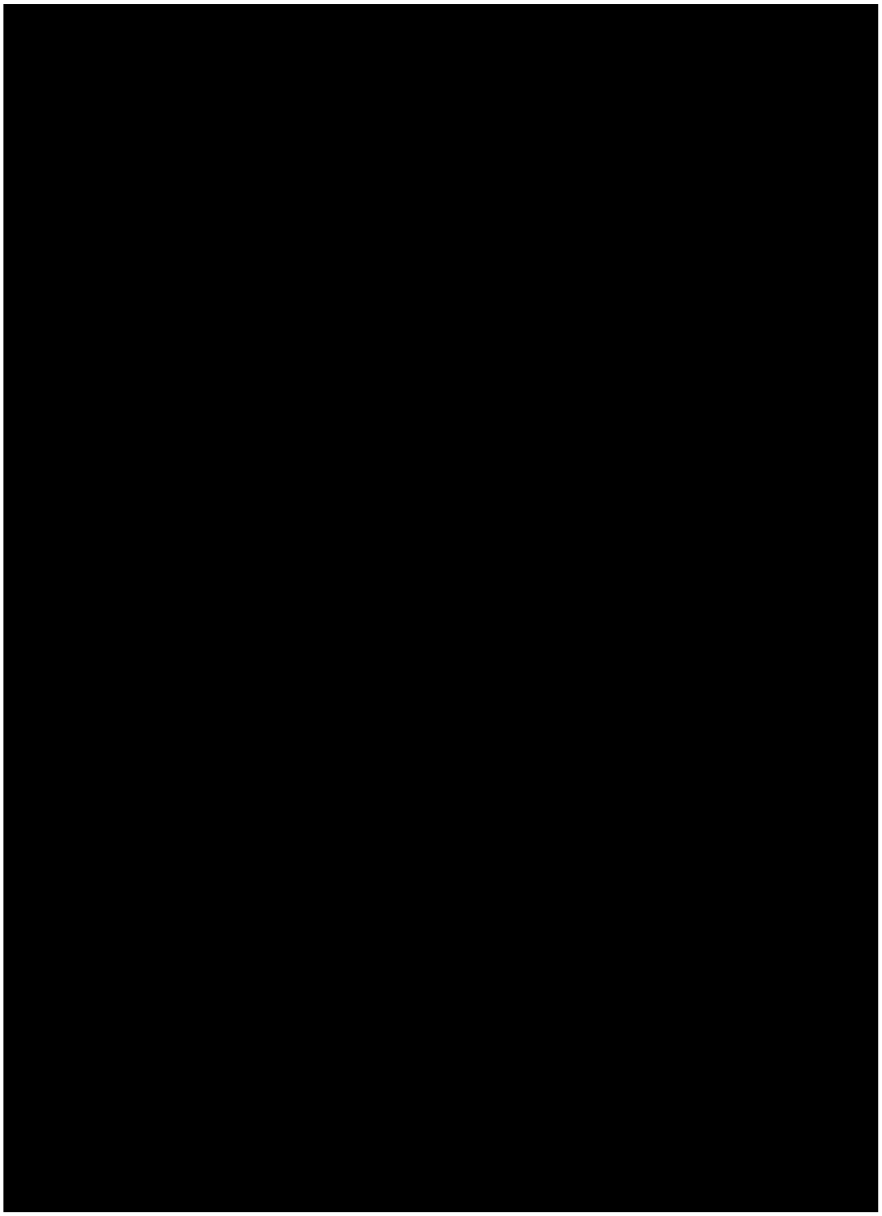

Fig. 4.1 Margaret Watkins, *Ellipse & Triangle,* glassware study for Macy's advertisement, 1924-1928. 21.0 x 16.1 cm (8 ¼ x 6 $^{5}/_{16}$ in.). Joseph Mulholland Collection.

[62] O'Connor and Tweedie, p. 149.

Writing on a later still life by Albert Renger-Patzsch [Fig. 4.2], a photograph also used as an advertisement, Boscagli identifies a similar image-effect:

> In their algid isolation, detached from any story or history, the laboratory glass vessels announce themselves as Things, unproductive materiality consumable primarily as spectacle [...] No tactility is possible here: these are absolute objects that can be accessed only visually, only at a distance [...] Any memory of their use is coolly superseded by the radiance of their image. Their everydayness washed out, their use value erased, the lab glasses have become hyperobjects of beauty[.][63]

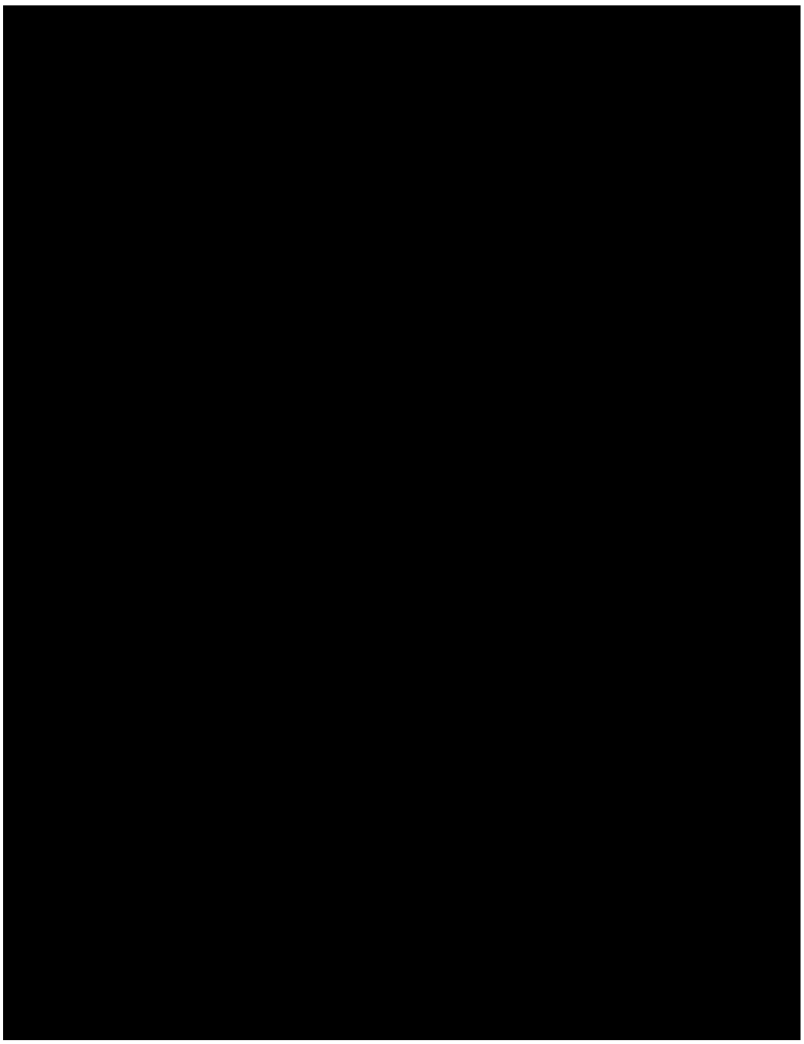

Fig. 4.2 Albert Renger-Patzsch, *Laboratory Glasses, Schott Glassworks, Jena, 1934*, ca. 1936. Photographic print.

Emphasising the spectacular transparency of these glass objects, situated in a wholly isolated, thoroughly decontextualized space of dazzling illumination, Watkins, like Renger-Patzsch, presents this glassware not as an assemblage of useful objects, but

[63] Boscagli, pp. 6–8.

as an array of idealised, untouchable things. This glassware is "not real, but fictive," presented and seen "through a distorting lens"; impossibly pure in its forms, impossibly intangible in its matter.[64]

There is no sense that Watkins's glasses should – or even could – be touched or handled, let alone drunk from; no suggestion that this immaculate matter is shaped to operate at the messy boundary between our bodily interior and our material reliance on the external world. In a smooth progression of the public glassworlds of the nineteenth century where, as Benjamin indicates, glass is used to "create a framework in which [the commodity's] use value becomes secondary", characterized by a profound emphasis on visual consumption and spectacular delight, rather than physical contact or tactile usage – "Do not touch the items on display" – Watkins's advertising photography collapses the physical barrier – glass – and the untouchable commodity – glassware – into one another.[65] In her still life, Watkins advertises not objects, but effect; not functional things, but "the drive or pulsion of desire".[66]

Further, by detaching these useful things from any suggestion of their use value, Watkins allows us to similarly separate *ourselves* from the mundane world of material reality and enter a realm of transcendent escapism. In his analysis of the genre of still life, Norman Bryson argues that the object-oriented focus of the genre "assaults the centrality, value and prestige of the human subject", and "expels the values which human presence imposes on the world".[67] In pitching "itself at a level of material existence where nothing exceptional occurs" and reiterating our thorough dependence on the material world by representing elements of our "routine existence, centred on food and eating", such as food stuffs, drinking vessels, cutlery, crockery, tableware, Bryson argues, still life abolishes "the subject's access to *distinction*".[68] No matter how hard we strive for subjective transcendence – a denial of our own vibrant materiality and an affirmation of human difference from the material world – in Bryson's reading, the art of still life serves to reminds us that human existence can always be brought back down to the base realm of our physical, bodily requirements.

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[64] Rowell, p. 10.
[65] Walter Benjamin, "Paris, Capital of the Nineteenth Century" [1939] in *The Arcades Project*, trans. by Howard Eiland and Kevin McLaughlin (Cambridge, MA and London: Belknap Press of Harvard University Press, 2002), pp. 14–26 (p. 18).
[66] Rowell, p. 10.
[67] Norman Bryson, *Looking at the Overlooked: Four Essays on Still Life Painting* (London: Reaktion Books, 1990), p. 60.
[68] Bryson, pp. 60–61, emphasis in original.

By separating form from function in *Ellipse & Triangle*, however, Watkins elides any suggestion of our human contingency to the material world. Where, as O'Connor and Tweedie note, advertising used to showcase things in action to help collapse the imaginative distance between products on the page and products welcomed into the home, in *Ellipse & Triangle* "there [are] no place settings and no reference to sitting down to consume something from these glasses"; there are no possible signs of our physical dependence on the material world presented within this image.[69] Rather than bringing us back down to the base realm of our bodily requirements, Watkins's image lifts us up to a transcendent realm, where form and function, materiality and daily life, are no longer messily entangled, but easily and willingly set apart.

Traceless Living

In *Ellipse & Triangle*, then, Watkins performs what is, in effect, a magic trick: she makes objects disappear in a play of light. She toys with the clarity and radiance of glass to allow these desirable things to enact a denial of both their own, and our own, materiality. The glassware offers no sign of its coarse material origins, no traces of use or flaws. Glass, here, is impervious, immaculate; cool, even clinical in its distance from the desiring spectator. *Ellipse & Triangle* fosters an idealised, aestheticised vision of things in the domestic space, centred on containing and erasing all possible traces of messy, material reality. In short, in *Ellipse & Triangle* glass sells an image of the truly modern home.

As critical perspectives on the home turned against the impassioned eclecticism which characterised the nineteenth-century interior, a vision of the domestic as a coolly rational, efficiently designed space began to eclipse the earlier fervour. Feverish quests for hygiene sparked by the spread of germ theory led to a "cleaning craze" at the end of the nineteenth century; "in the early twentieth century," Boel Berner notes, this was countered with "a more 'rational' or 'professional' image of the housewife's role".[70] In 1909, as Suellen Hoy describes, "home economics became

[69] O'Connor and Tweedie, p. 148.
[70] Boel Berner, "The Meaning of Cleaning: The Creation of Harmony and Hygiene in the Home", *History and Technology: An International Journal*, 14.4 (1998), 313–52 (p. 315) <http://dx.doi.org/10.1080/07341519808581936> [accessed 12 June 2014].

a full-fledged profession with the funding of a national association [...] In 1917 the federal Smith-Hughes Act subsidized programs to train girls and women as home makers, and by 1920 over thirty states had initiated home economics courses in their public schools."[71] Professional home economists like Ellen Swallow Richards, Lillian Gilbreth, and Christine Frederick translated the principles of scientific management and efficiency espoused by Taylorism into the domestic, providing detailed movement analyses and action schematics to facilitate the elimination of unnecessary movement through the rationalisation of kitchen processes.[72] This ethos of domestic professionalism was a recurrent theme in popular magazines too. Promising "Dish Washing Made Easy" in 1913, for example, *Good Housekeeping* instructed readers to treat washing up as a scholarly enterprise: "We should study to avoid unnecessary motions, – not to cross hands to handle the dishes too many times."[73]

This turn towards the scientific management of the home – which saw the "housewife" or "housekeeper" rebranded as "the home-maker", "home manager," or "family G. P. A." (general purchasing agent) – was echoed in presentations of the domestic interior itself.[74] In the opening decades of the twentieth-century, the fixtures, features, and fittings of the home acquired what Ellen Lupton and J. Abbott Miller describe as "a vigorous new physique".[75] The "plush fabrics, carved moldings, and intricate decorations," of the nineteenth century, Lupton and Miller write, "were rejected as dangerous breeding grounds for germs and dust, giving way to non-porous materials, flush surfaces, and rounded edges".[76] The ideal for modern living became a traceless existence, where the domestic displayed as little signs of having been lived-in as possible. In her analysis of *The Modern Interior*, for example, Penny Sparke

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[71] Suellen Hoy, *Chasing Dirt: The American Pursuit of Cleanliness* (Oxford: Oxford University Press, 1995), p. 154.

[72] See Hoy, p. 153, for discussion of Richards; Laurel D. Graham, "Domesticating Efficiency: Lillian Gilbreth's Scientific Management of Homemakers, 1924-1930", *Signs*, 24.3 (1999), 633–75 <https://www.jstor.org/stable/3175321> [accessed 25 July 2014]; for discussion of Gilbreth, and Ellen Lupton and J. Abbott Miller, *The Bathroom, The Kitchen, and The Aesthetics of Waste: A Process of Elimination* (Cambridge, MA: MIT List Visual Arts Center, 1992), pp. 41–50, for discussion of Frederick.

[73] Anna Barrows, "Dish Washing Made Easy", *Good Housekeeping* (June 1913), p. 828, *Home Economics Archive: Research, Tradition and History* (*HEARTH*) (Ithaca, NY: Albert R. Mann Library, Cornell University) <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=6417403_1342_006>.

[74] Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley, CA and London: University of California Press, 1985), p. 168.

[75] Benjamin, II, p. 734; Lupton and Abbott Miller, p. 2.

[76] Lupton and Abbott Miller, p. 2.

describes how "Model domestic interiors were presented as static images and spaces, complete with puffed-up cushions", presenting ideal visions of the home as completely removed from all signs of use.[77] "By the end of the 1920s," Sparke continues, "the furniture sections of American department stores [...] had begun to display complete modern room sets, sometimes in partnership with museums", as "Real lives [...] were replaced by the modern, mass media-dependent notion of 'lifestyles', the idealized version, that is, of the lives people actually lead."[78] For all that living is, unavoidably, "a most vital and untidy business", then, twentieth-century modernity was determined to make everyday life as "slicked up and streamlined and illuminated" as possible.[79]

Glass, with its transparency, its non-porousness, and its refined stability, became the ideal material for this gleaming model of domestic living. Where, Scheerbart argues, "Brick decays," meaning the air in "the cellars of brick houses [...] is always full of brick bacilli", "glass architecture needs no cellars beneath it", thereby eradicating the threat of a home built on an airborne flotilla of germs.[80] Where the furiously busy, homely interiors of the nineteenth century are over-burdened with signs of human life – "there is no spot," Benjamin grouses, "on which the owner has not left his mark" – glass, in contrast, creates "rooms in which it is hard to leave traces".[81] The optimistic visions for open, traceless living centred on glass, espoused by Benjamin, Scheerbart, and Le Corbusier alike, are founded on the act of self-erasure which glass performs. Glass is conceived of not as a solid, defining boundary, a rigid mass that admits light and heat but no physical matter, but as a medium of total openness and unrestricted freedom. In the early twentieth century, the transparency of glass, "eliding inside and outside", Armstrong argues, promises "absolute clarity".[82] As Boscagli concludes, the "transparency of glass means it has an insidious claim not to be there, and rather purports to enhance and assure a transparent access to the real".[83]

[77] Penny Sparke, *The Modern Interior* (London: Reaktion Books, 2008), p. 57.
[78] Sparke, pp. 57, 62–63.
[79] Watkins, quoted in O'Connor and Tweedie, p. 10.
[80] Scheerbart, p. 67.
[81] Benjamin, II, p. 734.
[82] Armstrong, pp. 161, 116.
[83] Boscagli, p. 158.

In *Ellipse & Triangle*, however, Watkins exploits the supposed openness, the "invisible transitivity of glass", in order to sell us a seductive fiction.[84] Watkins teases us with an image of the grace of transcendent immateriality. As the three-dimensional objects of her still life collapse into two-dimensional forms, we are offered total access to the things laid out before us. The glassware might be out of reach, but its pellucid forms offer no visual resistance: we can map its forms and contours, geometries and angles. Here, Watkins allows us to *see through matter*, as all distinctions of object interior and exterior collapse into a play of light. In *Ellipse & Triangle*, then, we experience the object world as "a spectacle spread out before us at a distance", wholly contained within the purview of our visual perception.[85] All the restrictions of point of view caused by our physical embodiment – being able to see only certain aspects of objects; perceiving objects as overlapping, occluding each other from sight – are, here, overcome.[86] We are no longer contained in a restrictive, embodied point of view. Instead, we have "the illusion of being immediately present everywhere and being situated nowhere" in Watkins's world of dazzling light.[87] Watkins's photograph doesn't just allow us to forget our messy, material dependency on the nonhuman world – our "routine existence, centred on food and eating" – but also invites us to shrug off the limitations of our own lumpen materiality: she lets us "forget […] that it is through [our] body that [we] go to the world"; and permits us, finally, to become truly modern, truly traceless.[88] Like glass itself, however, these promises of transcendent immateriality and traceless living are curiously fragile. They can be broken, as Watkins's still lifes also demonstrate, by the assertive materiality of glass.

[84] Armstrong, p. 161.
[85] Maurice Merleau-Ponty, *Phenomenology of Perception* [1945] trans. by Colin Smith (London and New York, NY: Routledge, 2005), p. 369.
[86] Maurice Merleau-Ponty argues that the effect of depth is produced in our visual perception by the overlapping of objects; this overlapping exists, however, only from the perspective of our embodied observation, not in reality. In short: we see overlapping objects and understand this overlapping to be a product of the relative positions of objects in front or behind one another, but the objects themselves remain physically apart – at no point do they actually overlap. Merleau-Ponty concludes that depth "quite clearly belongs to the perspective" of the embodied observer, "and not to things" themselves. See Merleau-Ponty, pp. 298–299; My reading of Merleau-Ponty's exploration of depth is indebted to Hanneke Grootenboer, *The Rhetoric of Perspective: Realism and Illusionism in Seventeenth-Century Dutch Still-Life Painting* (Chicago, IL and London: University of Chicago Press, 2005), pp. 36–38.
[87] Merleau-Ponty, p. 369.
[88] Bryson, pp. 60–61, emphasis in original; Merleau-Ponty, p. 369.

Tangible Matter

On the surface, another untitled glassware study from 1928 [Fig. 4.3] appears much like its sibling, *Ellipse & Triangle.* Here, reflections and refractions once again dazzle, "plates warp and dissolve", and, as O'Connor and Tweedie describe, even the table the glassware poses on "loses its solidity, picking up the undulating shapes of double and triple refractions".[89] Once again, it seems, Watkins's still life offers us sheer immateriality and transcendence, promising us a traceless, modern life "through effect and pure sign".[90]

Fig. 4.3 Margaret Watkins, *Untitled* (glass bowls & glasses), ca. 1928. Vintage palladium print, 16.2 x 21.4 cm (6 $^{3}/_{8}$ x 8 $^{7}/_{16}$ in.). Robert Mann Gallery, New York, NY.

In this photograph, as in *Ellipse & Triangle*, Watkins once again focuses on the interplay of glass and light. In both images, the glints and glimmers that spark the composition into life offer a modernist mimicry of one of the defining features of the still life tradition – what Roland Barthes describes as "matter's most superficial

[89] O'Connor and Tweedie, p. 150.
[90] O'Connor and Tweedie, p. 150.

quality: *sheen*".[91] For Barthes, this "sheen", found on the shining fruits of seventeenth-century Dutch tables, groaning under the weight of their wares, is designed "to lubricate [our] gaze amid [our] domain, to facilitate [our] daily business among objects whose riddle is dissolved and which are no longer anything but easy surfaces".[92] By emphasising the glassware's glimmering shine, Watkins enacts a double-erasure: glass already makes an "insidious claim not to be there", but the centrality of sheen in both images lends further credence to this claim by evacuating any and all sense of object interiority.[93] Glass isn't there, but if it is, it exists only as surface, dazzle, and delight. As Barthes continues:

> each object is accompanied by its adjectives, substance is buried under myriad qualities, man never confronts the object, which remains dutifully subjugated to him by precisely what it is assigned to provide [...] The object is always open, exposed, accompanied, until it has destroyed itself as a closed substance, until it has cashed in all the functional virtues man can derive from stubborn matter.[94]

For Barthes, then, the sheen of still life helps foster a vision of total human mastery over the material world. Over the "dutifully subjugated" nonhuman realm of still life, Barthes writes, "man stands now, his feet upon the thousand objects of everyday life": "there is", Barthes argues, "no other authority in his life but the one he imprints upon the inert by shaping and manipulating it".[95] The distance that still life inscribes between human subject and nonhuman object is, for Barthes, tyrannical and total: as we assess the image, we see only an array of inert materialities guilelessly oriented around our implied human presence. Everything is secondary to our human wants and desires. The superficiality of surfaces only fosters our domination over and difference from the nonhuman, material world. As we literally *stand over and above* the objects of Watkins's untitled glassware study, our gaze moving fluidly from one entity to the next, "lubricated" by the effortless radiations of light, we are seemingly at the modernist vertex of still lifes' celebration of the denigration of the material world.

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[91] Roland Barthes, "The World as Object" [1953] in *Critical Essays*, trans. by Richard Howard (Evanston, IL: Northwestern University Press, 1972), pp. 3–12 (p. 5), emphasis in original.
[92] Barthes, p. 5.
[93] Boscagli, p. 158.
[94] Barthes, p. 5.
[95] Barthes, pp. 3–5.

Yet, in this untitled study, Watkins instils a sense of *physicality* within her pictured glass objects and their audience alike. For all the plays and interplays of light that spill and pool over each other, echoing the patterns cast in *Ellipse & Triangle*, the sustained attention Watkins pays to the transparency of glass never serves, here, to revoke its solid, tangible, object forms. Wineglasses spill over plates; plates and wineglasses pour into bowls; and bowls and plates in turn diffract through glasses, crafting cycles of fluidity out of tricks of the light. In the midst of this rippling abstraction, however, each instance of shimmering reflection only pulls us back to the physicality and materiality of the objects themselves. The bright, gleaming base of the central wine glass spirals upwards, through its twisted stem, blossoming into its wide-open circular bowl. The shallow bowl that dominates the centre and topmost corner of the image swims between appearing convex and concave, caught between the flat circle of brightness at its base and the spark of reflected light in the body of the bowl. At the lower right-hand corner, a plate too moves between rising up toward the viewer or appearing laid flat against the surface of the table. In the interplay of light, it is hard to tell at first glance whether the plate is upright or upturned; if the darkened circles are oriented toward us, or if we are looking through to the base of the plate itself. It is the transparency – the materiality – of glass that affords this optical confusion; the effects of the much-derided "sheen" create this slippage between convex and concave, inversion and obtrusion. Yet, however much the forms of these objects may waver, they remain three-dimensional. For all their transparency, these are objects that occupy space rather than geometric abstractions – and glass itself remains undeniably tangible matter.

If anything, Watkins's portrayal of glassware in this photograph flirts with an *excess* of form. In this study, glass doesn't simply command or anchor the composition, as in *Ellipse & Triangle*; here, glass exceeds Watkins's composition. The close cropping of the shot fragments its objects into a succession of fractured circles, displaying the balance of abstract patterning and intricate geometries which characterises Watkins's advertising work. This framing, however, also allows the glassware to push up and out of the two-dimensional confines of the picture plane. As Watkins abstracts her composition, fragmenting the table top and glassware alike, the orientation of the planes of the photograph are in turn abstracted. The surface of the table here moves from horizontal to vertical, so the objects of the study appear vertiginously stacked on top of one another rather than arranged side by side. Rather

than appearing orderly, spread out before us at a distance, as in *Ellipse & Triangle*, this glassware is decidedly assertive, spiralling out of the picture plane at a forty-five-degree angle, driving upward and outward, resisting and contradicting the flatness of the photographic image itself as it reaches towards the viewer.

In its play of perspective, in its suggestion of strident three-dimensional forms created on a two-dimensional picture plane, Watkins's photographic still life approaches the effect of trompe l'oeil: a work which, Hanneke Grootenboer summarises, "display[s] objects so realistically [...] that the distinction between reality and representation is beyond our perception – at least for a split second".[96] Traditionally rendered in paint, trompe l'oeil works, Grootenboer writes,

> demonstrate that realism in painting can be surpassed only by a form of hyperrealism that takes us by surprise. The trompe l'oeil is a practical joke that provokes our eyes to the point of insult, and of doubt [...] The moment we are snared by the trompe l'oeil's lure, we enter a realm of illusion that forces itself upon us as a truth, whose artificiality we detect belatedly.[97]

However assertively three-dimensional Watkins's glassware appears, the photograph never achieves the seductive artificial illusion promised by a trompe l'oeil work – this glassware may push against the confines of its two-dimensional representation, but these glasses never appear as momentarily tangible as, for example, Samuel van Hoogstraten's *Feigned Letter Rack Painting* (c. 1670), William Michael Harnett's *The Artist's Letter Rack* (1879), or John F. Peto's *Old Souvenirs* (ca. 1881-1901), not least because of the precarious impossibility of their positioning on Watkins's horizontal-turned-vertical table top. There is no real sense that if we reached out here we would encounter solid things – glass as tangible as bristling papers, pocked wood, and curling tape. Watkins's photograph offers at best a scant approximation of the sensation, as her two-dimensional images present a suggestion of three-dimensional things.

Watkins's image does, however, operate around the same collapse of the distinction between nonhuman object and human subject which characterises trompe l'oeil. In classical perspective, a sense of three-dimensional space is created on two-dimensional surface, Grootenboer writes, "through the use of two

[96] Grootenboer, p. 4.
[97] Grootenboer, p. 4.

symmetrically determined points: the vanishing point located on the horizon of the picture and the point of view outside the picture where the beholder is presumed to stand".[98] This perspective is an affirmation of the physical and ontological distance between the human observer and the nonhuman observed: if we are *here*, in classical perspective, things are *there*; distanced, apart. The world is oriented around the access of the human eye – much like the isolated object-space presented for our circumspection in *Ellipse & Triangle* [Fig. 4.1]. In trompe l'oeil and Watkins's later photograph, however, these two points of perspective "are subjected to reversibility":

> The mathematical space that is supposed to be depicted *in* the picture has been hollowed out in a forward direction and has to be imagined *outside*, in the space of the actual viewer [...] The gaze of the viewer is no longer able to look "into" the painting but instead ricochets off the surfaces of the picture, bouncing back to the viewing eye, the place where it originated.[99]

In this collapse of seer and seen, Grootenboer argues, a decentring of perception occurs. The visual perception under which trompe l'oeil operates doesn't confer the same supra-human status on the observer as the transcendent vision afforded by the encounter in *Ellipse & Triangle*, but instead complicates the notion of visual perception itself as a strictly human affair. Drawing on the philosophies of Jacques Lacan and Maurice Merleau-Ponty, Grootenboer argues that the subversion of perspective in trompe l'oeil "offers us a map of both sides of the visual field, which can be defined neither by the subject's perspective nor by the collective perspectives of all subjects but by a depth that is created by the absence of the gaze as such".[100] It is not that trompe l'oeil lacks the gaze of the subject, but that "the gaze" itself is no longer *solely* the province of the subject. The illusory "depth" which characterises trompe l'oeil is created by the inclusion of an object-oriented perspective: as Barthes concludes, "Depth is born only at the moment the spectacle itself slowly turns its shadow toward man and begins to look at him."[101]

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[98] Grootenboer, p. 54.

[99] Grootenboer, p. 54, emphasis in original.

[100] Grootenboer, p. 57. Grootenboer draws heavily from Jacques Lacan, 'What Is a Picture?', in *The Four Fundamental Concepts of Psycho-Analysis* (1973), ed. by Jacques-Alain Miller, trans. by Alan Sheridan (New York and London: W.W. Norton & Company Ltd., 1981), pp. 105–19. Like Lacan, and Merleau-Ponty in *The Visible and the Invisible*, Grootenboer links the perspectival effects of trompe l'oeil into the underlying structures of consciousness. Here, however, I am more interested in the possibilities this perspectival play opens up for the subject-object encounter.

[101] Barthes, p. 12.

As the objects of trompe l'oeil appear to extend outward from the picture plane, then, the image offers "the reverse side of our visual field" where "things 'look back' at us" – much like Lacan's sardine can – "from a position we ourselves cannot occupy in order to see ourselves seeing".[102] To put this another way, in trompe l'oeil we become both viewer and vanishing point, both observer and observed. This blurring of the boundaries between subject and object confers depth – a condition of embodied materiality – on subject and object alike. In its photographic approximations of trompe l'oeil, then, Watkins's untitled glassware study restores a sense of tangibility, physicality, and materiality to glass that runs counter to the placid abstraction of *Ellipse & Triangle*. This matter is not inaccessible and coldly detached from the praxis of everyday life. Glass, here, is resolutely material and thoroughly insistent on implicating the viewer, too, within this resolute materiality.

The Kitchen Sink

In the slow, triangular curve of a ceramic kitchen sink lie a stack of dirty dishes, waiting to be washed. Over the assembly of objects, a metal tap is poised. The metal spout of a kettle juts in to the right-hand side of frame. In the sink, a chipped, stained teacup rests at an angle in a chipped, patterned bowl; on the edge of the bowl, a whisk rests. Next to the bowl, a small, clear, lidded, cylindrical glass jar stands. Behind the whisk, a small, striped ceramic jug or "creamer" sits; next to it, the centrepiece of the composition: a glass milk bottle with a thin wire collar. Where the glassware of Watkins's studies for Macy's shimmers and radiates, bathing the surroundings in cascades of light, here, the cheap, mass-produced milk bottle, like the ceramic creamer, is full to the brim – nearly overflowing – with cloudy, scummy water. At the tops of both vessels, thick clots of milk float, suspended in the water.

F rom the glittering world of immaculate glass, then, to the thorough banality of *The Kitchen Sink* [Fig. 4.4]. Where *Ellipse & Triangle* and the later, untitled glassware study for Macy's both showcase "elegant" glassware – a luxury item, often hand-finished, sold at high end department stores and marketed towards the discerning consumer – in *The Kitchen Sink*, O'Connor and Tweedie note, "There is no

[102] Grootenboer, p. 56.

display of exquisite artisanship in the objects [...] The creamer, bowl, and cup do not match, and the cup is placed askew in the bowl."[103]

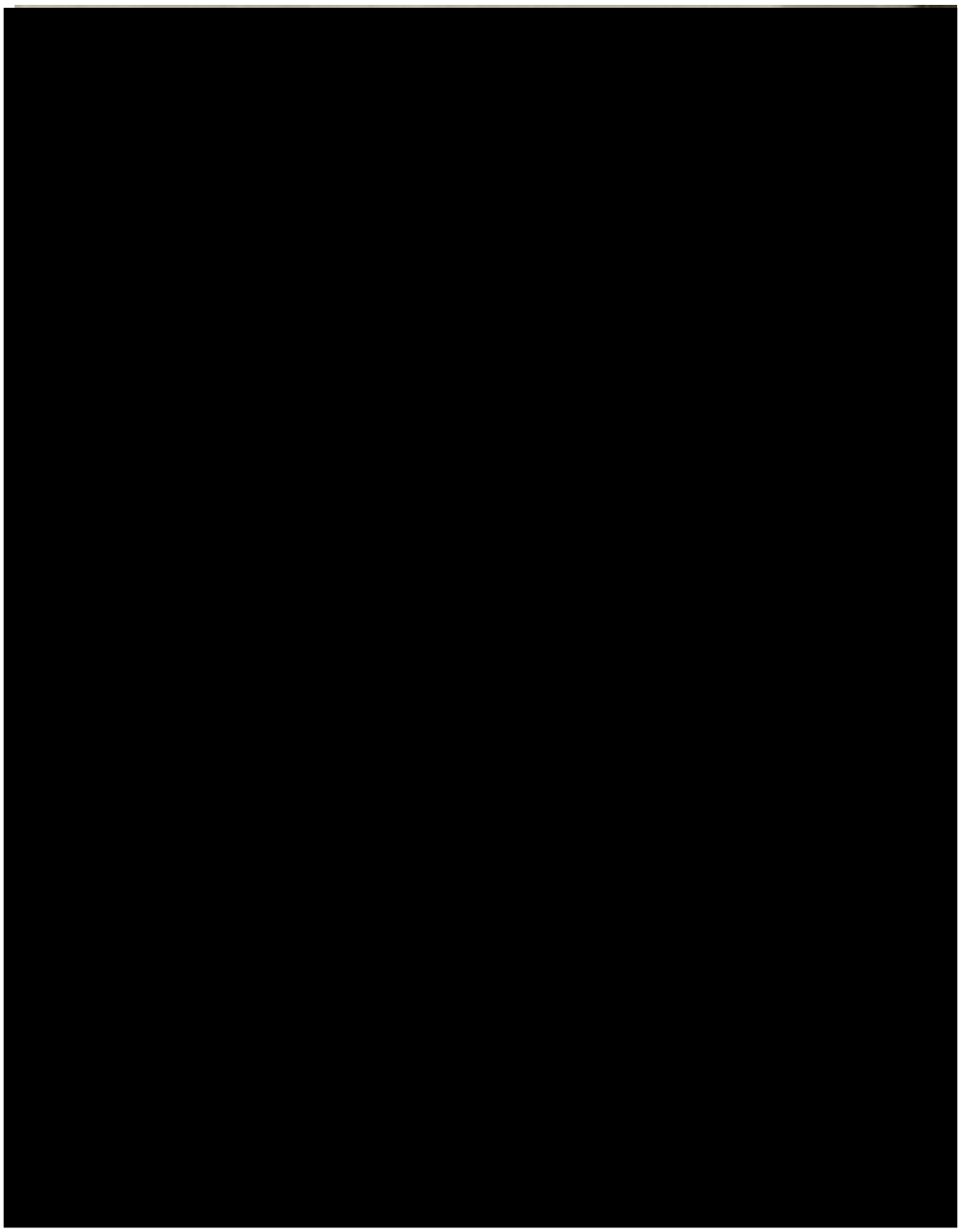

Fig. 4.4 Margaret Watkins, *The Kitchen Sink,* 1919. Vintage palladium print, 21.3 x 16.4 cm ($8\,^{3}/_{8}$ x $6\,^{7}/_{16}$ in.). Robert Mann Gallery, New York, NY.

[103] As Ellen T. Schroy notes, although "elegant" glassware - particularly pieces produced around the 1930s - is often grouped under the banner term of "Depression glass", the two are really quite different. "Depression glass" refers to mass-produced moulded glassware finished with patterns "designed to hide inconsistencies found so often in inexpensively mass-produced glass". In contrast, "elegant" glassware was sold as a luxury item through department stores. Ellen T. Schroy, *Warman's Depression Glass: Identification and Value Guide* (Iola, WI: Krause Publications, 2009), p. 8; O'Connor and Tweedie, p. 104.

Where, in the Macy's studies, Watkins separates everyday objects from their function, in *The Kitchen Sink* it is all too evident that these domestic objects have been used and that they will continue to be used. The milk bottle and creamer are brimming with dirty water; the cup and bowl are chipped, and the chips are stained darker, as the crockery continues, despite its flaws, to circulate through the routines of daily life. As O'Connor observes, "We are not even in the realm of seventeenth century *vanitas* paintings here: there are no traces of the luxurious expenditure of wealth, time and energies on feasts that do not last."[104] With *The Kitchen Sink*, we are simply mired in the murky banality of daily domestic life.

In the midst of a modernity centred on visions of glorious immateriality, aestheticizing everyday life, and traceless living, Watkins's still life is – much like Robert Rauschenberg's later *Bed* – a shocking, grimy anomaly. As the bacterial transmission of disease became a growing cause for public concern around the turn of the century, housekeeping literature frequently pinpointed the kitchen sink as a "menace".[105] An article in *Good Housekeeping* lists the offences of "The Unsanitary Kitchen Sink":

> here we find fruits and vegetables prepared, and food left standing to cool while waiting to be served. The daintiest preparations come in contact with the effluvia which must, of necessity, be continually arising from the grease laden sides and pipes of the sink. When laundry work is done in the kitchen, the dust of body emanations is added from the soiled linen to what is already in the sink.[106]

Even though the "white-porcelain-enameled iron sink" in Watkins's photograph – the sink inside her own apartment on Jane Street – was, according to the Good Housekeeping Institute, "Without any question" the most modern and hygienic sink available as of 1919 – far cleaner than the "old-fashioned, plain iron sink" and the porous but popular soapstone sink which soaks "up grease and dirt like a sponge" –

[104] Mary O'Connor, "The Objects of Modernism: Everyday Life in Women's Magazines, Gertrude Stein, and Margaret Watkins", in *American Modernism Across the Arts*, ed. by Jay Bochner and Justin D. Edwards (New York, NY: Peter Lang Publishing Inc., 2001), pp. 97–123 (p. 101).
[105] M. V. Shailer, "The Unsanitary Kitchen Sink", *Good Housekeeping* (December 1906), p. 666 <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=6417403_1329_007>.
[106] Shailer, p. 666.

Watkins's image appears like a paean to dirt.[107] Chipped cups, murky water, milk scum left to stand: *The Kitchen Sink* is an affront to the traceless aesthetic of domestic modernity. "Nothing short of a scrubbing down after every dishwashing should be considered sufficient," to rid the home of such a potential menace, *Good Housekeeping* warns. "Eternal vigilance is the only safe course".[108]

Watkins's critics concurred. During the exhibition of *The Kitchen Sink* in London in 1923, one contemporary reviewer dismissed any aesthetic appeal the image might claim, declaring that the photograph was not one that "anyone would beg to contemplate in his dying moments".[109] Just as with Rauschenberg's *Bed*, over thirty years later, artistic displays of dirt in the domestic possess the power to offend. Another critic described Watkins's work as "a record of slovenly housekeeping," but did at least concede that it was also "an exemplar of splendid technique".[110] Despite these numerous grumblings, however, *The Kitchen Sink* won second prize at the Emporium Second Annual Photographic Exhibition in San Francisco and garnered a two-page spread in *Camera Craft* "praising its technique".[111] (Further, just shy of a century later, at least some of the squeamishness over airing dirty dishes in public had clearly subsided: in 2013, Canada Post issued a stamp bearing an image of *The Kitchen Sink* to recognise and honour Watkins's contributions to photography).[112]

Watkins herself denounces this critical emphasis on the banality of her subject matter, dismissing the concerns of one commentator who complained that *The Kitchen Sink* suffered from "too many points of equal interest": "Evidently the poor duffer knows nothing of Modern art – abstractions, pattern, rhythm, etc. The 'objects' are not supposed to have any interest in themselves – merely contributing to the

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[107] Mildred Maddocks, "Reconstruction Even for Our Kitchens", *Good Housekeeping* (February 1919), 22–24, 94 (pp. 22–23) <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=6417403_1354_002>.

[108] Shailer, p. 666.

[109] F. C. Tilney, "Pictorial Photography in 1923", in *Photograms of the Year 1923* (London: George Routledge & Sons, 1923), p. 8 (p. 8), quoted in O'Connor, p. 101.

[110] Blumann, p. 570, quoted in O'Connor and Tweedie, p. 105.

[111] O'Connor and Tweedie, p. 104.

[112] B.B.C. News, "Photographer Margaret Watkins Honoured with Canada Post Stamp", *BBC News* <http://www.bbc.co.uk/news/uk-scotland-glasgow-west-21885274> [accessed 21 July 2016]. Although this article describes Watkins as "one of the most acclaimed photographers in North America at the turn of the 20th Century", the emphasis falls on her role as a teacher "of some of the greatest names in art photography, including Paul Outerbridge and Margaret Bourke-White, whose images [...] are amongst the best known photographs ever produced", rather than Watkins's own artistic contributions.

design."[113] In the margins of the accompanying *Camera Craft* article, she further berates her critics in a jotted note: "Though not an unrecognisable 'abstract' these items were simply the material for working out a design of related *triangles*. It *took ages* to observe & arrange them (& eventually I *did* wash up!)."[114] O'Connor describes how the "three metal objects" – the tap, the kettle spout, and the handle of the whisk – "offer the points of a triangle that position the center of the photograph" around the predominant glass object: the central milk bottle.[115] Despite Watkins's own protestations, however, and James Borcoman's assertion that the image's "dominant objects appear only at the edges" – "a shocking but healthy design solution, a way out of the rut of pictorialism" – as O'Connor and Tweedie acknowledge, "no matter how much we leave the realm of the everyday material world to move into the realm of aesthetic pleasure in formal arrangements, we cannot wholly lose the dirty dishes."[116]

There is both a realism and an intimacy to this still life that is coolly absent from both *Ellipse & Triangle* and the untitled glassware study from 1928 which prevents its objects from succumbing fully to Watkins's desired abstraction. A suggestion of tactility opens up within the composition, in the welcoming bracket of the lip of the sink, the way the handles of the cup, creamer, and whisk are angled towards us, as if awaiting the outreach of an expectant hand, and in the framing around the central milk bottle which opens up a brief but nonetheless apparent perspectival space for us to reach into. If the commercial offering of *Ellipse & Triangle* is presented in a thoroughly abstracted, purely aesthetic atmosphere, devoid of any possible tactility and object interiority, *The Kitchen Sink* is oriented around what Bryson terms "creatural space": "the space around the body that is known by touch and created by familiar movements of the hands and arms".[117] These are not objects of desire, then, fictitious and teasingly out of reach, but objects of routine; physical, tangible, and necessarily close to hand.

Whatever abstractions may underlie its form, *The Kitchen Sink* thoroughly debunks the modern myth of our own abstraction from the messy materiality of daily

[113] Watkins, quoted in Lori Pauli, "'A Few Hellers': Women at the Clarence H. White School of Photography", in *Margaret Watkins: Photographs*, ed. by Martha McCulloch (Glasgow: Street Level Photography Gallery & Workshop, 1994), pp. 55–61 (p. 57).
[114] Margaret Watkins, marginalia to Edgar Felloes, "The Emporium (Second Annual) Photographic Exhibition", *Camera Craft*, 29.10 (1922), 455–61, quoted in O'Connor, p. 104, emphasis in original.
[115] O'Connor, p. 103.
[116] O'Connor and Tweedie, p. 105.
[117] Bryson, p. 70.

life. The image is riddled with signs of the vital physicality of human and nonhuman existence. With their lingering traces of consumable matter, the clotted milk scum clouding the top of the milk bottle and creamer attests to both our own dependence on the material world and the liveliness of this matter itself, its organic origins and its capacity to change in response to its environment, moving from liquid to a viscous, clotted solid. Strive as we might to achieve the desirably modern vision of traceless living within our own homes, *The Kitchen Sink* implies, the reality of daily life is necessarily comprised of a succession of messy, material entanglements.

In *The Kitchen Sink*, Watkins doesn't just expose our own materiality, however: she also emphasises the materiality of glass itself, through the strong visual rhyme she establishes between the two glass objects in the sink, the milk bottle and the jar. The slight glint of light from the metal on the thin wire collar of the milk bottle chimes with the sheen on the metal jar lid; the circular patterning on the jar lid in turn echoes the circular pools in the froth on top of the milk bottle; the cloudy, murky water which fills the milk bottle recalls the cast shadow of the kettle which falls on the base of the sink, visible through the clear glass of the jar. Both glass objects are dull: there are no dazzling shimmers of light dancing in the background, here; there isn't even a caught reflection. While the glass jar threatens to perform an act of self-erasure – its transparency offering us visual access to the base of the sink beyond, and its outline wavering, even blurring, at one point, into the white enamel of the sink – the cloudy water causes the milk bottle to take centre stage as a defiantly solid object, casting a dark, precise shadow. This glass, steeped in use, clouded with grime, can't make "an insidious claim not to be there", as the sheer physicality of the milk bottle's glassy presence anchors the centre of the photograph.[118]

These comparative visions of glass offered by *The Kitchen Sink* – transparent and self-erasing; defiantly solid and resolutely physical – showcase the irony of conceptualising glass as traceless: as Armstrong argues, it is the very *materiality* of glass which invites such denials of its materiality. Transparency, Armstrong notes, is characterised by a paradoxical suggestion of *absence* that is generated by a clear and noticeable *presence*:

[118] Boscagli, p. 158.

> Transparency is something that eliminates itself in the process of vision. It does away with obstruction by not declaring itself a presence. But the paradox of this self-obliterating state is that we would not call it transparent but *for* the presence of physical matter, however invisible – its visible invisibility is what is important about transparency. It must be both barrier and medium.[119]

The thoroughly modern, traceless immateriality that glass grants is, somewhat ironically, grounded in the material properties of glass itself. Glass isn't invisible, open, fluid, or traceless, weightless or ephemeral. It is solid, rigid, firm, and stable. As seductive as the promise offered by the glass of *Ellipse & Triangle* may be, the transparency trick of glass is fragile, the illusion all too easily dispelled. Every time we attend to the transparency of glass – every time we celebrate its invisibility, its innate openness, its immateriality – we are, simultaneously, describing its thorough materiality.

Further, far from refusing traces of our embodied, material existence, Watkins's milk-stained, opaque glass, presented in the recognisable, creatural space of *The Kitchen Sink*, showcases the capacity of the material to preserve and proudly display signs of the multiple and various physical traces we leave all over the home, every day. From the froth curdled at the top of the bottle, we can spiral our attention outward to create a messy, imaginative map of all the signs we leave behind of our own thorough materiality. Think of a smeared lip print caught on the edge of a wine glass; a fingerprint held on the surface of a mirror; dried-out dregs of sauce still clinging to the edge of a washed-out jar, waiting to be recycled or reused. While, in Benjamin's and Scheerbart's ideal visions of the modern domestic, glass may refuse to absorb traces of our routine existence, in everyday life – in *The Kitchen Sink* – glass is a material testament to the messiness of our existence, as its non-porous surface, its crystalline clarity, capture and display every point of contact, each residue of muck, grime, and dirt. For all its promises of immaculate, modern immateriality, then, glass reiterates, day in, day out, that, no matter how hard it tries – no matter how fiercely the surfaces glitter, or how coldly untouchable its objects appear – even "modernity cannot get rid of materiality".[120]

[119] Armstrong, p. 11, emphasis added.
[120] O'Connor and Tweedie, p. 146.

Chapter Five

The Aesthetics of Electrical Immateriality

Illuminating Charles Sheeler's Doylestown Interiors

To be modern is to live electrically.

For many of us, the first thing we do when we wake up, often grouchily, is turn off an itinerant alarm, either by hitting the button on a radio-alarm clock, or tapping the screen of our mobile phone, which, after being plugged in all night, is fully charged for the new day. On a dull, dark winter morning, we turn on a light and blink against the force of the sudden glow. We might adjust the thermostat, kicking it up a degree or two, prodding the heating back into life to make the transition from sleep to wakefulness a little less jarring. We head for the shower, testing the water for the right temperature before stepping in to its baptism of warmth. We turn on the kettle, the coffee maker, the toaster, the television; we check headlines and emails on our laptop, tablet, or phone.

In our modern world, we live wirelessly, electrically, technologically. We use electricity all day, every day, to alter, adjust, and extend our control over the environments that surround us. We inhabit spaces where the effortless flick of a switch conquers the dark; where the turn of a dial chases off the winter chill; where the press of fingertips on a screen can connect us to anywhere or anyone in the world. Our lives rely on the electrical currents that flow in unseen, and often unappreciated, trajectories from power stations to our sockets and switches via a massive networked infrastructure of under- and over-ground transmission. To say that electricity is an integral part of the modern home – and modern life itself – is to put it mildly.

Yet, for most of human history, electricity remained and unknown, and potentially unknowable, phenomenon.[1] For centuries, electricity was regarded, as a professor of physics put it in 1755, "as an unimportant property of a few substances": not remarkable, scarcely useful, and with scant practical applications, largely

[1] For an overview of theories of electricity, see, for example, Sir Edmund Whittaker, *A History of the Theories of Aether and Electricity, Vol. I: The Classical Theories; Vol. II: The Modern Theories, 1900-1926* [1951] (New York, NY: Dover Publications Inc., 2017); J. L. Heilbron, *Electricity in the 17th and 18th Centuries: A Study of Early Modern Physics* (Berkeley and Los Angeles, CA, and London: University of California Press, 1979); Mary Fairclough, *Literature, Electricity and Politics 1740–1840: "Electrick Communication Every Where"* (London: Palgrave Macmillan, 2017); Stella Pratt-Smith, *Transformations of Electricity in Nineteenth-Century Literature and Science* (London and New York, NY: Routledge).

because, prior to the mid-eighteenth century, electricity was understood solely as a force of attraction or repulsion that could be induced within a few select materials using friction.[2]

Electricity, in the form of an electric charge, is a fundamental property of all matter. Borne by negatively-charged subatomic particles within matter, known as electrons, electrical effects are produced as these electrons accumulate or move.[3] Electrons, however, are so small, they are considered nearly massless. Electrons weren't discovered until 1897, meaning that, even as electricity beginning to modernise our world through technologies such as the telegraph, the telephone, the electric engine, and the electric light, the understanding of *what* electricity is remained elusive.[4] Electricity was instilled with a shifting and "incoherent" materiality, routinely categorised as a fire, or a fluid, or a fire *and* a fluid, and left to occupy the uncertain material status of "imponderable" matter – unweighable and immeasurable, but material, and capable of affecting surrounding entities.[5]

It was only in the wake of Benjamin Franklin's attempts to harness the power of lightning in a Leyden jar – a device capable of storing and then discharging an electric charge – in the mid-eighteenth century, however, that the true power and affective potential of electricity became apparent.[6] As the same professor of physics continued in 1755: "Forty years ago, when one knew nothing about electricity but its simplest effects [...] who would have believed that it could have any connection with one of the greatest and most considerable phenomena in Nature, thunder and lightning?"[7]

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[2] Samuel Klingenstierna, *Tal om de nyaste rön vid elektriciteten* (Stockholm: 1755), quoted in Heilbron, p. 6.

[3] "Electricity", *Encyclopedia Britannica* <https://www.britannica.com/science/electricity> [accessed 30 July 2017].

[4] "Electron | Subatomic Particle", *Encyclopedia Britannica* <https://www.britannica.com/science/electron> [accessed 30 July 2017].

[5] Richard C. Sha, 'From Electrical Matter to Electric Bodies', *The Wordsworth Circle*, 43.3 (2012), 143–46 (p. 143). As Both Sha and Whittaker note, this conception of "imponderable" materiality stretches the bounds of matter beyond breaking point, but was also applied to theories of light, heat, and magnetism until well into the nineteenth century. Whittaker, p. 38.

[6] For an examination of Franklin's contributions to electrical research, see Michael Brian Schiffer, with Kacy L. Hollenback, and Carrie L. Bell, *Draw the Lightning Down: Benjamin Franklin and Electrical Technology in the Age of Enlightenment* (Berkeley and Los Angeles, CA and London: University of California Press, 2003).

[7] Heilbron, p. 6; Klingenstierna, quoted in Heilbron, p. 6.

At the close of the eighteenth century, Luigi Galvani discovered that the application of an electrical charge could cause muscular convulsions in animals; after further experimentation, Galvani hypothesised that muscles "convulsed whenever a connection is made between the nerves and muscles by a metallic arc [...] caused by the transport of a peculiar fluid from the nerves to the muscles".[8] For Galvani, this phenomenon was undoubtedly electrical; for other electricians, this "galvanism" or animal electricity operated under a fluid distinct from ordinary electricity.[9] Either way, Galvani's investigations opened up the possibility of an even more visceral, material role for electricity, replacing older notions of "animal" or "vital" spirits as the source of animation within both human and animal bodies.[10]

Throughout the course of the nineteenth century, our relationship with electricity changed even more dramatically: electricity became *useful.* In 1800, Alessandro Volta – one of Galvani's dissenters – developed invented the "galvanic pile", or battery.[11] Using stacked, paired discs of zinc and copper, separated by a disc of dampened pasteboard, Volta generated an electrical charge. Unlike the Leyden jar, which stored electricity but discharged its power all at once, Volta's pile offered a *constant* supply of the electric fluid.[12] Electricity was no longer a single, sparking, burst of power, but a slower, more controlled – and, vitally, *controllable* – phenomenon.

With the discovery and development of electrochemical, electromagnetic, and electrical illumination phenomena in the early nineteenth century, the technological applications of electricity became increasingly apparent. The telegraph was developed in the 1830s, and, by the end of 1866, the first functional transatlantic telegraph cable had been laid between Ireland and Newfoundland, dramatically cutting communication times between Europe and America.[13] In the latter decades of

[8] Whittaker, p. 69. For more on Galvani's experiments, see pp. 67-69.
[9] Whittaker, p. 69.
[10] Dennis L. Sepper, "Animal Spirits", in *The Cambridge Descartes Lexicon,* ed. by Lawrence Nolan (Cambridge: Cambridge University Press, 2015), pp. 26-28.
[11] Fairclough, p. 5. For an overview of developments in electrochemistry in the wake of Galvani's and Volta's discoveries, see Whittaker, pp. 73-78.
[12] Fairclough, p. 5.
[13] In 1820, Danish physicist H. C. Oersted discovered that "a magnetized needle placed near a current-carrying wire would turn across the direction of the wire", demonstrating the thorough entanglement of electrical and magnetic effects. Oersted's findings "led to the invention of the galvanometer and the electromagnet, which were soon put to use in the first practical electrical telegraphs". In 1833, German scientists exchanged signals across a double wire in Göttingen; W. F. Cooke and Charles Wheatstone patented the first commercially viable electric telegraph in 1837, and S. F. B. Morse and Alfred Vail devised their own telegraph system in 1844. In 1858, there was a failed attempt to lay the first

the nineteenth century, electric illumination captivated the public imagination, as the darkness of night, seemingly without any material trace, was cast out by beams as brilliantly bright as day.

Narratives of electrical modernity have certainly been told before, in nineteenth-century tales of telegraphs, telephones, and public spectacles of electric light – of communication being reshaped; of glittering "white ways"; of humankind conquering the night.[14] In this final part of *Thoroughly Modern Matter*, however, I turn instead to a decidedly twentieth-century affair, and focus on electricity's far from smooth transition from public phenomenon to private amenity. Although certain wealthy households embraced electricity early – J. P. Morgan's Madison Avenue abode and the Vanderbilts' New York houses were wired for incandescent light in the 1880s, and had their own private power sources (or did, at least, until Mrs. Vanderbilt "ordered" her husband to have the "mysterious dynamo" removed) – only eight percent of American homes were electrified nearly three decades later, by 1907; by 1917, this had risen to nearly a quarter; by 1925, this had increased to over half, and, by 1930, electricity had reached nearly seventy percent of American homes.[15] While a technological, electrical modernity certainly began in the mid-nineteenth century, for many, electricity wasn't a regular feature of their everyday lives and their homes until over seventy years after the first telegraphs appeared. It is this twentieth-century domestication of lively, electrical matter that I focus on in this final chapter and the conclusion.

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submerged transatlantic telegraph cable; in 1865, another endeavour ended 1,200 miles out at sea when the cable snapped. Bruce J. Hunt, "Electrical Theory and Practice in the Nineteenth Century", in *The Cambridge History of Science, vol. 5: The Modern Physical and Mathematical Sciences,* ed. by Mary Jo Nye (Cambridge: Cambridge University Press, 2003), pp. 311-27, pp. 311-12, 319. For more on the development of the telegraph, see Iwan Rhys Morus, "The Electric Ariel: Telegraphy and Commercial Culture in Early Victorian England", *Victorian Studies,* 39.3 (1996), 339-378 <http://www.jstor.org/stable/3829450> [accessed 31 July 2017].

[14] See, for example, Tim Armstrong, *Modernism, Technology and the Body: A Cultural Study* (Cambridge: Cambridge University Press, 1998); Stephen Kern, *The Culture of Time and Space, 1880-1918: With a New Preface* [1983] (Cambridge, MA, and London: Harvard University Press, 2003); Carolyn Marvin, *When Old Technologies Were New: Thinking about Electric Communication in the Late Nineteenth Century* (Oxford: Oxford University Press, 1988); Wolfgang Schivelbusch, *Disenchanted Night: The Industrialisation of Light in the Nineteenth Century*, trans. by Angela Davies (Berkeley, CA: University of California Press, 1988); David E. Nye, *Electrifying America: Social Meanings of a New Technology* (Cambridge, MA and London: MIT Press, 1990); Nye, *American Technological Sublime* (Cambridge, MA and London: MIT Press, 1994).

[15] Ernest Freeberg, *The Age of Edison: Electric Light and the Invention of Modern America* (New York, NY: Penguin Books, 2013), p. 73; Ben Wattenberg, *Statistical History of the United States* (New York, NY: Basic Books, 1976), p. 827, cited in Nye, *Electrifying America*, p. 395, fn. 50.

Our shifting relationship with electricity is a vast topic, encompassing histories of physics, chemistry, biology, mathematics, engineering, publicity, marketing, economics, industrialism and imperialism, to name but a few. Here, I present a necessarily selective account of the developments and innovations that advanced our understanding of this lively, quixotic, electrical force. In this chapter, I focus on the technology at the heart of the domestication of electricity: the electric light. I trace the development of an aesthetic of immateriality that surrounded electrical illumination to detail how the incandescent light appeared to realise modernity's desire to get rid of unruly materiality by offering a seemingly immaterial source of light. In the conclusion, I focus on the distillation of this aesthetic of immateriality within a portfolio of photogravures produced by Man Ray in 1931 for a French energy company.

At the heart of this chapter lies a sequence of photographs centred on experiments with the effects of artificial illumination within the domestic space: Charles Sheeler's Doylestown interiors, produced in 1916-17. I start this chapter by situating the advent of electric light in its nineteenth-century context, examining why the quest for electrically-powered illumination struck such a chord in the modern public imagination. Next, drawing on contemporary housekeeping literatures, I move on to explore how the aesthetic of immateriality that surrounded public presentations of electric illumination in the late nineteenth century was both sustained and perpetuated during electricity's domestication in the opening decades of the twentieth. Within this context of domestic, electrical immateriality, I situate Sheeler's Doylestown interior photographs.

Although Sheeler is best known as a celebrant of the technological innovations of American modernity, a true artist of the Machine Age, the disquieting unhomeliness of these Doylestown interiors speaks to a broader cultural concern about the effects of introducing such an unknown – and unknowably powerful – force as electricity into the traditional space of the American home. In these nocturnal domestic scenes, as fierce abstraction jars against heightened textural realism, and brightly lit spaces descend into stark, impenetrable dark, Sheeler interrogates the aesthetics of immateriality that surround this new form of artificial illumination.

The Matter of Light

The nineteenth century, Ernest Freeberg writes, "was characterized by a particular hunger for light".[16] Cities were growing, and growing darker. In rapidly-constructed tenement housing, countless families lived without daylight. By the turn of the twentieth century, Daniel Freund notes, New York contained 350,000 dark rooms: in the worst tenements of Manhattan, "41 percent of the stairs and rooms were pitch black, 38 percent were very dark, and 21 percent were dark – a total of 100 percent".[17] Skyscrapers, too, cast their shadows over the city streets. In a pamphlet on *Planning Sunlight Cities*, G. W. Tuttle and Herbert S. Swan calculated that, "at noon on December 21, the Woolworth Building cast a 1,635-foot shadow, and the Equitable, a recent, imposing addition to the city's skyline and a lightning rod for criticism, shaded 7.59 acres."[18]

As industrialisation drew more people into working in cities, skies too darkened under smoke stacks and soot from steam locomotives.[19] In his 1893 novel *The Cliff-Dwellers*, Henry Fuller surveyed the dimly-lit scene of turn-of-the-century Chicago:

> This country is a treeless country – if we overlook the "forest of chimneys" comprised in a bird's-eye view of any great city [...] It is a shrubless country – if we give no heed to the gnarled carpentry of the awkward frame-works which carry the telegraph, and which are set askew on such dizzy corners as the course of the wires may compel [...] It is an airless country – if by air we mean the mere combination of oxygen and nitrogen which is commonly indicated by that name. For here the medium of sight, sound, light, and life becomes largely carbonaceous, and the remoter peaks of this mighty yet unprepossessing landscape loom up grandly, but vaguely, through swathing mists of coal-smoke.[20]

[16] Freeberg, p. 52.
[17] Daniel Freund, *American Sunshine: Diseases of Darkness and the Quest for Natural Light* (University of Chicago Press, 2012), p. 9, referencing Lawrence Veiller, "Back to Back Tenements" in *The Tenement House Problem,* ed. by Robert W. DeForest and Lawrence Veiller [1903] (New York, NY: Macmillan Co., 1970), pp. 295-97.
[18] G. W. Tuttle and Herbert S. Swan, *Planning Sunlight Cities* (New York, NY: American City Pamphlets, 1917), quoted in Freund, pp. 9-10.
[19] Freund, p. 2.
[20] Henry Fuller, *The Cliff-Dwellers* [1893] ed. by Joseph A. Dimuro (Peterborough, Ontario: Broadview Press, 2010), pp. 55-258 (pp. 58–59).

In Fuller's city, even the technologies of modernity loom "vaguely, through swathing mists of coal-smoke", as each initial impression of absence gradually resolves, out of the murk, into a revelation of presence: out of a "treeless country", a "'forest of chimneys'" emerges; out of a barren land, devoid of interest, telegraph poles appear. In an era of modernisation, Chicago, like New York, like London, with its infamous, deadly fog, is darkened and polluted by signs of modernity.[21]

Traditional sources of incandescent artificial light were ill-suited to living conditions in the rapidly modernising world. Candles, made for centuries by housewives and servants in home kitchens from tallow (animal fat), were difficult and laborious to make, smelled foul throughout the production process and while burning, and offered only a relatively small pool of dim, flickering light.[22] Spermaceti candles, most likely first offered in the mid-eighteenth century, created from the "almost-clear amber or rose-tinted waxy liquid" found in the head cavity of whales, offered a brighter, whiter glow, but took specialist candlemakers nearly a year to make, relying on cycles of cooler and warmer weather to facilitate the necessary oil-pressings and clarifications.[23] As such, they were the province of the wealthy alone. The fuel in oil lamps – usually tallow, vegetable- or whale-oil – congealed in cold weather and often smelled foul.[24] Whale oil offered the cleanest, brightest flame, but was prohibitively expensive.[25] The development of paraffin candles in the mid-nineteenth century helped produce a cleaner light – the name "paraffin" was derived "from two Latin words, *parum*, little or none, and *affinis*, affinity, because of its complete neutrality and great stability" – and kerosene (coal oil), available from the 1860s, improved this provision of cleaner light even further.[26] A kerosene lamp "burned clear, hardly smoked, and was relatively odorless", and "burned as brightly as five to fourteen candles"; kerosene was much, much cheaper than whale oil, and, unlike

[21] For a detailed analysis of London's pollution predicaments in the nineteenth century, see Christine L. Corton, *London Fog: The Biography* (Cambridge, MA: Harvard University Press, 2015).
[22] Jane Brox, *Brilliant: The Evolution of Artificial Light* (London: Souvenir Press, 2012), pp. 12–13.
[23] Brox, pp. 44, 45–46.
[24] Mimi Sherman, "A Look at Nineteenth-Century Lighting: Lighting Devices from the Merchant's House Museum", *APT Bulletin*, 31.1 (2000), 37–43 (p. 41) <http://www.jstor.org/stable/1504725> [accessed 28 July 2017]; Brox, p. 14.
[25] Brox, pp. 45–47.
[26] Campbell Morfit, *A Treatise on Chemistry Applied to the Manufacture of Soap and Candles* (Philadelphia, PA: Parry & McMillan, 1856), p. 543, quoted in Brox, p. 78.

animal-derived fuels, it didn't spoil in storage.[27] Kerosene lamps, then, allowed "all but the poorest families to have fairly decent light after sundown".[28]

Yet, even this scant light came at a high price. In 1900, one-third of tenement fires in New York were caused by lamps or candles.[29] Light shafts – indentations "at the side of the building about twenty-eight inches wide and enclosed on all sides", designed to allow daylight to enter otherwise dark rooms – exacerbated the spread of these blazes: filled with "garbage and filth", light shafts acted "as a duct to convey flames from one story to the next" when fires broke out.[30] The quest for light often proved "a positive hindrance to the health and comfort of tenants".[31] While gas lighting dramatically improved the provision of artificial light – gas burners available by 1890 offered 250 candle power – gas lighting was still highly flammable; further, gaslight devoured oxygen and spewed out ammonia, sulphur, and carbon dioxide into the air, causing nausea and severe headaches in ill-ventilated spaces.[32] Gaslight also increased the temperature of the room it was in. Both oil and gas lighting released moisture into the air, caused fabrics to deteriorate, and stained the interior with soot, necessitating the practice of "spring cleaning" to remove the grime that accumulated during the artificially-lit winter months.[33]

At the close of the nineteenth century, electric light shone a beacon of hope into this growing darkness of modernity. Following Humphrey Davy's demonstration of electric arc lighting in 1801 and the first arc lamp in 1807, where a four-inch curve of brilliant light glowed between two charcoal sticks; Johan Geissler's experiments with passing an alternating current through a tube of gas to create a "light of low

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[27] Brox, pp. 82–83.

[28] Nye, *Electrifying America*, p. 17; Sherman, p. 41.

[29] William D. Nordhaus, "Do Real-Output and Real-Wage Measures Capture Reality? The History of Lighting Suggests Not", in *The Economics of New Goods*, ed. by Timothy F. Bresnahan and Robert J. Gordon (Chicago, IL: University of Chicago Press, 1996), pp. 27–70 (p. 35, fn. 7). For a detailed analysis, see Hugh Bonner and Lawrence Veiller, *Special Report on Tenement House Fires in New York, Prepared for the Tenement House Commission of 1900* (New York, NY: Evening Post Job Printing House, 1900), State Library of Pennsylvania, PA <http://www.archive.org/details.cu31924015346335> [accessed 15 July 2017].

[30] Roy Lubove, "Lawrence Veiller and the New York State Tenement House Commission of 1900", *The Mississippi Valley Historical Review*, 47.4 (1961), 659–77 (p. 660) <http://www.jstor.org/stable/1889603> [accessed 15 July 2017].

[31] Lubove, p. 660.

[32] Nye, *Electrifying America,* p. 17; John A. Jakle, *City Lights: Illuminating the American Night* (Baltimore, MD: Johns Hopkins University Press, 2001), p. 36.

[33] Nye, *Electrifying America,* p. 17; Molly Harrison, *The Kitchen in History* (New York, NY: Charles Scribner's Sons, 1972), p. 115.

intensity" in 1856; and Michael Faraday's suggested trial of an electrically-illuminated lighthouse in 1857, electric light began to seem like a real, and imminent, possibility.[34] Newspapers and scientific journals began doggedly tracking the quest to create a reliable and viable method of electrical illumination.[35] When Charles Brush set up a lone electric arc lamp on a Boston street corner in 1878, then, Nye notes, "crowds gathered nightly to see it".[36]

While the public had certainly seen artificial light before, they had never seen anything like *this*. Arc lamps were astonishing in their brightness in comparison to oil and gas. "Under the intense arc light," John A. Jakle notes, "the eye could see with the retinal cones, as it did during the day, whereas, with dim gas light, perception took place more with the retinal rods": it's no surprise, then, that arc lights were popularly described and represented as "artificial suns".[37] It wasn't just their brilliance, however, that dazzled the curious crowds: as David E. Nye writes, the arc lamp was a source of fascination "because it seemed to violate the natural order. For the first time in history, light was separated from fire."[38] Candles and tallow, oil and gas are all *material* sources of light: when these fuels burn, they engage in a constant and perceptible material exchange with their surrounding environment. Smoke skitters into the air; flames flicker, stirred by a passing breeze; fire radiates heat; the smells of burning fuel permeate the air. In contrast, the arc lamp "needed no oxygen. It was not affected by the wind. It could be turned on in many places simultaneously, at the turn of a switch."[39] The brilliant glow of this lone electric light, fiercely bright and summoned at will, unsettled the materiality of illumination entirely.

The Brush arc light, however, was unsuitable for indoor use. Even though arc lamps appeared almost "supernatural", producing light without any perceptibly consumed fuel, they still, Nye writes, "conformed somewhat to what lighting 'ought' to be; they flickered a little, their carbon elements burned down like candles, and they

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[34] "Arc Lamp" *Encyclopedia Britannica* <https://www.britannica.com/technology/arc-lamp> [accessed 3 July 2017]; Wiebe E. Bijker, *Of Bicycles, Bakelites, and Bulbs: Towards a Theory of Sociotechnical Change* (Cambridge, MA and London: MIT Press, 1995), p. 208; Nordhaus, p. 37.

[35] See, for example, Charles Bazerman, *The Languages of Edison's Light* (Cambridge, MA and London: MIT Press, 1999), pp. 23–38 for an overview of the press coverage and publicity surrounding Thomas Edison's efforts towards electric light.

[36] Nye, *Technological Sublime*, p. 176.

[37] Jakle, p. 54.

[38] Nye, *Technological Sublime*, p. 176.

[39] Nye, *Technological Sublime*, p. 176.

were quite hot".[40] As carbon deposits built up around the electrodes where the arc of light was produced, the lights hissed or hummed, making a noise similar "to the sound of swarming bees".[41] Arc lights also required vast amounts of power, supplied via battery to each individual light, so their use was limited to larger, public installations.[42] These slightly noisy lamps, however, produced an "intensely brilliant" eight-hundred candle power light, as electrons excited by the electric current passing between the gap in the carbon electrodes collided with atoms in the air and released photons – particles of light.[43] Looking at this bright arc of light directly was painful to the eyes.[44] As such, tower lighting systems were developed to allow arc lights to be mounted high above the city streets, as in Madison Square [Fig. 5.1]. Even with their elevation, as Freeberg notes, some passers-by took to "shielding themselves" from the arc light's glare "with umbrellas", and health experts cautioned that "too much exposure to the new light would cause eye diseases, nervous exhaustion, and freckles".[45]

Despite these reservations, arc lighting proved a spectacular sight. In the illustration from *Harper's Weekly* [Fig. 5.1], for example, arc light quite literally outshines the old gas streetlight in the centre of the frame: while the globe of the gaslight is bright, the arc light is *brilliant*. Here, arc light turns night into day, with night strollers casting long shadows over the ground, and the wood of the telegraph poles, the metal of the fence posts, and the detail of the obelisk all haloed in bright reflections of light. Beaming down in strident, visible rays, the representation of the arc light forms a vertical counterpart to the horizontal lines of the telegraph and telephone cables sweeping through the top half of the frame, enmeshing the city streets in material signs of modernisation. While the cables are integrated into the

[40] Nye, *Electrifying America*, p. 2.
[41] Jakle, p. 39; Freeberg, p. 28. As a result of these carbon deposits, arc lights needed daily servicing to adjust the distance between the electrodes in order to maintain the arc of electrical current.
[42] Schivelbusch,p. 56.
[43] The application of an electrical charge to the carbon electrodes causes negatively and positively charged ions to flow between the electrodes. As electrons are pulled out of the negative electrode (the cathode) by the electric tension generated between the cathode and the positive electrode (the anode), these electrons collide with atoms in the air, and release energy in the form of light. These collisions also convert atoms into ions (ionisation), releasing new electrons and allowing a flow of electrons to move from the anode to the cathode, establishing an electric discharge. Bijker, pp. 208-09.
[44] Jakle, pp. 39, 54.
[45] Freeberg, p. 27. In response to such complaints, Freeberg writes, arc-light companies began encasing their wicks in "thick globes of opal glass" to diffuse the light and create a "mellower effect".

scene, however, mirroring the other horizontal lines of the image – the tree line, the road, the hansom tracks, the pavement and pedestrians – the arc lamp is deliberately set apart, towering over all, a monument to modernity equal in stature to both the commemorative obelisk and the church steeple.[46] Arc light doesn't loom "vaguely, through swathing mists" of night, like the other technologies of modernity present within the frame, but obliterates the "swathing mists" entirely.[47]

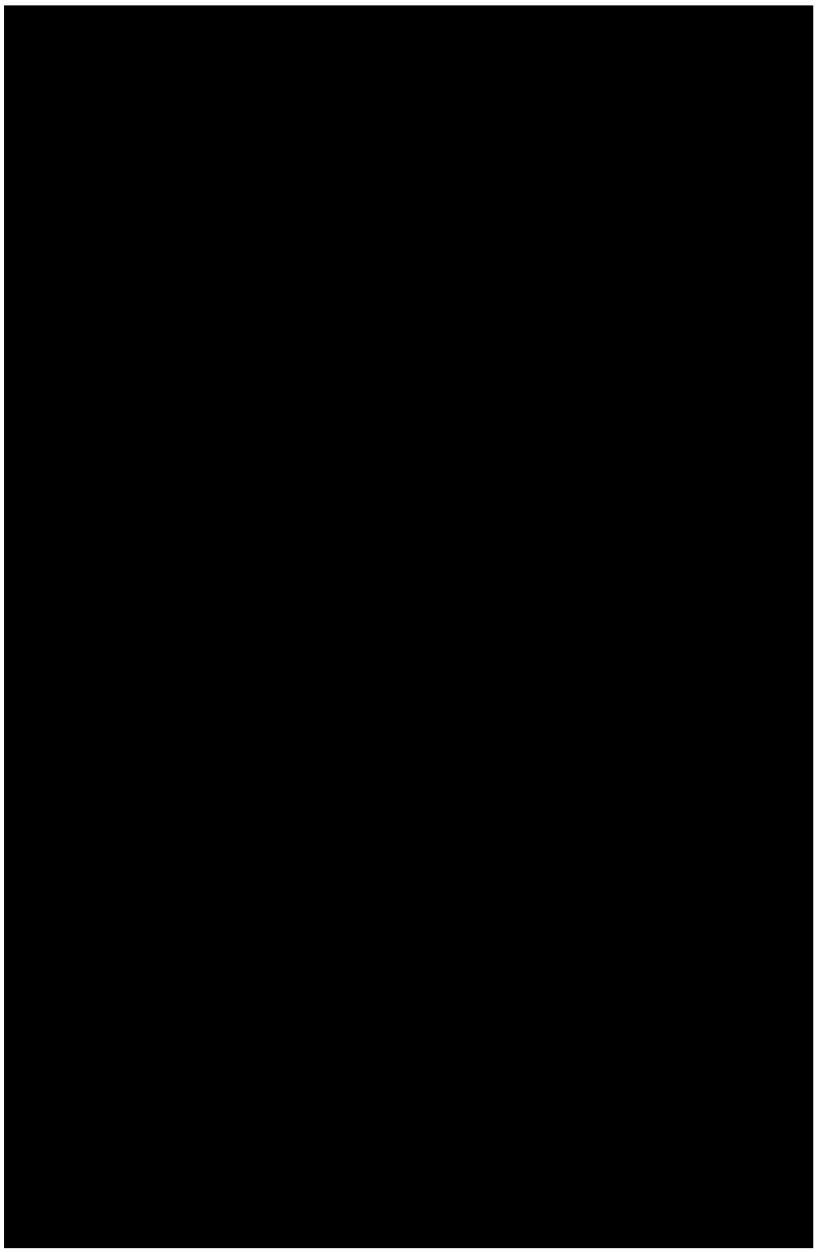

Fig. 5.1
Charles Graham, "The Electric Light in Madison Square, New York", *Harper's Weekly,* 14 January 1882.

[46] Most likely this obelisk is the Worth Monument, erected in 1857 to commemorate the life of General William Jenkins Worth (1794-1849), a veteran of the War of 1812 and the Mexican-American War, and a renowned military tactician. Worth Monument sits in a parklet – Worth Park – within Madison Square, at the intersection of Fifth Avenue, Broadway, and 25th Street. See "Worth Square Monuments - General William Jenkins Worth Monument: NYC Parks", NYC Parks <https://www.nycgovparks.org/parks/worth-square/monuments/1734> [accessed 6 July 2017].
[47] Fuller, p.59.

The advent of the incandescent lamp, developed near-simultaneously by English physicist Joseph Swan and American inventor Thomas Edison in 1878-79, promised a more practical solution to modernity's problems of light. Early witnesses to Edison's efforts in incandescent lighting, captivated by the "surprising organic beauty" of the incandescent light, compared it to "a little globe of sunshine", emitting a "bright, beautiful light, like the mellow glow of an Italian sunset".[48] These incandescent lamps were softer, subtler, more controllable than arc light. Unlike arc light, which was indivisible, meaning its intensity was could not be varied, the incandescent bulbs "could be made to light at various levels of intensity", and numerous lights could be powered from a central source while still operating independently, although the first central electricity stations weren't operational until 1882.[49]

The light incandescent lamps offered wasn't too dissimilar from gaslight – as Wolfgang Schivelbusch notes, part of Edison's aim was to invent "a small light having the mildness of gas" to effect an "exact imitation of all done by gas" – but the quality of light they afforded differed dramatically.[50] The incandescent bulb didn't consume oxygen, or release noxious chemicals into the interior air; the incandescent bulb carried very little risk of fire or explosion; didn't deteriorate fabrics or interior furnishings; didn't stain the interior with soot; its glow was steady, unfluctuating. The incandescent bulb didn't affect the temperature of its surroundings, even though the production of light in the bulb itself relied on the resistance of the electrical current heating the filament to the point that its atoms released energy, in the form of light.[51] As a report from the 1881 Paris Electricity Exposition concluded, the incandescent light appeared to be "totally independent of all external influences".[52] In separating light from fire for the first time in human history, electric illumination

[48] Freeberg, p. 52.
[49] Schivelbusch, pp. 56, 65; Jakle, p. 59.
[50] George S. Bryan, *Edison: The Man and His Work* (London and New York, NY: Garden City Publishing Co., 1926), p. 111, quoted in Schivelbusch, p. 58.
[51] John Toedt, Darrell Koza, and Kathleen Van Cleef-Toedt, *Chemical Composition of Everyday Products* (Westport, CT and London: Greenwood Publishing Group, 2005), p. 152. Only around ten percent of the light emitted by an incandescent bulb is visible; the rest of the energy is experienced as heat, meaning, as a source of light, filament bulbs are wildly inefficient.
[52] Henry de Parville, *L'Électricité et ses Applications* 2nd edn (Paris: Libraire de L'Académie de Médecine, 1883), p. 355, quoted in Schivelbusch, p. 60.

entered the public sphere as "an impossible paradox": brilliantly immaterial, effortlessly bright, and more than capable of satisfying the modern clamour for light.[53]

Tripping the Light Fantastic

In the public arena, electric illumination quickly became a spectacle in its own right. In the beginning, there was no way to disguise the introduction of the immense arc light towers that "gleam[ed] as pure and white as the full moon", but electric light itself soon emerged as a star attraction.[54] At the 1889 Exposition universelle in Paris, for example, the Eiffel Tower, erected for the occasion, beamed rays of blue, white, and red arc light over Paris. Not to be outdone, the World's Columbian Exposition of 1893, held in Chicago, was the "world's first electric fair", lit with an electric glow from 8,000 arc lamps and 130,000 incandescent lights – "more light bulbs than all the rest of the city of Chicago".[55] The Fair's Electric Building was touted as "the first ever devoted to demonstrating the 'mysteries and wonders and benefits and capabilities of electricity'": visitors to the Electric Building were greeted by a statue of Benjamin Franklin, complete with kite, which simultaneously reiterated the role of electricity within American history, and of America within the history of electricity itself.[56] Inside, at the heart of the General Electric exhibit, was an 82-foot "Tower of Light", "crowned" by a 1,000 pound "prismatic bulb made up of 30,000 pieces of cut glass, in the shape of Edison's incandescent lamp".[57]

Buoyed by the success of Chicago, organisers of the 1901 Pan American Exposition at Buffalo, New York chose electricity as the Exposition's central theme

[53] Nye, *Electrifying America*, p. 2.
[54] Wabash *Weekly Plain Dealer,* March 6, 1880, quoted in Peter Tocco, "The Night They Turned the Lights on in Wabash", *Indiana Magazine of History,* 95.4 (1999), 350-63, p. 355 <https://scholarworks.iu.edu/journals/index.php/imh/article/view/11762/17231> [accessed 14 August 2017]; *New York Haven Register*, 30 December 1879, quoted in Freeberg, p. 33.
[55] Chaim M. Rosenberg, *America at the Fair: Chicago's 1893 World's Columbian Exposition* (Charleston, SC and Chicago, IL: Arcadia Publishing, 2008), p. 128, referencing S. E. Hirsch and R. I. Goler, *A City Comes of Age: Chicago in the 1890s* (Chicago, IL: Chicago Historical Society, 1999). Rosenberg notes that "The Machinery Hall had a gigantic Westinghouse electricity-generating plant", while the "Edison, Thomson-Houston, Fort Wayne, and Western Electric companies had their own power plants, as did the German Siemens-Halske company".
[56] Rosenberg, p. 128, quoting from John J. Flinn, *Official Guide to the World's Columbian Exposition in the City of Chicago, State of Illinois, May 1 to October 26, 1893* (Chicago, IL: The Columbian Guide Company, 1893).
[57] Rosenberg, p. 169.

to highlight the first hydroelectric power station at Niagara Falls. At the heart of the Fairgrounds, Nye describes, the organisers constructed:

> a 400-foot electric town, covered with 40,000 small bulbs, with a 60-foot model of Niagara Falls gushing down its side. Rather than blind visitors with powerful lighting, Buffalo's engineers decided to use 200,000 small incandescent lights [...] in the fair's Grand Court, bathing it in an even diffusion of light so that it seemed a huge impressionist painting. The exclusive use of incandescents instead of arc lights permitted precise control over highlighting, contrast, and color, making the exhibition grounds into a subtle work of art.[58]

The grandest spectacle of the Exposition, however, came at night, and was captured on film by the Edison film company: the light show at the Electric Tower [Fig. 5.2]. The fifty seconds of footage opens in daylight with the camera slowly panning around the beaux-arts buildings surrounding the esplanade, visitors strolling the grounds; as the camera reaches the centrepiece of the Exposition – the Electric Tower – however, the screen fades to black.

When the image returns, it is night. The camera continues its slow plan. A brief, bright flash strikes the top of the frame. Then, a light: a fierce, bright beam. Then, the Electric Tower itself, outlined in light. Although in the film the lights appear only white, as Nye notes, pastel hues were use throughout the Exposition, and the Tower itself was decked "with tints of blue, green, and gold".[59] Against the blackness of the night, every ornate, bulb-adorned detail of the Tower is hyper-visible on film, but all sense of a supporting, physical structure underlying the display is lost: the Tower appears immaterial; a radiant outline of pure light. The searchlight returns, brighter, stronger, searing out from the top of the Tower, turning its beam from one side of the Tower Basin to the other, searching, blaring up into the night sky, before striking straight down; the glowing outline of the Tower vanishes entirely, engulfed in a pillar of light. Continuing its pan, the camera shifts to the other Exposition buildings, visible only as abstract outlines of light. Set against the dark, there is no sense of where one building ends and another begins. As the distinctive, curved dome of the Temple of Music, rendered in light, moves across the frame, the film ends, and the scene fades to black.

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[58] Nye, *Technological Sublime*, p. 149.

[59] David E. Nye, "The Transformation of American Urban Space: Early Electric Lighting, 1875-1915", in *Urban Lighting, Light Pollution and Society*, ed. by Josiane Meier and others (London and New York, NY: Routledge, 2014), pp. 30–45 (p. 35).

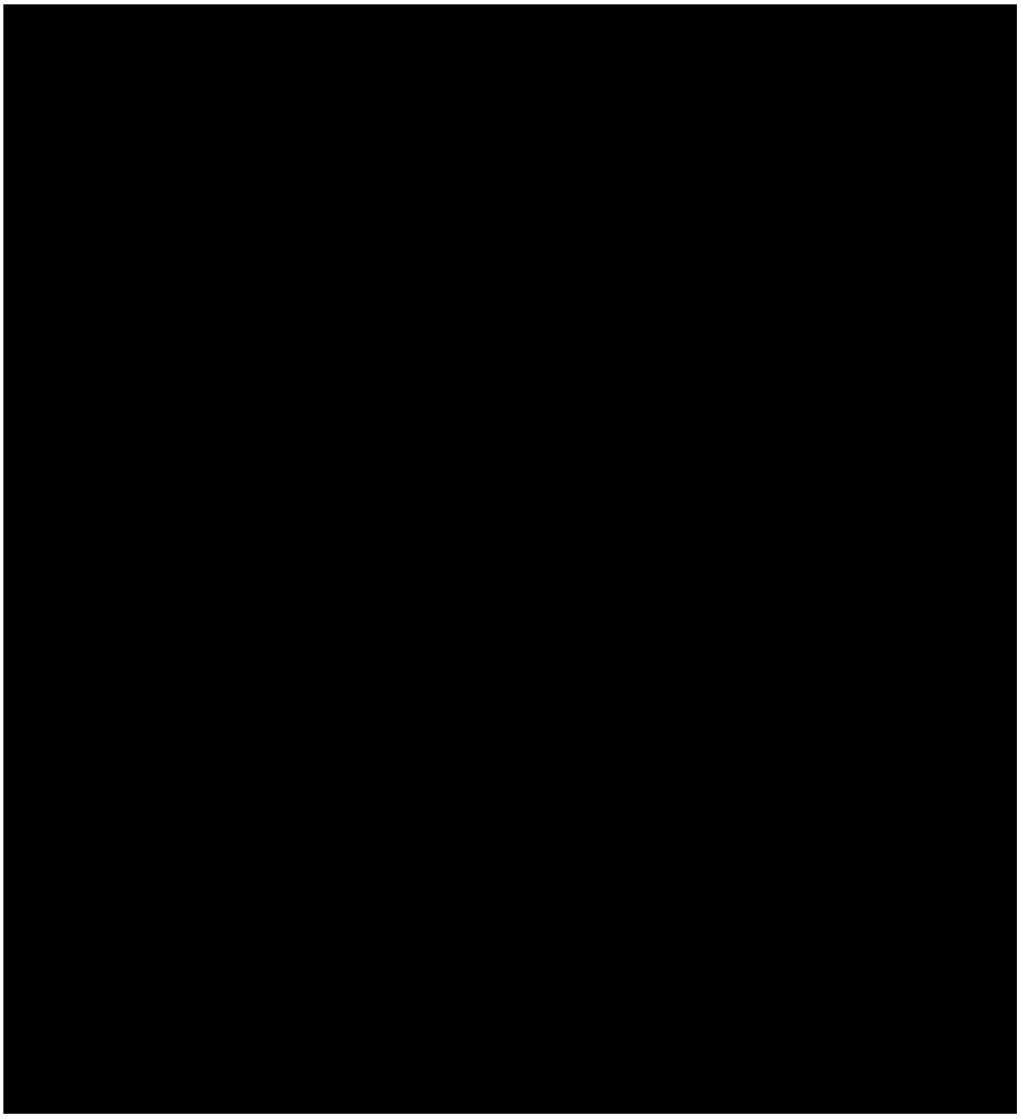

Fig. 5.2 Scenes from the light show on the Electric Tower, from Edwin S. Porter and James Henry White, *Pan-American Exposition by Night,* 1901. Thomas A. Edison, Inc. Video retrieved from Library of Congress.

This electric wonderland – the grand public spectacle of the Electric Tower – transforms the aesthetic of immateriality afforded by the technologies of electric illumination into an affective capacity. Here, electric light not only appears to transcend all prior material limitations, but also alters and distorts the physicality of the objects and environments that it illuminates. At the Exposition, an entire fairground is realised in daylight, plunged into dark, and etched again in light. Electric light, in effect, allows the organisers to switch the materiality of the world around them off and on at will.

In American cities, too, an electrically-illuminated nocturnal transformation began to occur. In a 1909 image of *Broadway at Night* [Fig. 5.3] Alvin Langdon Coburn captures the transcendent glow of the "great white globes" of arc light. Under the

rippling reflections of electric light, Broadway itself, slicked with rain, becomes an animated force, flowing through the composition. The fierce glow of the arc streetlights here is doubly muted, however, first by their translucent glass globe coverings, and then by the rain, transforming their light from the strident beams of Madison Square seen in Fig. 5.1 to a diffuse aura.[60]

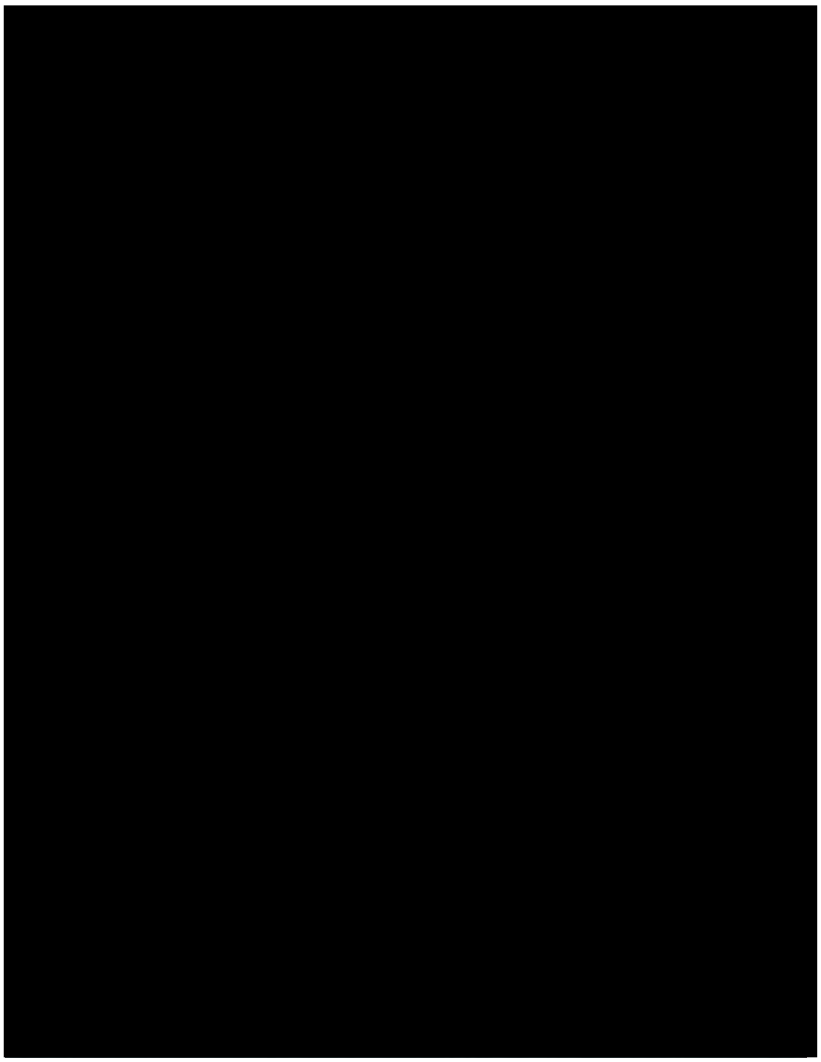

Fig. 5.3 Alvin Langdon Coburn, *Broadway at Night,* 1909. Photogravure. 20.2 x 14.9 cm (7 $^{15}/_{16}$ x 5 $^{7}/_{8}$ in.). The Elisha Whittelsey Collection, The Metropolitan Museum of Art, New York, NY.

Out of this wavering arc-lit mist, however, an incandescent spectacle emerges: advertising signs, glittering in the dark. Where the hazier, pictorial glow of the arc lights offers a dreamy, pictorial romanticism, the striking legibility of the advertising

[60] Arc lights were first installed on Broadway in 1880. See Edwin G. Burrows and Mike Wallace, *Gotham: A History of New York City to 1898* (Oxford: Oxford University Press, 1998), esp. pp. 1059-1070 for an overview of modern lighting in New York.

signs creates an electric spectacle similar to the one presented at the 1901 Exposition and captured on film by the Edison company. Just as the illumination of the Electric Tower simultaneously rendered its structure hyper-visible and wholly immaterial, the incandescent advertising signs in Coburn's photograph make their own letter forms hyper-visible while any sign of the physicality of the buildings behind the signs disappears entirely, lost in the grey city glow. At the very top of the frame, left of centre, a far fainter electrically-lit sign comes into view, its text illegible: this light alone reveals the presence of a building towering over the entire scene; the building itself is kept from view. Incandescent light once again performs its magic trick of making its supporting structures disappear: substance is rendered ephemeral here, the built environment present only by implication, with the vertical lettering of advertising signs alone left to suggest the verticality of New York's modern cityscape. As Nye describes, Coburn's aesthetic of nocturnal immateriality is reflective of the experience of the urban electric wonderland itself:

> In the night city there were no shadows, no depth, no laws of perspective, and no orderly relations between objects. At night the urban landscape no longer seemed physically solid. An immense sign bulked larger on the skyline than a far more substantial building, and gargantuan electrified objects distorted the sense of scale. The city as a whole seemed a jumble of layers, angles, and impossible proportions[.][61]

In Coburn's photograph, as in the filmed spectacle of the Exposition, as in the city itself, the aesthetic of electric immateriality prevails, as materiality is once again lost in the brilliant flare of electric light.

In these public spectaculars, Carolyn Marvin argues, the electric light dazzled "its audiences with novel messages".[62] Some of these "novel" electrical "messages" were quite literal. Alongside the incandescent awnings of Coburn's Broadway, as Marvin describes, an "electrically powered monster magic lantern" sat on top of Joseph Pulitzer's *World* building in New York projecting "stencil-plate slides of figures, words, and advertisements upon the clouds or, on clear nights, nearby buildings"; at the 1925 Paris exhibition, Tag Gronberg notes, the Eiffel Tower was lit

[61] Nye, *Technological Sublime*, p. 196.
[62] Marvin, p. 6.

with electric bulbs to spell out "Citroën", "a sign visible from 40 kilometers".[63] The nightly displays at the Electric Tower were markedly less verbal in their transmissions, but nonetheless offered an equally legible message to the crowd of awestruck onlookers. Here, the medium *was* the message, to paraphrase Marshall McLuhan: "The most immediate message conveyed by electric lights", Marvin concludes, "was that the occasion of their appearance was as colorful and worthy of notice as they were."[64] The message of electric light, quite simply, sought only to reinforce the spectacularity of electric light itself.

For Marvin, these electric arrays were simply the modern incarnation of a long-established tradition of communities coming together around incandescent light to rally against the forces of the night, from "the village bonfire that predated the Middle Ages" to "the float-wick oil lamp of the eighteenth-century garden fête".[65] While these early events helped to "intimidate heathen hordes", modern feats of electric light served "to remind attentive audiences of the existence and justification of vested power" – in energies companies, in technological infrastructure, in emergent consumer capitalism – "and to impress on them its size and majesty".[66] In these modern light spectaculars, as electricity danced through wires in flares and flashes under human command and for pure human delight, the awesome power of human ingenuity was beamed out for all to see. As William Chapman Sharpe summarises, "The ability of the city to transcend the rhythms of nature, to banish night so that its own artifice could reign supreme, came to symbolize the essence of progress, the culmination of technical prowess and cultural sophistication."[67]

Yet, within these electric wonderlands, an emphasis on the effortlessness of electric technology, rather than on the mammoth human effort involved in its

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[63] Marvin, p. 186, referencing "Advertising on the Clouds", *Invention* (London), 17 February 1894, pp. 150-51; Tag Gronberg, "Beware Beautiful Women: The 1920s Shopwindow Mannequin and the Physiognomy of Effacement", *Art History,* 20.3 (1997), 375-96 (p. 375) <http://onlinelibrary.wiley.com/doi/10.1111/1467-8365.00068/pdf> [accessed 28 August 2017].

[64] Marshall McLuhan, *Understanding Media: The Extensions of Man* [1964] (Berkeley, CA: Ginko Press, 2013); Marvin, p. 159. Marvin situates her analysis of electric light as a medium of communication in the wake of McLuhan's work, arguing that although "McLuhan's notion of an information medium was unconventionally broad" in encompassing the electric light, "this would have been a perfectly sensible claim in both Britain and the United States in the late nineteenth century", where electric light, in "much social imagination […] was the premier mass medium of the future". See pp. 158-159, 6.

[65] Marvin, p. 159.

[66] Marvin, p. 159.

[67] William Chapman Sharpe, *New York Nocturne: The City After Dark in Literature, Painting, and Photography* (Princeton, NJ, and Oxford: Princeton University Press, 2008), p. 2.

development, construction, and maintenance, prevailed. Praising the electric spectacle of New York in *Camera Work* in 1911, Coburn reached for a language of divine intervention to downplay the mechanical mundanities of electrical light:

> It is only at twilight that the city reveals itself to me in the fulness of its beauty, when the arc lights on the Avenue click into being. Many an evening I have watched them [...] They begin somewhere about Twenty-sixth street, where it is darkest, and then gradually the great white globes glow one by one, up past the Waldorf and the new Library, like the stringing of pearls, until they bust out into a diamond pendant at the group of hotels at Fifty-ninth street. Probably there is a man at a switchboard somewhere, but the effect is like destiny, and regularly each night, like the stars, we have this lighting up of the Avenue.[68]

Ezra Pound, similarly taken with the electric lights of New York, asserted: "No urban nights are like the nights there [...] one sees but the lighted windows. Squares after squares of flame, set and cut into the ether. Here is our poetry, for we have pulled down the stars to our will."[69] In these electric "fairylands", the effects of electric light were described as "dreamlike", "supernatural", rather than feats of innovation; Edison himself was regularly referred to in newspapers as the "Wizard" of Menlo Park (the site of his research laboratory in New Jersey).[70] Electric light not only appeared to be an immaterial source of artificial light, wholly set apart from the material world, but was consistently presented and conceptualised as a transcendent phenomenon, fashioned from a mix of human ingenuity and near-magical immateriality. In its dazzling public displays, electric light made modernisation itself appear effortless, immaterial, and seemingly realised modernity's dream of leaving the material world, with all its liveliness, messiness, and limitations, behind.

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[68] Alvin Langdon Coburn, "The Relation of Time to Art", *Camera Work,* 36 (1911), p. 73, quoted on "Alvin Langdon Coburn | Broadway at Night | The Met", The Metropolitan Museum of Art, New York, NY <http://www.metmuseum.org/art/collection/search/260096> [accessed 18 July 2017].

[69] Ezra Pound, "Patria Mia" [1913] in *Patria Mia and the Treatise on Harmony* (London: Peter Owen Limited, 1962), pp. 9-73 (p.19).

[70] Marvin, p. 165; On the publicity surrounding Edison, see, for example, *The Arizona Sentinel* (Yuma County, AZ), 5 October 1889, *Chronicling America* <http://chroniclingamerica.loc.gov/lccn/sn84021912/1889-10-05/ed-1/seq-4/> [accessed 7 July 2017] or the *Pittsburgh Dispatch* (Pittsburgh, PA), 15 July 1889, *Chronicling America* <http://chroniclingamerica.loc.gov/lccn/sn84024546/1889-07-15/ed-1/seq-1/> [accessed 7 July 2015].

Domesticating Electric Light

Following these grand public spectacles, Lisa Gitelman and Theresa M. Collins write, a "well-publicised illumination of houses of every sort – residential, banking, printing, legislative, and theatrical" – ensued, working "to reinforce a broad logic of domestication that may have helped to make the incipient infrastructure of electrical power distribution more knowable".[71] Persuading consumers to introduce electric illumination into the domestic sphere, however, required far more than the successful electrification of public buildings. Frustrations remained about the lingering uncertainties surrounding electrical materiality. An 1884 contributor to the American journal *Science* lamented that "We shall probably never know what electricity is".[72] The public, too, appeared mystified by the newfound power available at their fingertips. As Marvin notes, "Not knowing how to turn off the light was a familiar comic theme" in both newspapers and electrical trade journals at the close of the nineteenth century:

> A cartoon in an illustrated paper showed Uncle Hayseed [a hapless character from the countryside] in a New York hotel inverting his large, rude boot over the lamp after many futile attempts to blow it out. In another story, a puzzled rancher at a Seattle hotel finally succeeded in uncoiling the wire from which the lamp in his room hung, so that he could stuff it into a bureau drawer to extinguish it.[73]

Even publications designed to advise their readers about using *Electricity in the Service of the Home* willingly admitted the limitations of their knowledge of the topic: "It is impossible for me to tell what Electricity is", Maud Lucas Lancaster wrote in 1914. "I cannot even learn myself from our greatest Scientists what Electricity really is".[74] To

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[71] Gitelman, Lisa, and Theresa M. Collins, "Medium Light: Revisiting Edisonian Modernity", *Critical Quarterly,* 51.2 (2009), 1-14 (p. 10) <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8705.2009.01857.x> [accessed 16 December 2015].

[72] "What Is Electricity?", *Science*, 4.84 (1884), 232–34 (p. 232) <http://www.jstor.org/stable/1759734> [accessed 2 July 2017].

[73] Marvin, p. 18, referencing "Novel Uses of Incandescent Lamps – 'A Flash of Darkness'", *Electrical Review* (October 10 1891), p. 94; *Electrical Review* (October 3 1891), p. 77. On uses of the term "hayseed", see Leslie Dunkling, *A Dictionary of Epithets and Terms of Address* [1990] (London and New York, NY: Routledge, 2008).

[74] Maud Lucas Lancaster, *Electric Cooking, Heating and Cleaning: A Manual of Electricity in the Service of the Home* (New York, NY: D. Van Nostrand, 1914), p. 7, *HEARTH* <http://hearth.library.cornell.ed/cgi/text/text-idx?c=hearth;idno=4400448> [accessed 13 June 2017].

persuade consumers to invite this mysterious force into their homes, the radical newness of this emergent incandescent world had to be downplayed, and the affective capacities of electric light reworked instead into a language of electrical subservience and human control. Yet, throughout these conceptual shifts in approaches to electric light, the aesthetic of electrical immateriality prevailed.

In housekeeping literature, concerns about the brilliance and colour of electric light abounded. The whiteness of electric light, Chris Otter notes, "was often an unpleasant shock" after the "ochreous, cosy" yellowness of oil and gas light, and even appeared "bluish" to the eye.[75] In their 1915 *Good Taste in Home Furnishing*, Mary Ann and Henry Blackman Sell cautioned that, while "white" electric light was "unquestioningly valuable in shops and in the service part of the house, there are many reasons why it should be kept out of rooms of [...] 'comfort' and 'activity'", such as reception rooms, sleeping rooms, and living rooms.[76] Chief among these reasons was the prospect of fatigue.[77] The Sells advocated "coating or covering the tungstens with amber-colored 'gelatine film' (such as is used in theaters to produce colored light effects)" to prevent the eyes from becoming unduly tired by the new, harsh whiteness of electric light.[78] In 1924, Frederick W. Ives provided an illustrated caution against admitting "uncontrolled" electric light into the home [Fig. 5.4], portraying unshaded beams of electric light as itinerant arrows, mercilessly conquering the domestic space.[79] Shaded lights, in contrast, offered a far softer effect, their beams represented as quiet adornments, almost indistinguishable from delicate tassels on the lampshades themselves. Even with the multitude of advantages electric light offered over candles, oil, and gas – being, in the home at least, cleaner, brighter, safer, and more reliable – the desire wasn't simply to bring electric light into the domestic space, but to ensure that the vibrancy of electric light itself was thoroughly domesticated.

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[75] Chris Otter, *The Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (Chicago, IL and London: University of Chicago Press, 2008), p. 185.

[76] Maud Ann Sell and Henry Blackman Sell, *Good Taste in Home Furnishing* (New York, NY: John Lane Co., 1915), p. 78, *Home Economics Archive: Research, Tradition and History (HEARTH)* (Ithaca, NY: Albert R. Mann Library, Cornell University) <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4614958> [accessed 13 October 2015] The Sells also include a diagram demonstrating the various categories of rooms and their appropriate lighting, rendered as part-family tree, part-electric candelabra. See p. 69.

[77] Sell and Sell, p. 78.

[78] Sell and Sell, p. 81.

[79] Frederick W. Ives, *Home Conveniences* (New York, NY and London: Harper and Brothers Publishers, 1924), *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4302047> [accessed 13 August 2017].

Fig. 5.4
Illustration of the "value of controlled light", from Frederick W. Ives, *Home Conveniences,* p. 174.

One of the key virtues of electric light, as expressed within housekeeping literatures of the early twentieth century, was its capacity to slip, almost unnoticed, into the existing structures of the home. Advising on *Simple Furnishing and Arrangement* in 1921, Helen and John Gloag found that, while "electric light offers comfort and convenience", its "supreme advantage" over gas and oil lighting was that "practically any fitting can be wired" to suit electric "lamps and candles".[80] "This means," the Gloags wrote, "that we are able to use a great number of beautiful designs which were originally made for wax candles and which lose none of their grace or beauty for being adapted for electric light."[81] (See, for example, the accompanying illustrations in Fig. 5.5). Lillie Hamilton French, writing in 1903, similarly noted that, "When there is electricity in the house, candelabra are often utilized for the mantel, the electric wires being made to run up the backs of the candlesticks, where they remain invisible".[82]

Fig. 5.5
Illustrations of suggested electrical fixtures, from Helen Gloag and John Gloag, *Simple Furnishing and Arrangement,* pp. 130, 132.

[80] Helen Gloag and John Gloag, *Simple Furnishing and Arrangement* (London: Duckworth, 1921), p. 128, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4118620> [accessed 20 February 2016].
[81] Gloag and Gloag, p. 128.
[82] Lillie Hamilton French, *Homes and Their Decoration* (New York, NY: Dodd, Mead and Co., 1903), p. 353, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4399950> [accessed 13 August 2017].

Writing on *House and Home* twenty years later, Greta Gray echoed this emphasis on concealing the signs of electrical adaptation, declaring that, "In order to get the right effect the source of light should be as little in evidence as possible."[83] As Charles Bazerman summarises:

> Electric lighting arrived in the American home in a bouquet of flowers and ornaments. The fixtures were ornate, the illustrations of domestic scenes incorporating light were florid and elegant, and the descriptions of domestic lighting were full of the language of aesthetics [...] Until modern design invaded middle-class suburbs after World War II, lighting was almost always heavily adorned with ceramic and stained glass representations of flowers and classical art, creating an aesthetic of genteel affluence.[84]

Within a modern aesthetic that increasingly prided itself on material honesty (as discussed in Chapter Three), it is somewhat curious that literature on integrating electric light into the home repeatedly emphasised concealing, disguising, or tempering any and all signs of the newness of this modern, electric technology. Electric light was somehow too bright, too brilliant, too offensively *modern* in its dematerialisation of illumination, to be allowed to enter the home unchecked. Only by pretending to be what it was not – antique; traditional; other forms of light, even, as in the porcelain candle lamps of Fig. 5.6 – could electric light be safely welcomed into the domestic space.

The design of electric lamps also helped to perpetuate this aesthetic. "Although Edison's incandescent lighting system was one of the most sophisticated pieces of technology yet created," Freeberg notes, consumers using Edison's first incandescent bulbs "marveled that they were 'simplicity itself'": the material complexity of the entire electric enterprise "had been engineered out of sight, invisible to the consumer".[85] In the domestic interior, consumers encountered electric light as a bulb, with a wire, connected to a socket, that could be turned "on or off at pleasure" using a key.[86] The bulb was "a mass-produced object – not quite cheap at fifty cents or a dollar, but an expendable item to be tossed in the trash when it broke".[87] The

[83] Greta Gray, *House and Home: A Manual and Text-Book of Practical House Planning* (Philadelphia, PA: J. B. Lippincott Co., 1923), p. 125, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4305819> [accessed 13 August 2017].
[84] Bazerman, p. 313.
[85] Freeberg, p. 72, quoting from the *New York Herald,* 5 September 1882.
[86] Freeberg, p. 73.
[87] Freeberg, p. 73.

wire was easily hidden out of sight within or behind the body of a light fixture. The key, as Schivelbusch argues, was strikingly similar to the gas taps already in use: "Actual switches and the ability to turn lights on at a distance", writes Schivelbusch, were "much later developments".[88]

In mimicking existing forms of illumination technology, manufacturers minimised any sense of intrusion into the domestic space while simultaneously confirming the superiority of electric light over its predecessors by emphasising its immateriality. While the keys to electric light echoed the taps for gas, for example, they were also, crucially, different:

> Unlike gaslight that had to be physically lit – "One turns on the tap, lights a match and the light flares up" – and then began to burn with the leisureliness of a candle flame, electric light comes on in an instant: "You come home, turn on the switch, and without fire, without a match, the whole house lights up."[89]

Consider the bulbs advocated for use in candelabras and candlesticks too, such as those in Fig. 5.6, fashioned from porcelain and tipped with glass in a crafted approximation of a flame.

Fig. 5.6 Illustration of a 5-light electrolier in oxidised silver, and a 2-light bracket in old candle brass, both with electric candle lamps, by F & C Osler Ltd., London, from J. H. Elder-Duncan, *The House Beautiful and Useful,* p. 69.

[88] Schivelbusch, pp. 67, 68.

[89] Henry de Parville, *L'Electricité et ses applications,* 2nd edn (Paris: 1883), p. 335, quoted in Schivelbusch, p. 67.

Not only did these bulbs preserve the desired aesthetic of seeming candlelight, but these electric candle lamps also perpetually underscored the magical immateriality of electric light by inviting sustained comparison to the candles that they resemble. Where candles hissed, flickered, crackled, and dripped wax, these electric imitations were silent, steady, and clean. Where wax pooled in the saucers at the base of the candle sockets (the bobèche), these electric candle lamps offered brighter light without any of the messiness of material incandescence. While candles (and oil lamps) required "wick trimming and soot cleaning", the electric light needed no such maintenance: "As far as the customer was concerned," Freeberg writes, "the bulb worked for about six hundred hours, until it either broke or began to blacken and dim. Then an electric company worker could replace the expired bulb in a minute or two."[90] By designing bulbs that combined easily with the existing fixtures and fittings of the domestic interior, manufacturers of electric light downplayed the radical newness of their technology, while at the same time underscoring the emergent aesthetic of electrical immateriality that surrounded public demonstrations of electric illumination.

The comparative convenience and seemingly effortless immateriality of electric illumination captured the public imagination. As Schivelbusch notes, in the commentary of Henry de Parville, quoted above, "it is not simply one room, but the whole house that is suddenly bathed in light".[91] An 1882 contributor to *Harper's Bazaar* was similarly captivated – overexcited, even – by the comparative virtues of electric light over gas:

> Gas spoils woman's complexion and tarnishes her silver, and she repays this cruelty with hatred and suspicion. She is always suspecting gas of surreptitiously leaking with a view to poisoning the family and blowing up the house [...]
>
> With the introduction of the electric light there will be an end to this frequent and deplorable dissention in regard to the leakage of gas. The electricity can not leak, and even if it could, the most gifted of women could not detect the fact by the sense of smell [...] Divorce was almost unknown in this country before the introduction of gas, and we may hope that the abolition of gas will bring back the peace that once invariably characterized the American household, where nothing leaked at night, except perhaps the roof or the cider barrel.[92]

[90] Freeberg, p. 73.
[91] Schivelbusch, p. 67.
[92] "Sweetness and Light", *Harper's Bazaar,* 15.40 (1882), p. 626, *HEARTH* <http://hearth.library.cornell.edu/cgi/t/text/text-idx?c=hearth;idno=4732809_1450_041> [accessed 14 August 2017].

Gas, here, is presented as affective matter, "tarnishing" women's silver and ruining her "complexion"; electricity, in contrast, possesses no affect at all. The material affectivity of gas is instilled with an intrinsic malevolence, as gas "surreptitiously [leaks] with a view to poisoning the family and blowing up the house". Like microbes and germs, those newly-discovered agents of contagion, gas is described as lively, affective matter, actively scheming to undermine the safety and sanctity of the human home. Electricity, in comparison, has no such nefarious desires lurking within its liveliness: in this commentary, electricity has no sense of liveliness at all. "The electricity can not leak," the writer assures us – even though, in 1882, electricity was widely classified as a fluid – further, even if it could leak, the writer assures us, its immateriality would render such a leak undetectable. Where gas schemes against human desire, acting according to its own hostile will, electricity remains throughout the agent of "the inventors" of the electric light, a traceless servant of their designs. Lucas Lancaster, writing in 1914, reaffirmed this vision of electric docility: "Electricity [...] makes a most valuable servant, when put to do useful work. In its capacity as a servant, it is always at hand; always willing to do its allotted task and do it perfectly, silently, swiftly and without mess; never wants a day off; never answers back".[93] The domestication of electric light, then, not only perpetuated the seeming immateriality of electrical illumination, but also denigrated previous sources of artificial light by emphasising their messy, material liveliness.

On a grander scale, however, electric light proved far messier than any household coal burner. As the use of domestic electricity spread, and it "became apparent that high-voltage current could be transported over long distances without an appreciable loss of voltage," Schivelbusch writes,

> Central electricity stations [such as Edison's Pearl Street coal-burning station] were replaced by power stations built not in the cities they supplied but in areas where the energy required to generate electricity was cheapest. The new locations – in coal-mining districts, near waterfalls or dams – were often hundreds of kilometres away from where the electricity was used.[94]

Around these distant sources of electrical power, whirring vaguely in the mists of modernity, veritable "mountains" of ash "surreptitiously grew", as vast quantities of

[93] Lancaster, p. 8.
[94] Schivelbusch, p. 66.

coal were consumed to generate this new, "immaterial" form of domestic energy.[95] Yet, as Kevin Trumpeter argues, a "physical and psychological gulf emerged between the light [...] that people were then beginning to enjoy and the waste that that enjoyment would inevitably create", as all signs of the messy, material origins of this seemingly immaterial electricity were concealed from the consumer.[96] Trumpeter concludes: "As technological innovation promised to make twentieth-century existence increasingly convenient, it also made that existence appear a good deal tidier, at least from the circumscribed local perspective through which we are predisposed to view our physical environment."[97] As far as domestic consumers were concerned, then, electricity within the home more than lived up to its public promise of immateriality.

The Doylestown Interiors

On the surface, Charles Sheeler's Doylestown interior photographs appear to adopt a similar aesthetic of domestic electrical immateriality. Across a sequence of twelve interior images, each taken at night, each lit by the fierce glow of a photographer's lamp, Sheeler fractures the domestic interior into a series of dramatically lit spectacles, exploring how the traditional home might be reshaped as radically new and radically modern as a result of the aesthetics of immateriality that surround the electric light.

This reading of the Doylestown interiors would certainly fit with Sheeler's categorisation as a Precisionist artist of the Machine Age. Sheeler is often known as a celebrant of the power of American industry, thanks to his commercial commission in 1927 to photograph the Ford Motor Company's manufacturing plant in River Rouge, Michigan – at that time, the largest factory in the world – and the clean lines and hard geometries of his oil paintings, such as *American Landscape* (1930) – a rendering of the River Rouge plant, with a smoke stack dominating the grey sky – and his 1929 *Upper Deck*, a realist, yet abstracted, painting of the motors, ventilator, and

[95] Kevin Trumpeter, "Furnishing Modernist Fiction: The Aesthetics of Refuse", *Modernism/Modernity*, 20.2 (2013), 307–28 (p. 310) <https://muse.jhu.edu/article/511008/pdf> [accessed 14 August 2014].
[96] Trumpeter, p. 310.
[97] Trumpeter, p. 310.

exhaust fans of the S.S. *Majestic*.[98] That Sheeler regularly and repeatedly moved across media, translating his precise, realist photographic images into "clinical", "cold, objective, and emotionless" oil paintings and pencil sketches only enhances this impression of the precise, machinic quality of his work.[99] As Wanda Corn summarises, "Sheeler's credentials as a machine ageist are impeccable."[100]

In the 1916-17 Doylestown series, however, Sheeler was experimenting with a very different photographic aesthetic, influenced by both the flat, bold forms of abstraction found in Cubism and the "rules of reproducibility and legibility of straight, documentary photography" he followed during his time as a commercial photographer for Pennsylvania architects between 1912 and 1914.[101] The resultant photographs, Marius de Zayas giddily declared, "proved that Cubism exists in nature and that photography can record it".[102]

The sixteen images that comprise the Doylestown series centre on an old, colonial cottage in Doylestown, Bucks County, in rural Pennsylvania.[103] Sheeler and his friend and fellow artist, Morton Schamberg, used the cottage as an artistic retreat from the bustle of New York, until Schamberg's death during the 1918 influenza epidemic.[104] During their tenancy, Sheeler and Schamberg undertook rudimentary repairs, whitewashed the interior walls, and stripped away "many recently added

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[98] "Charles Sheeler, River Rouge Plant", Whitney Museum of American Art, New York, NY <http://collection.whitney.org/object/1480> [accessed 3 July 2017]; "Upper Deck, Charles Sheeler", *The Met's Heilbrunn Timeline of Art History,* The Metropolitan Museum of Art, New York, NY <http://www.metmuseum.org/toah/works-of-art/2005.100.155/> [accessed 3 July 2017].

[99] Mark Rawlinson, "Charles Sheeler's Imprecise Precisionism", *Comparative American Studies*, 2.4 (2004), 470–86, (pp. 472–75) <http://dx.doi.org/10.1177/1477570004048082> [accessed 12 December 2015].

[100] Wanda M. Corn, *The Great American Thing: Modern Art and National Identity, 1915-1935* (Berkeley and Los Angeles, CA, and London: University of California Press, 1999), p. 295.

[101] Gilles Mora, "Charles Sheeler: A Radical Modernism", in *The Photography of Charles Sheeler, American Modernist,* by Theodore E. Stebbins Jr., Gilles Mora, and Karen E. Haas (Boston, MA: Bullfinch Press, 2002), pp. 79–93 (p. 82).

[102] "Exhibition of the Photographs of Charles Sheeler'" exhibition announcement, the Modern Gallery (New York, NY, 1917), quoted in quoted in Charles Brock, *Charles Sheeler, Across Media* (Washington, D.C.: National Gallery of Art, 2006), p. 29.

[103] The photographs which comprise the Doylestown series are all titled *Doylestown House,* followed by a more specific title, resulting in compound titles such as *Doylestown House, Downstairs Window*. As I am specifically focusing on these Doylestown interior photographs throughout, I refer to images only by the latter part of their titles, mainly to prevent extensive repetition.

[104] Karen Mae Lucic, "The Present and the Past in the Work of Charles Sheeler", (unpublished PhD thesis, Yale University, 1989). Sheeler continued renting the Doylestown house until 1926; Lucic suggests that Sheeler's continued investment in the property "indicates that he conceived of the house as a kind of shrine" to Schamberg (p. 53, 55).

appurtenances", leaving the "rustic" house sparsely furnished.[105] Between 1916 and 1917, Sheeler produced sixteen photographs of the Doylestown house: four exterior shots, taken in daylight, and twelve interior shots, all taken at night using the light from a photographer's lamp. The shots of the Doylestown interior are all decidedly unhomely: the rooms are devoid of most signs of human presence or habitation and are held between stark contrasts of extreme light and encroaching shadow.

Critical accounts of the Doylestown series often comment on Sheeler's use of artificial light without focusing directly on the medium of this light itself. Karen Lucic identifies that, in *The Stove* at least, "the evenness of light indicates that the actual source is a bright photographer's or kerosene lamp".[106] As Lucic's statement implies, pinning down the exact type of light Sheeler used is difficult, as the lamp itself is never in shot. Weston Naef, curator of the J. Paul Getty Museum photographic collection, however, states that the "interior is photographed [...] with a single source of artificial light blasting from [...] the electric bulbs that had recently come into use by photographers"; yet, as Lucic notes, the Doylestown house itself was "apparently without electricity".[107] Although battery-operated electric lights were in use at the time – French photographer Félix Nadar had used the stark glow of battery-operated electric arc lights to capture the catacombs and sewers of Paris as early as 1861 – it seems unlikely that Sheeler managed to conceal such apparatus within or behind the body of the stove.[108] What we have in the Doylestown series, then, is a portrait of house whose aesthetics of immaterial illumination are profoundly and repeatedly shaped by the discourses surrounding the immateriality of electric light. Sheeler performs a faux-electrification of the Doylestown interior, where a fiercely bright artificial light – either kerosene or electric – throws "every crack, repair and bulge in

[105] Karen Lucic, *Charles Sheeler in Doylestown: American Modernism and the Pennsylvania Tradition* (Allentown, PA: Allentown Art Museum, 1997), p. 19. The house was built by Jonathan Worthington in 1768; a 1908 publication from the Bucks County Historical Society describes the property as in a state of disrepair, noting that, although the "old flat door-step over which the Colonial owner entered his primitive palace is still in place", the "immense fireplace" of the southwestern wall is "now open to the elements". Warren S. Ely, "The Old Worthington House", ca. 1908, quoted in Brock, p. 22.

[106] Karen Lucic, "On the Threshold: Charles Sheeler's Early Photographs", *Prospects*, 20 (1995), 227–55 (p. 232) <https://doi.org/10.1017/S0361233300006074> [accessed 18 November 2014].

[107] Weston Naef, *The J. Paul Getty Museum Handbook of the Photographs Collection* (Malibu, CA: The J. Paul Getty Museum, 1995), p. 143; Lucic, *Sheeler in Doylestown,* p. 19.

[108] Shao-Chien Tseng, "Nadar's Photography of Subterranean Paris: Mapping the Urban Body", *History of Photography,* 38.3 (2014), 233-54 <http://dx.doi.org/10.1080/03087298.2014. 881150> [accessed 7 July 2017].

the walls [...] into high visibility".[109] Light in the Doylestown series is denied a physical, material presence; here, Sheeler engages the aesthetics of electric illumination to explore the disruptive affect and abstracting potential of introducing such artificial light into the domestic space.

In the most well-known of the Doylestown interior images, *The Stove*, Sheeler's decision to conceal the source of artificial light positions his work within the emergent aesthetic of electrical immateriality.[110] Critical accounts of *The Stove* [Fig. 5.7] situate the photograph as anticipatory of Sheeler's Machine Age idiom. As Lucic notes, in this image Sheeler "virtually ignores the colonial fireplace" just visible in traces of a mantle and a stone hearth on the left-hand side of the frame, in favour of emphasising the nineteenth-century stove, a much later technological addition to the cottage.[111] For Lucic, this decision to focus on the more modern, incursive technology, "removes the Doylestown house interior from sentimental associations of domestic life in colonial days and convivial family gatherings around a blazing hearth", allowing Sheeler to "firmly" distance himself "from ancestor worship and antiquarianism".[112] For Charles Brock, this turn away from the hearth, towards the stove results in a near-religious idolatry of technology, as backlighting "the convex form of the matte black stove" rings the stove with "an aura or halo that has religious overtones".[113] Yet, as Lucic concludes, "the stove retains undeniable symbolism" of home fires burning: "it contains light and provides an alternative to the total darkness outside the room".[114] For Mark Rawlinson, this stove-light

> appears like a sun [...] acting as a forcefield that binds [...] the other photographs [in the series] together [...] It seems possible to imagine that in the other photographs [...] the light source is not a strategically placed

[109] David Peters Corbett, "The Problematic Past in the Work of Charles Sheeler, 1917–1927" *Journal of American Studies*, 45.03 (2011), 559–80 (p. 572) <https://www.jstor.org/stable/23016789> [accessed 14 March 2015].

[110] Sheeler repeatedly returned to this image of *The Stove,* translating the photograph into a conté crayon sketch called *Interior with Stove* in 1932; in his photographic *Self-Portrait at Easel* (ca. 1932), Sheeler is pictured working on this sketch. Sheeler translates this image of himself from *Self-Portrait at Easel,* working on *Interior with Stove,* into his "enigmatic" 1940 oil painting, *The Artist Looks at Nature*. Although Sheeler revisited other images from the Doylestown series in different media, he returned to *The Stove* most often. See Karen E. Haas, "'Opening the Other Eye': Charles Sheeler and the Uses of Photography", in *The Photography of Charles Sheeler,* pp. 119-39.

[111] Lucic, "On the Threshold", p. 232.

[112] Lucic, *Sheeler in Doylestown*, p. 24.

[113] Brock, p. 25.

[114] Lucic, *Sheeler in Doylestown*, p. 24.

photographic lamp but the light from this stove emanating through the house.[115]

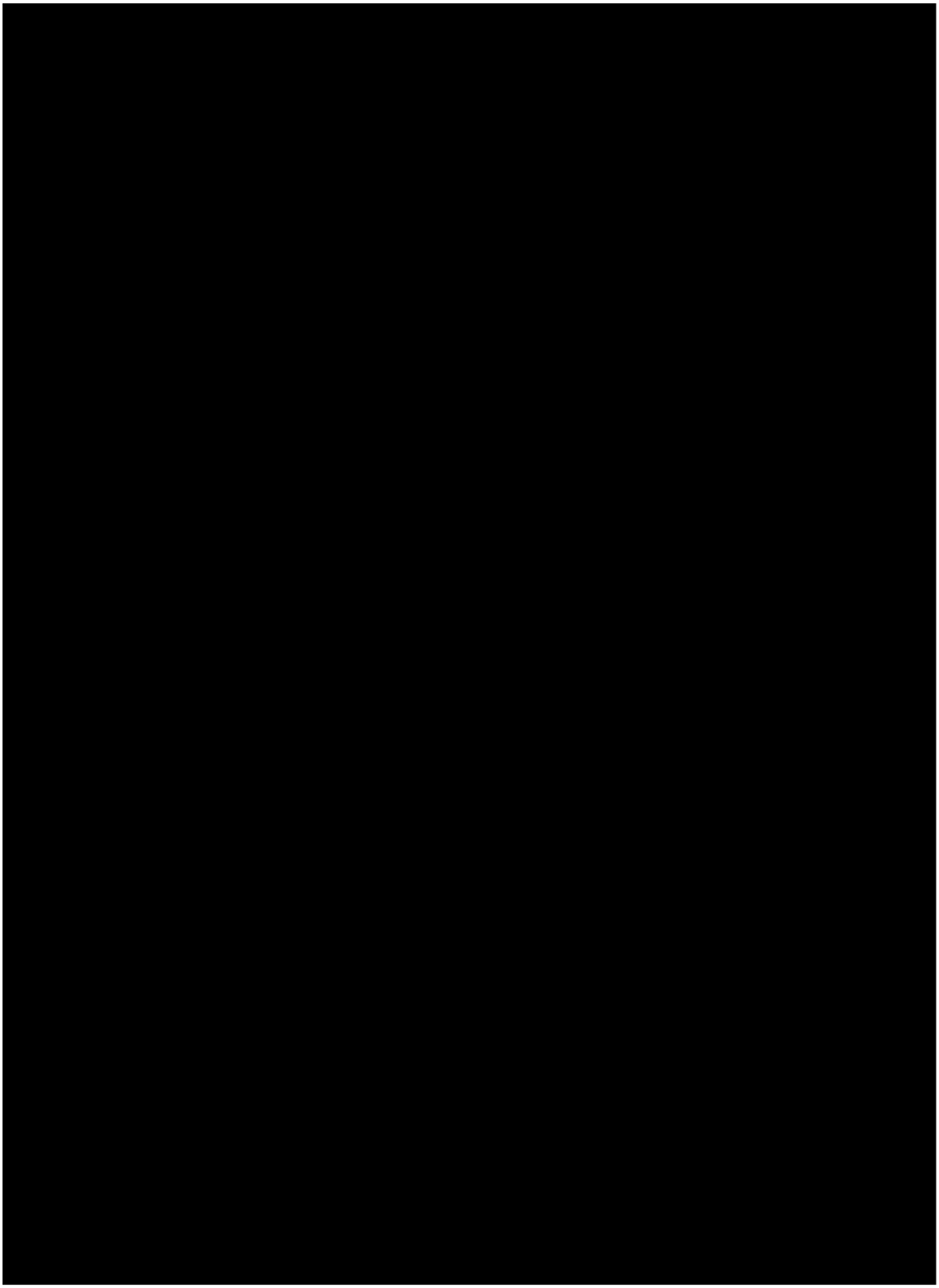

Fig. 5.7 Charles Sheeler, *Doylestown House – The Stove,* ca. 1916-17. Gelatin silver print. 23.1 x 16 cm (9 $^{1}/_{16}$ x 6 $^{7}/_{16}$ in.). The Lane Collection, The Metropolitan Museum of Art, New York, NY.

[115] Rawlinson, *Borders of Abstraction*, p. 39.

The light within *The Stove*, however, isn't *from* the stove at all, but from a lamp, fittingly concealed, without a trace, inside the form of an older technology. Like the elegantly wrought mock-candelabra electroliers or retrofitted electric candlesticks popular at the time of this photograph's taking [Fig. 5.6], the outer shell of an older technology in *The Stove* once again serves as an aesthetic shell for a more modern source of illumination. This stove, that needed filling with coal, and the ashes cleaning out, is quite literally eclipsed by the strident, bright light that leaves no material sign or trace within the scene. Where the stove dominates the centre of the composition, light appears as pure affect, dazzlingly bright, completely divorced from any signs of material presence or physical intrusion into the spaces of the home. As Lucic argues, "This substitution of artificial for natural light is a strategy that emphasises Sheeler's self-conscious control and manipulation of the illumination." [116]

It's hard, though, to view *The Stove* as a celebration of either of the two modern technologies evident within the scene. The stove itself is a "glowering silhouette", "a cold, black, abstract void" that "cuts across the picture and flattens space", holding us, as viewers, at bay, outside the domestic interior – hardly welcoming, warm, or inviting at all.[117] Although, as Brock describes, the shadow of the stove "projects past the lower border of the picture frame and into the space of the camera and the hypothetical viewer", implicating us within the scene, the flatness of the stove itself, with its thick, black pipe rising to the ceiling, blocks our access to the scene. We are kept in shadow, here, unable to reach the light.

Further, the light within *The Stove* – and across the series as a whole – is unsettlingly stark. The light may offer respite from the utter dark that waits outside the window, but the glow also *creates* the darkness that looms inside the interior itself. Shadows in this image and across the series all loom larger-than-life. The shadow cast by the chunk of wood next to the fieldstone hearth on the left-hand side of the frame overshadows the wood itself; the shadow cast by the windowsill spills upward, onto the panes of the window; the shadow of the door frame forms a black bar down the door. As Rawlinson writes:

> there's nothing subtle about the place, hard whitewashed walls, harshly lighted with excessive bright spots and deep, deep shadows, all add up to an uncomfortable place to be [...] These photographs are full of dark spaces,

[116] Lucic, "The Present and the Past", p. 44.
[117] Rawlinson, *Borders of Abstraction,* p. 39; Brock, p. x.

> looming silhouettes; there are thresholds that cannot be crossed [...] and windows that cannot be seen through. The interior thus becomes a site of containment, a claustrophobic space with harsh, unpredictable lighting and deep dark shadowy areas into which one dare not venture.[118]

Rawlinson reconciles the fierce unhomeliness of the lit environment with the implicit homeliness of the domestic space itself by inviting us to "picture the landscape in which the house sits [...] to imagine the lighted house as a beacon in the darkened landscape", where it becomes "a burrow, a place to hide, a bolthole [...] a miniature world that lies beyond the unhomely".[119] Yet, everything about the photographs themselves, and *The Stove* in particular, precludes such an escape from the confines of the interior. Lucic concludes: "In this scene, the doors and windows indicate no potential to open whatsoever. The elements in the room are so thoroughly self-enclosed, it hardly occurs to a viewer that an outside world might exist".[120] Sheeler's presentation of light compounds this sensation: it's not just that "two study locks secure [the] rough-hewn door leading to the outside", but that our access to the door is further barred by a black bar of shadow; it's not just that the night outside is dark, but that the darkness outside seems to pour *in*, through the silhouetted stove pipe and shadow of the windowsill. The aesthetics of electrical illumination employed here don't reaffirm the conceptualisation of electrical light as a blazing, immaterial power, staving off the dark, but instead present such immaterial light as devoid of warmth and comfort. Sheeler's aesthetic of immateriality, here, estranges us from the home, leaving us coldly isolated. Light, somewhat paradoxically in Sheeler's Doylestown interiors, keeps us in the dark.

The Affective Power of Electric Light

Implicit within the aesthetic of immateriality that surrounds electric light in both the public and the domestic spheres is the idea that electric light is thoroughly subject to human control. From the stars that "we have pulled down [...] to our will" and the carefully orchestrated dancing lights of expositions and advertisements, to the

[118] Rawlinson, *Borders of Abstraction*, pp. 38–39.
[119] Rawlinson, *Borders of Abstraction*, pp. 41–42.
[120] Lucic, "On the Threshold", p. 232.

effortless flick of a switch that illuminates "the whole house", electric light compounded the impression that electricity was utterly subservient to our human needs.[121]

Sheeler's engagement with the aesthetics of electric illumination in the Doylestown series in no way undermines these visions of our electrical control: as Rawlinson writes, "One cannot help but not the staged-ness of each image", with Sheeler positioning the photographer's lamp in numerous locations within the house to create various effects.[122] Yet, within this display of precise control, artificial light repeatedly emerges as a profoundly affective – and profoundly disruptive – force. Throughout the Doylestown series, Sheeler's efforts to de-materialise light unsettle spatial relations, disturb our understandings of the objects and entities light illuminates, and alter our ability to comprehend the domestic world that lies before us.

In *Stairs from Below* [Fig. 5.8], for example, as the joists underpinning the staircase that spirals above us catch the light, each riser recedes into a darkened hollow. The staircase presents a negative of itself: the tread of the steps, rising up, are dark, while the joists, usually unseen as we ascend the stair, form the brightest part of the photograph, in the succession of increasingly acute triangles at the centre of the composition. To translate the two-dimensional image of *Stairs from Below* into a logical, recognisable, three-dimensional space, we have to work against the fundamental assumption that light denotes presence and dark denotes absence: it is the darkest parts of the picture that form the solid ground we would walk on, as we make our way up the narrow, winding stair. Darkness, here, isn't absence, but presence.

The walls of the stairwell also contribute to the photograph's perspectival shift, as Lucic notes: "Logic tells us that the whitewashed walls of the stairwell must be at right angles to the ground plane, yet they incline inward dramatically as they ascend to the top of the composition".[123] Between the angle of the camera, Sheeler's framing of the composition, and the location of the light, streaming in from above – or from the right of the flattened plane of the photograph – the walls, instead, appear as floor. We feel as if we are at the top of the stairs, looking down, rather than at the bottom, looking up. Theodore E. Stebbins Jr.'s description of *Stairs from Below* as

[121] Pound, p. 19; de Parville, p. 355, quoted in Schivelbusch, p. 67.
[122] Rawlinson, *Borders of Abstraction*, p. 39.
[123] Lucic, "On the Threshold", p. 238.

"dizzying" is apt: in this photograph, light is able to affect our visual and perceptual understanding of a space so profoundly that we are left, quite simply, not being able to tell which way is up.[124]

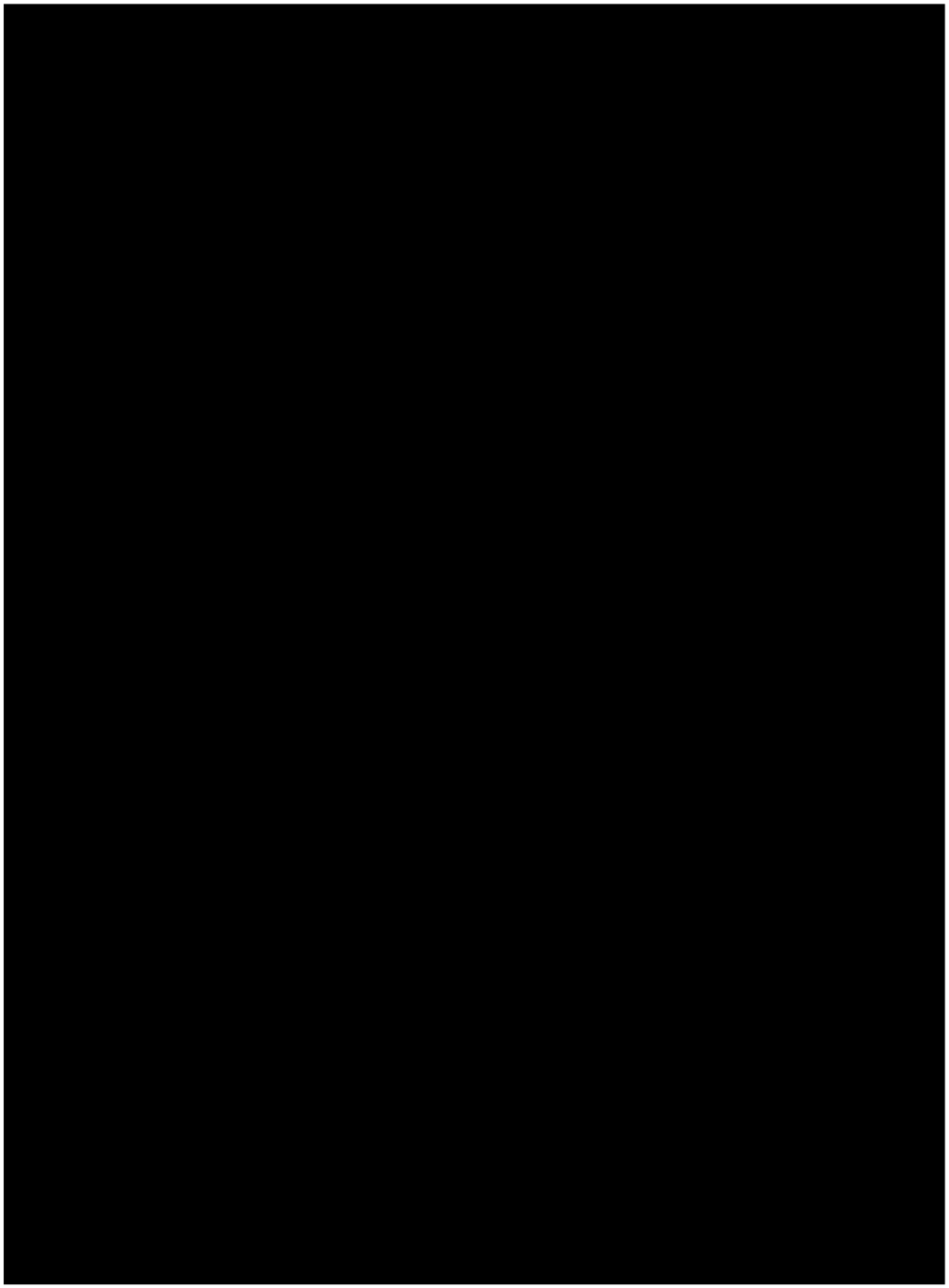

Fig. 5.8 Charles Sheeler, *Doylestown House, Stairs from Below,* ca. 1916-17. Gelatin silver print, 21.2 x 15 cm (8 $^{3}/_{8}$ x 5 $^{7}/_{8}$ in.). The Lane Collection, the Museum of Fine Arts, Boston, MA.

[124] Theodore E. Stebbins Jr., "Sheeler and Photography", in *The Photography of Charles Sheeler, American Modernist* (Boston, MA: Bullfinch Press, 2002), pp. 9–25 (p. 13).

It is Sheeler's use of concealment of the source of light – his engagement with the contemporary emphasis on concealing all signs of the materiality of illumination – that causes our confusion. As E. H. Gombrich describes, our visual perception relies on differential shading to build an understanding of the physical world around us: the human eye "depends almost exclusively on the modifications that the surrounding light undergoes when falling on the objects within view. The varieties of light and shade on their surface tell us of their shape".[125] As we use these patterns of light and shade to interpret the three-dimensional space that surrounds us, Michael Baxandall writes: "the wiring of the retina overrides any awareness of [...] [the] actual direction of light. We are physically built to have an expectation of light coming from above rather than below the level of the eye, and so too an expectation of and about shadow".[126] Throughout the Doylestown series, Sheeler's positioning of the light frustrates these established patterns of perception. Images are lit from the ground up – as in *The Stove*, or *Stairway with Chair* [Fig. 5.9] – or at unexpected angles, as in *Stairwell* [Fig. 5.10], so shadows fall in patterns that do not correspond to expectations based on light coming from above. When the interior world of the domestic is lit from below, cast shadows rise up behind objects in exaggerated projections, and attached shadows merge with their objects, oscillating between material and immaterial, object and image.

In particular, *Stairway with Chair* [Fig. 5.9] showcases how light can alter our practice of reading the physical dynamics of the material environment. The lamp, placed out of shot to the right of the frame, casts a projected shadow of the chair onto the wall; this shadow looms far larger than the object it represents, meaning we access the chair itself as more shadow than substance. The reflected light running down the chair leg allows us to interpret the object as cylindrical, and lets us read the narrow bars jutting off the leg as arranged at right angles to one another. Yet, this three-dimensional object is so similar in tone to its shadow in Sheeler's black and white photograph that aspects of the chair itself begin to look like shadows: are there four narrow bars on the chair, or just two, with each casting its own dark shadow? The stairs, too, participate in this dance between materiality and immateriality, object and

[125] E.H. Gombrich, *Shadows: The Depiction of Cast Shadows in Western Art* (London: National Gallery Publications, 1995), p. 10.
[126] Michael Baxandall, *Shadows and Enlightenment* (New Haven, CT and London: Yale University Press, 1995), p. 38.

illusion, as the shadows cast make each tread appear to be tilted upward, rather than flat. Further, the shadow between the fourth and fifth stair is so dark, the two objects merge into one another.

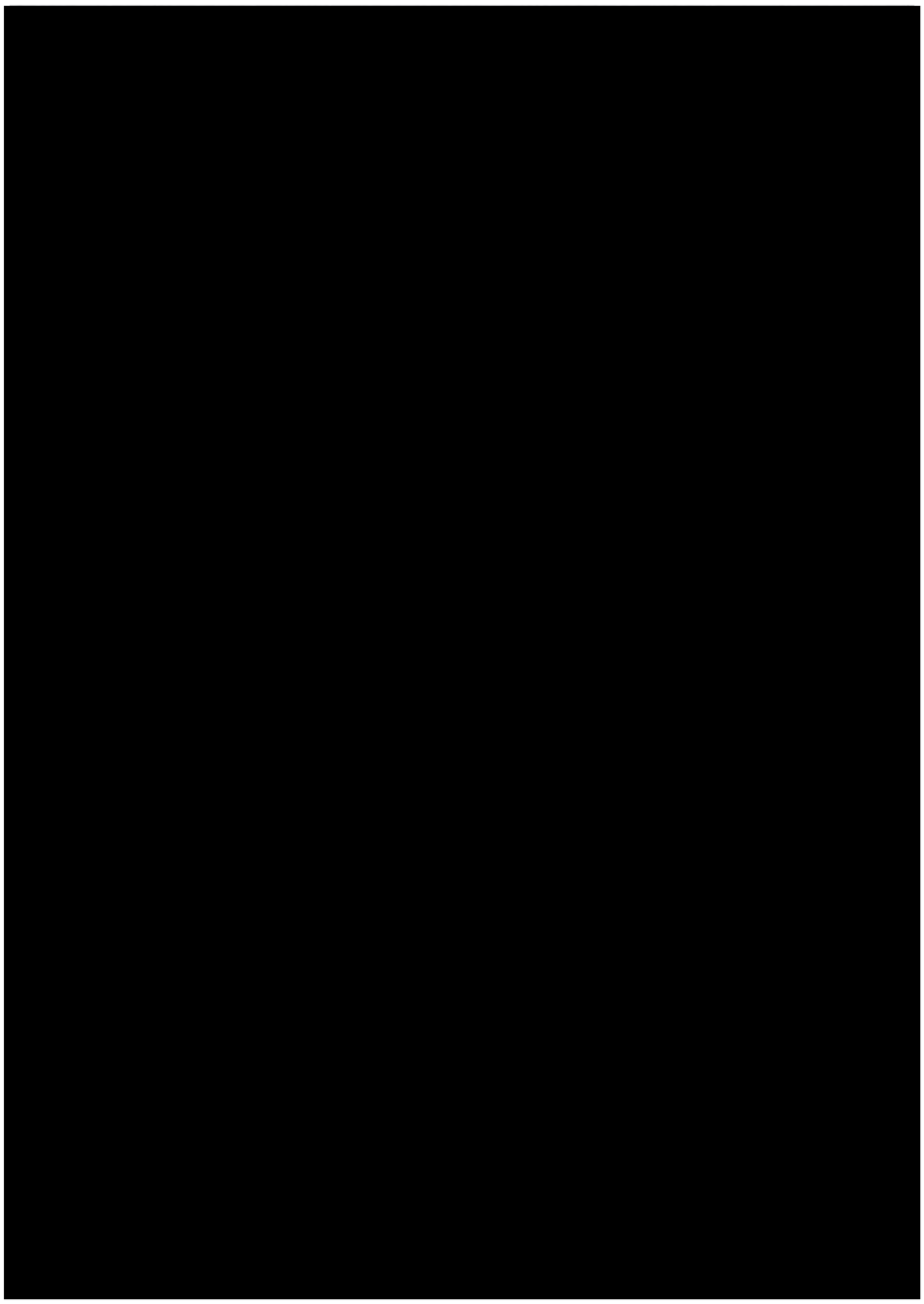

Fig. 5.9 Charles Sheeler, *Doylestown House, Stairway with Chair,* ca. 1916-17. Gelatin silver print, 24 x 16.5 cm (9 $^{7}/_{16}$ x 6 $^{11}/_{16}$ in.). The Lane Collection, the Museum of Fine Arts, Boston, MA.

Stairwell [Fig. 5.10] – "one of the most daringly modern compositions in the series" – similarly disrupts our established methods of interpreting spatial relations using shadow.[127] Even more so than in *Stairs from Below*, Sheeler's positioning of the light in this image abstracts the physical form of the home into an impossible architecture. The risers, Lucic writes, appear to be "oriented in the wrong direction"; the treads appear to be hanging into nothingness, leading nowhere.[128]

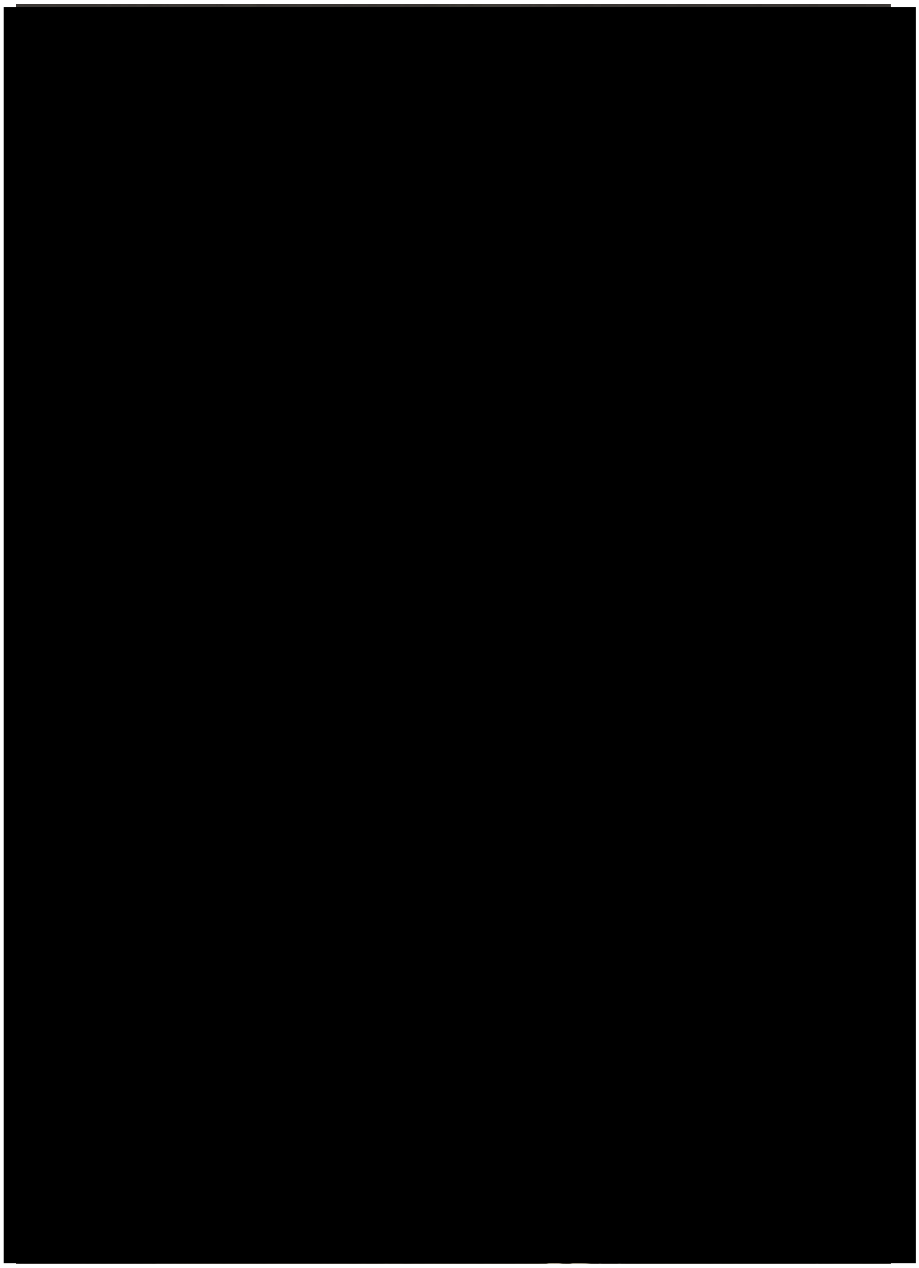

Fig. 5.10 Charles Sheeler, *Doylestown House, Stairwell,* ca. 1916-17. Gelatin silver print, 24.2 x 16.8 cm (9 $^{1}/_{2}$ x 6 $^{5}/_{8}$ in.). The Lane Collection, the Museum of Modern Art, New York, NY.

[127] Lucic, *Sheeler in Doylestown*, p. 22.
[128] Lucic, *Sheeler in Doylestown*, p. 22.

Lucic continues:

> It is natural to assume that the stairwell is volumetric, that it encloses enough space to accommodate a human body. Therefore, the dark, L-shaped central shadow must denote a spatial recession of several feet from the stairwell's opening to the white, plastered wall behind, but visually the L-shaped shadow appears as a flat, abstract shape – essentially nonvolumetric.[129]

The position of the camera further distorts the spatial relations within the work. Just visible on either side of the photograph is "a narrow doorway framing the view [...] oriented toward the stairwell at a ninety-degree angle" although, as Lucic describes, "at first glance the dark panes that surround the doorway appear parallel to the lighted stairwell".[130] Thanks to the stark glow of an unseen source of light, we are confronted with spaces that don't correspond to each other, left stranded between areas in the domestic space that we can't navigate or enter. As Lucic concludes, in this image we are "eclipsed by the indifferent, even hostile, 'inorganic surroundings'".[131] Artificial, immaterial illumination doesn't appear to be under human control, here, but powerfully affective and thoroughly *de*humanising in its effects.

There is a gulf between what we see "at first glance" in Sheeler's pictures and what we later understand the photographs to show.[132] In his analysis of the Doylestown series, David Peters Corbett similarly draws on the idea of re-reading images, as he links Sheeler's photographic images back to late-nineteenth century American trompe-l'oeil painting. For Corbett, as Sheeler's use of lighting throws the textural details of the interior "into high visibility", the photographs evoke "the specific reality effect" of the trompe-l'oeil works of William Michael Harnett and John Frederick Peto.[133] Yet, where trompe-l'oeil uses attached shadow – "the shadow cast by an object on the ground on which it rests" – to enhance "the impression of its solidity" and generate the illusion of three-dimensional material forms on a two-dimensional painted surface, Sheeler strives for the opposite effect, using shadow and light to create two-dimensional, flattened, abstracted forms out of three-dimensional photographed objects.[134] In the Doylestown interiors, then, the material acquires an impossible immateriality as a result of Sheeler's use of artificial light.

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[129] Lucic, "On the Threshold", p. 234.
[130] Lucic, "On the Threshold", p. 234.
[131] Lucic, "The Present and the Past", p. 80.
[132] Lucic, "On the Threshold", p. 234.
[133] Corbett, p. 572.
[134] Gombrich, p. 37.

These altered spatial relations and shifting objects, "dark spaces" and "looming silhouettes" are symptoms of the unhomeliness of the Doylestown interior, then, rather than its cause: it is Sheeler's presentation of light as thoroughly immaterial and profoundly affective, creating patterns of illumination that are wholly unfamiliar to us, which transforms the domestic interior into a sequence of "very self-conscious exercise[s] in cubist" abstraction.[135] By documenting this experimental disruption of illumination, Sheeler's photographs make us acutely aware of a process that we view as automatic, unconscious, and objective. These images operate in the gap between sight and perception, between our access to visual information and the translation of that information into an apprehension of the three-dimensional object world that surrounds us. The revelation that we are conditioned to see the world in a certain way – that we rely on something as subtle and fleeting as shadow to form a visual understanding of the physical environment – is deeply unsettling. That we invite such a disruptive, affective force as electric light into our homes so guilelessly, Sheeler's use of the medium implies, should also be cause for concern.

Sheeler's presentation of the interior within the Doylestown series is frequently described as "ambivalent".[136] The domestic, here, is caught between the stasis of two-dimensional abstraction and "sequences of movement" suggested by Sheeler's focus on thresholds and open doors; between the historical traces incarnated within the colonial cottage's interior and Sheeler's experiments in modern photography which, Corbett concludes, "resonate without resolution"; between homeliness and a deeply "uncomfortable place to be"; at its very core, between light and dark.[137] Sheeler's vision of the modern domestic in these interiors is, ultimately, ambivalent too. Within the images, Sheeler explores a widely-advocated, widely-accepted aesthetic of electrical immateriality. Throughout, light remains clearly under his precise control. Yet, he uses this control to emphasise the profoundly unsettling capacities of light lauded for its aesthetic of immateriality to instil a deep sense of disconnection, isolation, and unhomeliness within a traditional American home. In these Doylestown interiors, then, the aesthetics of immateriality that surround the electric light enact unsettling transformations of the domestic interior and suggest how the shifting balance of materiality and immateriality within the

[135] Rawlinson, p. 39; Brock, p. 29.
[136] Brock, p. 30.
[137] Rawlinson, *Borders of Abstraction*, pp. 38–39; Corbett, p. 566.

modern domestic has a far wider affective reach than its inhabitants might, at first, suspect.

Conclusion

Modernism Meets Modernity

Man Ray's *Electricité*

In 1931, a French energy company, la Compagnie Parisienne de Distribution d'Electricité (CPDE), commissioned American artist Man Ray to produce a portfolio of photographs, hoping to spark interest in domestic electrification in France's dwindling interwar economy.[1] For the CPDE, Man Ray was quite the coup. Not only was he "famous and fashionable in Paris" because of his portraiture, fashion photography, and his affiliations with Dada and Surrealism, but, Katherine Ware argues, by virtue of being American, he was "automatically associated [...] with the positive values of modernity and technology".[2]

Throughout my explorations of *Thoroughly Modern Matter*, I've drawn on works of modernism which reflect the tensions that ensued as human and nonhuman entities vied for control; works that hold us in a state of ambivalence, unsure of how to resolve the conflict between modernity's immaterial ideal and the messiness of lived reality; and works that openly defy modernity's devoted push towards exacting human control over the nonhuman, material world by flaunting the disturbing vibrancy of nonhuman matter. In Man Ray's *Electricité*, however, the aesthetics of modernism are charged with conveying modernity's material – or, rather, *im*material – ideal to its audience.

Throughout *Electricité*, Man Ray uses his own, self-proclaimed original, photographic technique: the rayograph, named, of course, for its creator. Discovered by chance as he was developing images from a fashion shoot in 1922, the rayograph involved exposing objects placed on chemically-treated paper to light. The resulting

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[1] While American homes were steadily electrifying between 1920 and 1930, demand for domestic electricity was variable at best: even as costs of electrical energy were lowered as an electrical infrastructure developed, the majority of French electricity was supplied to industry. As the global Depression took hold in the thirties, however, industrial demand declined, leaving energy companies to turn their attentions to cultivating a demand to domestic electricity. Stefanie Spray Jandl, "Man Ray's *Electricité*", *Gastronomica,* 2.1 (2002), 12-15 (p. 13), <http://www.jstor.org/stable/10.1525/gfc.2002.2.1.12> [accessed 28 July 2017], referencing Robert L. Frost, *Alternating Currents: Nationalized Power in France, 1946-1970* (Ithaca, NY and London: Cornell University Press, 1991), pp. 9-39.

[2] Katherine Ware, *In Focus: Man Ray, Photographs from the J. Paul Getty Museum* (Los Angeles, CA: The J. Paul Getty Museum, 1998), p. 62.

images produced "not quite a simple silhouette", but were, in Man Ray's words, "startlingly new and mysterious", "distorted and refracted" visual impressions, glowing white and "standing out against a black background, the part directly exposed to the light".[3]

Although Man Ray claimed the technique for his own invention, such cameraless photographs or "photograms" had been around, Ware notes, since "the inception of photography in the 1830s, when William Henry Fox Talbot and others exposed plant and fabric specimens laid on chemically treated paper to light, producing a silhouette of the objects".[4] Further, when he "discovered" the rayograph technique, Man Ray was renting a room in the same hotel as Tristan Tzara, a key player in Parisian Dada, who owned a collection of photograms produced by German artist Christian Schad; Tzara had published one of the "Schadographs" in *Dada* magazine in 1920.[5]

Original or not, the rayograph technique garnered attention in America and Europe alike. *Vanity Fair* printed four of the images in 1922, heralding "A New Method of Realizing the Artistic Possibilities of Photography", and, encouraged by Tzara, Man Ray produced a limited-edition album of rayographs, *Les Champs délicieux* (*Delicious fields*), that same year.[6] (Man Ray attempted to get Gertrude Stein to buy a copy, but she declined).[7] In the preface to *Les Champs délicieux*, Tzara declared that Man Ray "had invented the force of tender and fresh lightning", the rayographs energising the photographic medium with their Dada experimentalism.[8] As Simon Bieling points out, "During the composition of a photogram, the artist cannot calculate the effects of

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[3] Man Ray, *Self-Portrait* [1963] (London: Penguin Group, 2012), pp. 127-28.

[4] Ware, p. 6.

[5] Simon Bieling, "Man Ray (Emmanuel Radnitzky)", three Rayographs, 1923, in *Dada in the Collection of the Museum of Modern Art,* ed. by Anne Umland and Adrian Sudhalter, with Scott Gerson (New York, NY: Museum of Modern Art, 2008), pp. 222-27, p.225. See also *Dada,* 7 ("Dadaphone") (1920), p. 6, *The International Dada Archive,* University of Iowa Libraries, Iowa City, IA <http://sdrc.lib.uiowa.edu/dada/dada/7/pages/06.htm> [accessed 1 August 2017].

[6] "A New Method of Realizing the Artistic Possibilities of Photography", *Vanity Fair,* 19.3 (November 1922), p. 50, University of Michigan Library, Ann Arbor, MI, <https://babel.hathitrust.org/cgi/pt?id=mdp.39015046808476;view=1up;seq=1244> [accessed 1 August 2017].

[7] Merry Foresta in "A Labyrinth of Media: The Photographs of Man Ray" [symposium proceedings] in *In Focus,* pp. 101-38, p. 111.

[8] Tzara, "La photographie à l'envers' in *Champs délicieux* (Paris: Société Générale d'imprimerie et d'édition, 1922), n.p., quoted by Jeff L. Rosenheim, "*Electricité* by Man Ray, 1931", *Met Collects,* 12 (2014), The Metropolitan Museum of Art, New York, NY <http://www.metmuseum.org/art/online-features/metcollects/man-ray-electricite> [accessed 14 September 2017].

the shadow of a particular object in the final image", meaning that, as Susan Laxton argues, the process operates with "an extreme invitation of chance" which "recalls the impersonality and deskilling of machine processes" – the proud automatism – celebrated in Dada.[9] In his preface, Tzara emphasised this collapse between man and machine, proclaiming that, with the rayograph, "the man is the camera".[10] When Walter Benjamin translated Tzara's essay for the Constructivist journal *G*, he altered Tzara's declaration to "The man is the Kodak", "effectively 'branding' Man Ray", Laxton argues, "and further emphasizing the alignment of rayographs with a particularly American form of commercial production".[11]

These twinned legacies of avant-garde credibility and transatlantic commercial viability made Man Ray the CPDE's artist of choice for their 1931 commission. While his earlier rayographs are rife with eclectic object combinations – in *Les Champs délicieux* silhouetted razor blades and combs mix with gyroscopes, stretched-out springs, and spirals of cardboard; in later rayographs of 1923 and 1924, we find shoe trees, revolvers, and cigarettes – *Electricité* presents a much more rigidly controlled and cohesive rayograph array. Although the portfolio encompasses both electric public spectacles (*La Ville*), playful reiterations of electricity's transcendence of previous, natural limitations (*Electricité*, Fig. 6.1), and the resolutely practical (*Le Cuisine*, Fig. 6.3), the presentation of electricity across the work as a whole is selective and highly attuned to recognisable legacies of electric representation. When dealing with a force as lively and volatile as electricity, the riotous Dada drive and Surrealist tendencies towards exuberance needed to be curtailed, it seems, to avoid any suggestion that this astoundingly powerful modern energy might operate outside of our strictly human control.

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[9] Bieling, p.227; Susan Laxton, "'Flou': Rayographs and the Dada Automatic", *October,* 127 (2009), 25-48, p. 28, <https://www.jstor.org/stable/40368552> [accessed 8 August 2017], emphasis in original. As Laxton notes, both Dada and Surrealism claimed the rayographs as part of their movement, and Man Ray himself seemed to transition seamlessly between the two. See also Jane Livingston, "Man Ray and Surrealist Photography", in *L'Amour Fou: Photography and Surrealism,* by Rosalind Krauss and Jane Livingston (London: Arts Council of Great Britain, 1986), pp. 115-52.

[10] Tristan Tzara, "La photographie à l'envers" in *Les Champs délicieux* (Paris: Société Générale d'imprimerie et d'édition, 1922), n.p, quoted in Laxton, pp. 39-40.

[11] Tristan Tzara, "Die Photographie von der Kehrseite", trans. by Walter Benamin, in *G: Zeitschrift für elementare Gestaltung,* 3 (1924), pp. 39-40, quoted in Laxton, p. 39-40.

In the opening image of Man Ray's portfolio [Fig. 6.1], for example, we are greeted by the soft globe of a white bulb, suspended cordlessly from the top of the frame, "surrounded by a Milky Way of particles".[12] This bulb is abstract: the glass bulb, tungsten filament, metal screw or bayonetted fitting are all blocked white by Man Ray's rayograph technique. Flecks of rayograph liquid splatter across the scene, too, bright darts of light against the deep black of the photogravure.

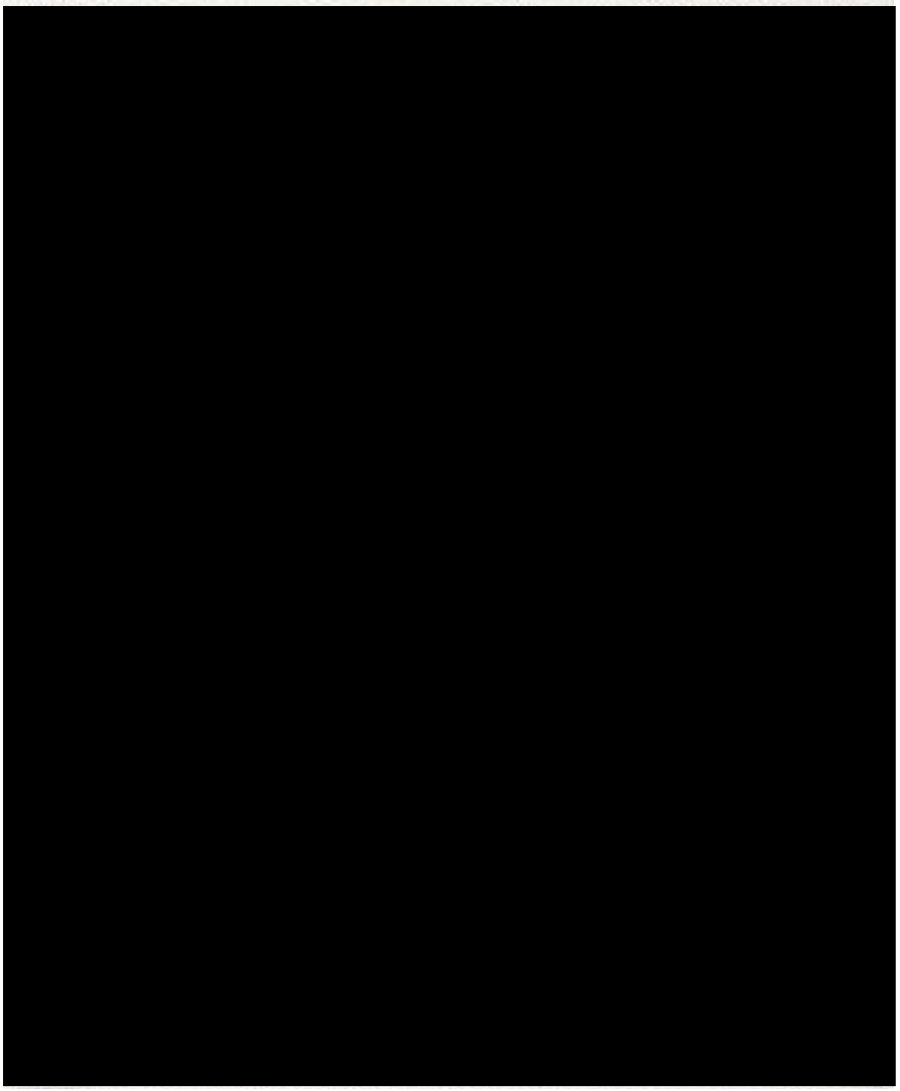

Fig. 6.1 Man Ray, *Electricité*, from *Electricité,* 1931. Photogravure, 26 x 20.5 cm (10 ¼ x 8 $^{1}/_{16}$ in.). The Metropolitan Museum of Art, New York, NY. Gift of Joyce F. Menschel, 2013.

Yet, there is very little that appears accidental, here. A soft, curved shadow falls across the bulb's rayograph shape, emphasising the delicate undulations of its form. This shadow turns an otherwise abstracted shape into a three-dimensional

[12] Ware, p. 62.

object. As we read the bulb as a three-dimensional object, our interpretation of the other elements within the image starts to shift. The background ceases to be a flat, black backdrop and instead starts to acquire a sense of perspectival space. The bulb becomes suspended *within* the space of the photograph, rather than flattened against the picture plane. The diagonal jag of speckled light similarly starts to transition from two- to three-dimensions. The brighter concentration of light at the base of the picture begins to angle towards us and the more dispersed, fainter flecks start to recede, transforming these particles of light from a vertical, mottled, lightning prong into a horizontal cluster that extends into the far reaches of the visible distance. These pinpricks of light scatter themselves across the bulb, too, mirroring its undulations in their varying concentration. As we navigate through this image, then, all sense of scale is surrendered. The bulb, a point of focus anchoring both the composition and our attention within the deep black void of the photogravure, acquires a planetary gravity. The dots of light become stars. We are held in a moment of celestial grace, bathing in the soft glows of light which puncture the dark.

Electricity itself is nowhere to be seen in this opening image of the portfolio. It is present solely by implication, in the white glow of the bulb and dashes of light. Yet, this bulb shows no sign of the material connections needed to function as a source of electric illumination: no wires or fixtures feed into this transcendent source of light. Here, again, electricity is welcomed into the home via an aesthetic of immateriality. Here, again, Man Ray draws on the imagery of electrical technologies superseding their natural counterparts.[13] Where Ezra Pound and Alvin Langdon Coburn saw New York lit by the brilliance of "stars", Man Ray offers a domestic where light bulbs possess the timeless splendour of a moon. Here, as in many images throughout the portfolio, the thoroughly ordinary meets the coolly wondrous, and both are energised by the encounter. Through an avant-garde aesthetic of isolated objects, and the abstraction and chance of his photographic technique, Man Ray brings a nineteenth-century legacy of electrical fascination into the modern, twentieth-century home to make the electrical domestic feel vibrant, vital, and new.

In *Electricité*, however, Man Ray also grants electricity a sense of *materiality*. In four of the images within the portfolio Man Ray strives to represent electricity itself,

[13] For an account of General Electric's use of this imagery in their marketing, see Leigh George, "'The Sun's Only Rival': General Electric's Mazda Trademark and the Marketing of Electric Light", *Design Issues,* 19.1 (2003), 62-71, <http://www.jstor.org/stable/1512056> [accessed 3 August 2017].

using the fierce, wavering glow of rayograph ribbons and coiled wires to convey the sparking flow of electric current. In *Le Soufflé* [Fig. 6.2], for example, the web of wavering light around the fan suggests both the circulation of cool air from the fan – the "breeze" of the title – and a connection between the static rayograph of the household object and the lively animation of the electrical world. In *Cuisine* [Fig. 6.3] a coiled wire spirals out from (an admittedly rather unappetising) roast chicken, suggesting not only radiant heat and an aroma, but also the electric current used within the electric oven to create the dish itself. Conceptualised as a dart of light, crackling with energy, a slither of lightning trapped not within Franklin's Leyden jar but within the domestic space, in Man Ray's visual portrayals electricity acquires a sensuous, lively, material presence.

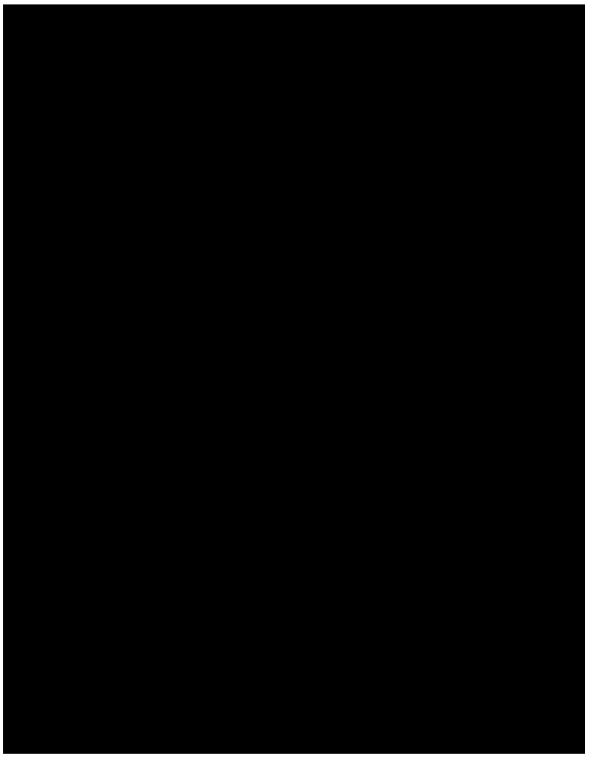

Fig. 6.2
Man Ray, *Le Soufflé*, from *Electricité,* 1931. Photogravure, 26 x 18.6cm (10 ¼ x 7 $^{5}/_{16}$ in.). The J. Paul Getty Museum, Los Angeles, CA.

Fig. 6.3
Man Ray, *Cuisine,* from *Electricité,* 1931. Photogravure, 19.7 x 26 cm (7 ¾ x 10 ¼ x in.). The J. Paul Getty Museum, Los Angeles, CA.

In the "signature image of the portfolio", also called *Electricité* [Fig. 6.4], Man Ray combines his lively, material incarnation of electricity with another lively materiality: the human body. In this photogravure, "undulating strands of white electrical 'current'" charge across the nude torso of Lee Miller, Man Ray's assistant and collaborator.[14] Yet, conferring a sense of material liveliness on electricity, it seems, necessitates a corresponding denial of the material liveliness of the human body.

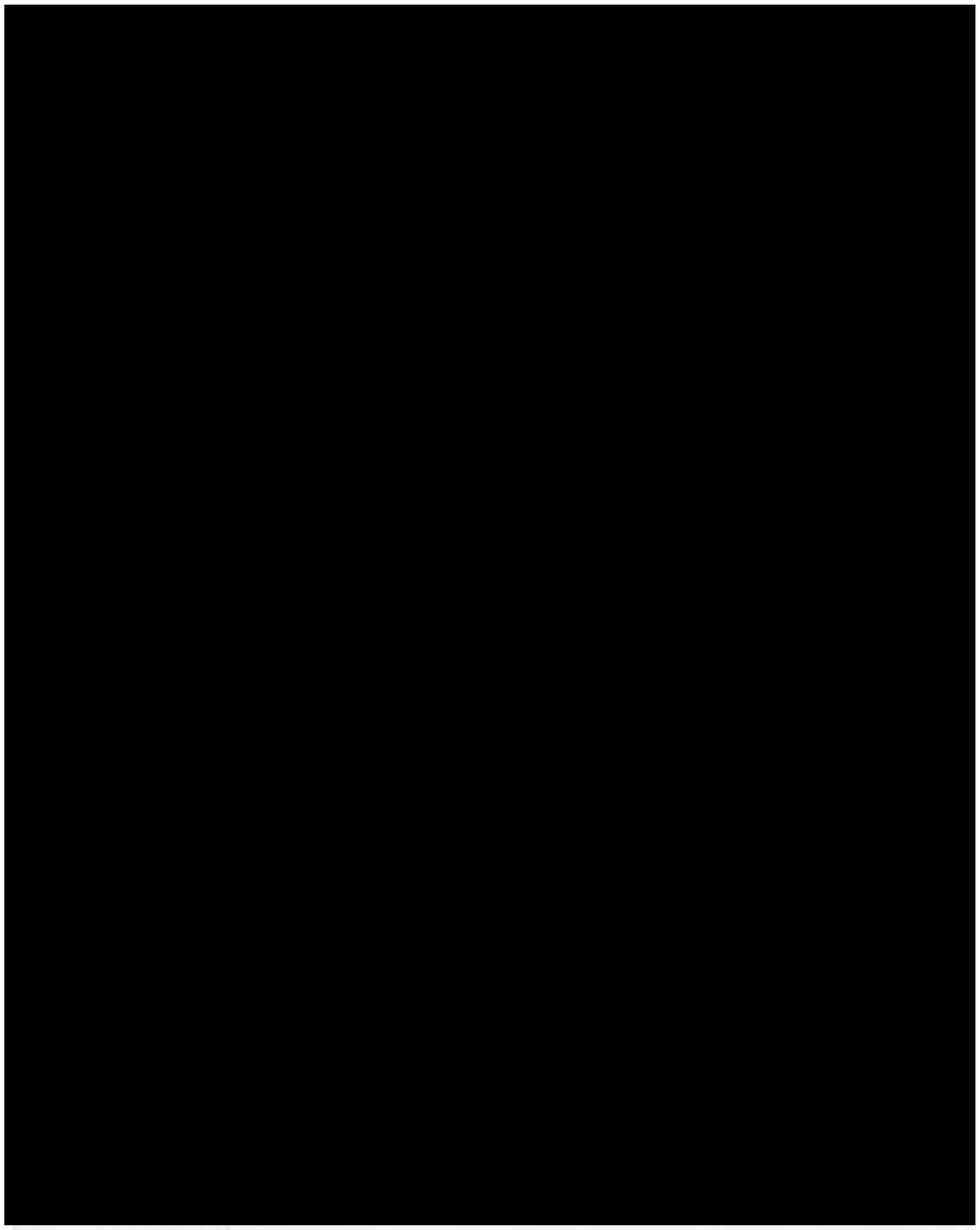

Fig. 6.4 Man Ray, *Electricité,* from *Electricité,* 1931. Photogravure, 32.7 x 26 cm (12 $^{7}/_{8}$ x 10 ¼ in.). Victoria and Albert Museum, London.

[14] Whitney Chadwick, "Lee Miller's Two Bodies", in *The Modern Woman Revisited: Paris Between the Wars,* ed. by Whitney Chadwick and Tirza True Latimer (New Brunswick, NJ and London: Rutgers University Press, 2003), pp. 199-222 (p. 206).

As Whitney Chadwick notes, "images of Lee Miller's body circulated widely" in the late 1920s and early 1930s, in both fashion photography and Man Ray's Surrealist work, which often "fragmented and deformed the body and [...] focused obsessively on its parts".[15] In *Electricité*, Miller's nude torso is situated at the nexus of these two key aesthetics: the abstraction and fragmentation of the avant-garde, and the commercial appeal of the female form.[16] With the ribbons of electric current draped diagonally across Miller's torso like sashes, Man Ray appropriates the air of commerciality from fashion photography to advertise electricity, rather than couture, and combines it with Surrealist fragmentation – and fetishization – of the female body. In uniting both, Man Ray emphasises the modernity of electricity, capturing the frisson of excitement that accompanies the truly new, while effectively neutralising any fears about the liveliness of electricity itself.

This aesthetic combination, Tag Gronberg notes, would have been familiar to discerning audiences in both France and America alike.[17] Seeking to assert the "modernity" of their products and capitalise on the publicity that surrounded the experimentalism of modern art, advertisers increasingly turned to abstracted representations of the female figure to sell their consumer products. Where earlier mannequins strived for human verisimilitude, a materialised "trompe-l'oeil" that relied on "wax or hair" to render them lifelike, a commentator writing on "Modern Decorative Art" in 1925 praised the rejection of these prior attempts at material deception:

> The modern decorative artist has [...] sworn to annihilate the horrible simpering wax figures of the clothiers' shops of our youth. Today the lay-figures [...] are *spiritual* works of art [...] Sometimes all naturalization is cast aside, decoratively cut features, cut in plane, are gilt or silvered all over, adding to its strangeness. Sometimes face and figure become a mere cubistic chaos of intersecting surfaces; sometimes face and hands are reduced to a decorative hieroglyphic traced in space.[18]

[15] Chadwick, p. 199.
[16] Chadwick, p. 206.
[17] See Tag Gronberg, "Beware Beautiful Women: The 1920s Shopwindow Mannequin and a Physiognomy of Effacement", *Art History,* 20.3 (1997), 375-96 <http://onlinelibrary.wiley.com/doi/10.1111/1467-8365.00068/pdf> [accessed 28 August 2017].
[18] Gronberg, p. 379; Vernon Blake, "Modern Decorative Art", *Architectural Review,* 58 (1925), p. 31, quoted in Gronberg, p. 379.

Much like Meret Oppenheim's *Object*, it seems, advertising the discrepancy between object surface and interior is a preferably modern way out of the rut of uncanny material deceit that proliferated in the nineteenth century. "[W]e have finally become disgusted with those horrific wax cadavers, those disturbing counterfeits", observed a 1922 French article on "the face of the modern street": "Certain mannequins, those which have been gilded, have been criticised. But why impose any restriction on stylisation? Is it not all the more striking the less it borrows from reality?"[19]

This aesthetic of bodily abstraction wasn't just designed to appeal to the modern eye, however, but also the male gaze. As Gronberg notes, advertising throughout the twenties repeatedly cautioned against offering "too-close [a] facsimile of the female body", for fear of repulsing male viewers by instilling an "uncanny" "sex appeal" within the "inorganic", and allowing "sexual fetishism" to "overdetermine commodity fetishism".[20] Dehumanising the female form without removing all traces of its sexual appeal allowed the modern woman to be idealised into an object of desire. This abstraction placed the object of sexual desire – the female figure – beyond reach, allowing the commodity to slip between the object and its implicitly gendered male viewer. The commodity, then, became the conduit between male subject and female object, offering both the medium and message of connection.

In *Electricité*, fractured by composition, rendered in duplicate, and solarised via photographic process, Miller's figure is subject to multiple bodily abstractions, transformed from a material, human body to an aestheticised, mannequin-like form. Like many images of women produced by male Surrealists, Miller here is, as Mary Ann Caws describes, "Headless. And also footless [...] armless too; and always unarmed [...] so stressed and dismembered, punctured and severed", yet still "lustily appealing", unclothed and anonymised into swathes of skin, breasts, and hips.[21] Man Ray's

[19] Guillaume Janneau, "Le visage de la rue moderne", *Bulletin de la vie artistique,* 5e année, 22 (1924), p. 498, trans. by and quoted in Gronberg, p. 379.

[20] Gronberg, p. 382; Hal Foster, *Compulsive Beauty* (Cambridge, MA and London: The MIT Press, 1993), p. 135.

[21] Mary Ann Caws, "Seeing the Surrealist Woman: We Are a Problem", in *Surrealism and Women*, pp. 11-16 (p. 11). Rosalind Krauss's analysis of Surrealist photography, which I draw on later in this conclusion, comes under severe criticism in *Surrealism and Women* for, as Rudolf Kuenzli writes, its failure "to recognize the oobvious misogyny in these works" in which the male Surrealist "fetishizes the female figure [...] deforms, disfigures, manipulates her [...] literally manhandles her in order to re-establish his own ego". For Krauss herself, the dissolution of reality as a stable external referent enacted as Surrealist photography reveals reality to be a system of signs opens up the possibility of the deconstruction of this same sign system. "Having dissolved the natural in which 'normalcy' can be

enlargement and duplication of Miller's torso compounds this physical fragmentation, stacking the figure in rows of itself as if each version is, like a mannequin, readily interchangeable with another.

Miller's figure is further dehumanised by Man Ray's use of solarisation – a technique discovered accidentally by Miller herself, involving the exposure of negatives "to sharp bursts of light to achieve heightened contrast between subject and background" – and the slight, upward angle of Man Ray's shot.[22] The careful shadows produced by this combination of techniques transform Miller's skin from something fleshly, animate, and unavoidably human into an implacably cool imitation of marble. Under these shadows, which emphasise the lithe athleticism of her form, her body garners a sense of overwhelming gravity, like the bulb which opens *Electricité*. While the bulb becomes planetary, Miller becomes classically statuesque. Her pose, too, furthers this impression, mimicking, as Chadwick observes, the *Venus de Milo*, from the slight contortion of her torso and her absent arms, to the horizontal plinth, taking the place of falling, draped fabric.[23] As a modern, mannequin Venus, Miller is incarnated "as an object of desire: an object for possession".[24]

It is not Miller, though, that we are meant to imaginatively possess here, but *electricity*. For all the voyeurism afforded by Miller's naked body, her simultaneous abstraction places her just teasingly out of reach. We are also quite literally barred from accessing Miller's body by the white ribbons of electricity in the foreground of the image.[25] Electricity as commodity, then, comes between us and the object of our

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grounded," Krauss argues, "Surrealism was at least potentially open to the dissolving of distinctions […] Gender, at the heart of the Surrealist project, was one of those categories". For Kuenzli, however, this potential for the dissolution of gender categories in no way counterbalances the sustained visual violence, dehumanisation, and fetishization that Surrealist artists subjected women to. See Krauss, "Photography in the Service of Surrealism", pp. 28, 35; Krauss, "Corpus Delicti" in *L'Amour Fou,* pp. 57-100 (p. 95); Rudolf E. Kuenzli, "Surrealism and Misogyny", in *Surrealism and Women*, ed. by Mary Ann Caws, Rudolf Kuenzli, and Gwen Raaberg (Cambridge, MA,and London: MIT Press, 1991), pp. 17-26 (p. 24).

[22] Man Ray "later refined" solarisation into "his own signature technique". Jeana K. Foley, "Lee Miller", in *Concise Dictionary of Women Artists* [2001] ed. by Delia Gaze (New York, NY and London: Routledge, 2011), pp. 483-85 (p. 484).

[23] Chadwick, p. 205. As Chadwick notes, *Venus de Milo* was a recurrent theme within Surrealist artworks, as the mixture of her classical form and fragmented, ruined state allowed the statue to operate as an icon that "would recuperate the past while at the same time undermining its wholeness and fixity".

[24] Caroline Arscott and Katie Scott, "Introducing Venus", in *Manifestations of Venus: Art and Sexuality,* ed. by Caroline Arscott and Katie Scott (Manchester and New York, NY: Manchester University Press, 2000), pp. 1-55 (p. 142).

[25] Chadwick, p. 206.

desire. *This*, however, *is the point*. These white strands don't just give visual representation to an electrical current in their stylised, softened, suggestion of lightning, but, as they weave around each other, tangling and splitting like cords, also resemble the wires that carry electricity into the home itself.

By placing electricity between us, as viewing subject, and Miller, as desired object, Man Ray draws on popular associations between electrical energy and sexual desire. *Electricité* visualises a newfound language of attraction where a first meeting might "give off sparks" if "one could 'feel the electricity'" and a "sexual current" prevailed, infusing the image with a sexual tension, an energy, a liveliness, waiting to spark into life at the barest contact.[26] By transforming these sparks into wires, however, Man Ray reiterates that electricity isn't a barrier to be overcome, but the *medium of desire itself*, a vital point of connection between us and the idealised vision of modern being – represented by Miller's classically modern form – that we strive for. Electricity is both excitement – anticipation, a charge, fizzling just below the surface – *and* a tangible, material connection. The revelation here, then, is that *we already live electrically*, already feel its power thrumming through our veins; we simply need the CPDE to provide the necessary material components.

There is another, equally vital, distance at work in *Electricité*, however. While the gap between Miller and us, charged and electrified with desire, powers the scene, Man Ray also maintains a careful visual distance between Miller's body and electricity itself. Streaming across the composition, the white ribbons are thoroughly flattened, held as abstract forms on the picture plane; Miller's body – rendered in shades of grey, duplicated and enlarged in an exaggeration of perspective – operates in the three-dimensional space of the background. These two key components of the composition – the human figure and electricity – are thoroughly separate and thoroughly separable: that the image of Miller's torso, reversed and presented in hazier focus, recurs in *Salle de Bain* [Fig. 6.6] only emphasises the divisibility of this image and the dehumanisation of the human body itself. Within this sole instance of electrical current and the human figure being brought into dialogue, then, Man Ray's composition prevents any suggestion of direct contact between Miller's unclothed body and his rayograph representation of electrical current. It is not enough, it seems,

[26] Wiebe E. Bijker, *Of Bicycles, Bakelites, and Bulbs: Towards a Theory of Sociotechnical Change* (Cambridge, MA: MIT Press, 1995), p. 222; Armstrong, p. 18. For more on electricity, sexuality, and metaphor, see Armstrong, pp. 18-21.

to evacuate any and all traces of material liveliness from the human figure itself; the liveliness of electricity demands that a visible, insurmountable, distance be placed between electricity and the human body. Even when allied with the aims of modernity, modernism cannot reconcile the immaterial ideal with lived reality without resorting to abstraction.

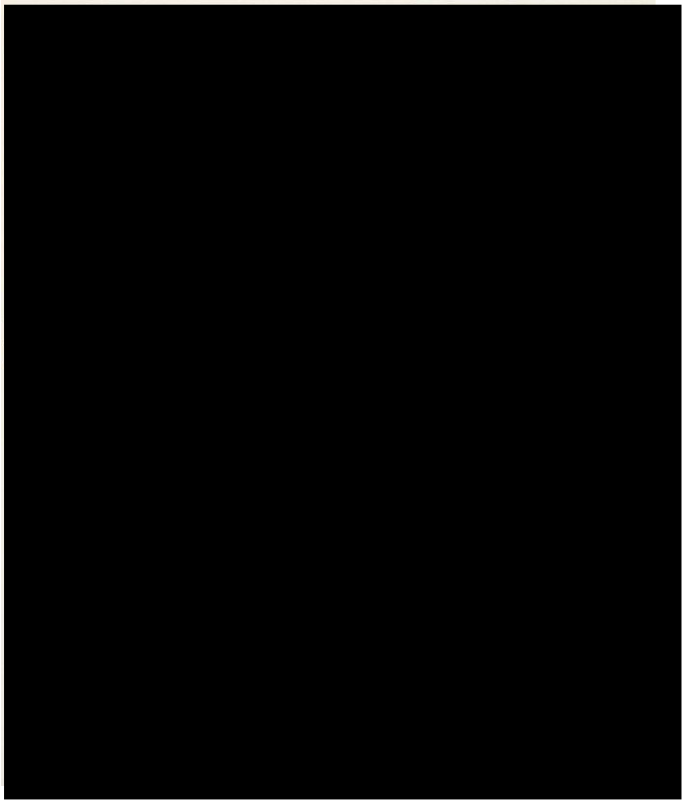

Fig. 6.6
Man Ray, *Salle de Bain*. from *Electricité,* 1931. Photogravure, 26 x 20.5 cm (10 ¼ x 8 in.). Smithsonian American Art Museum, Washington D.C.

For all the portfolio offers a more readily recognisable reality than his earlier rayographs, Man Ray's *Electricité* repeatedly advertises its own abstraction. Rendered in ghostly, rayograph white, with glass becoming opaque and metal becoming translucent, the objects we encounter throughout the portfolio are removed from any sense of material reality. In her analysis of *Photography and Surrealism*, Rosalind Krauss argues that such representations of rupture are characteristic of Surrealist photography. Where, for Krauss, "photography normally functions as a kind of declaration of the seamlessness of reality itself," the photographic manipulations found in Surrealist photography – Krauss cites "Darkroom processes like combination printing and double exposure", as well as solarisation and "duplication" as prime

examples – reveal that reality is riddled "with interpretation, with signification".[27] While, for Krauss, this process is fundamentally semiotic – "The photographs are not *interpretations of reality*", Krauss concludes; "they are representations of that very reality as configured or coded or written" – I want to modify her argument slightly: the point that I take from Krauss is that, as modernism advertises its own artifice, it exposes the conditions of modernity itself as equally unreal.[28]

This, for me, is the other revelation that *Electricité* affords: that modernity's immaterial desires can only ever be realised through the abstractions of modernism. There is no way to live without trace; no way to possess total control over nonhuman matter; no way to erect an impenetrable boundary between subject and object. Our bodies are simply too lively, too material, too thoroughly embedded within and dependent upon the nonhuman, material world for us to ever achieve the immaterial ideal that modernity strives towards. The narrative of progression that permeates modernity can only be realised in the abstract, imaginative spaces afforded by modernism: in the vacuum of contact that surrounds Lee Miller's thoroughly dehumanised body, or the transcendent isolation of Margaret Watkins's commercial domestic glassworlds.

Although vitally attuned to the material complexities of modernity, modernism repeatedly refuses to support guilelessly modernity's idealised vision. From Gertrude Stein's preoccupations with the emergent liveliness of dirt in *Tender Buttons*, to Robert Rauschenberg's visceral display of the lively independence of the human body in *Bed*, Meret Oppenheim's *Object* parody of modernity's denials of thingly interiority, Margaret Watkins's refusal to allow glass to become an icon of domestic immateriality in her still life photography, Charles Sheeler's ambivalent experiments in domestic electrification, and Man Ray's necessary retreats into electrical abstraction, modernism not only attends to the repeated material upheavals that characterise modernity, but tests the lived, modern ideal against the far messier experience of reality. Modernism forces us, its audience, to acknowledge the abstraction and artifice at the heart of modernity's immaterial aims by repeatedly

[27] Krauss, "Photography in the Service of Surrealism", (p. 28). The idea that any photograph offers access to "the real" is, however, very much up for debate. See Jae Emerling, *Photography: History and Theory* (London and New York, NY: Routledge, 2012); Joel Snyder and Neil Walsh Allen, "Photography, Vision, and Representation", *Critical Inquiry,* 2.1 (1975), 143-69 <https://www.jstor.org/stable/1342806> [accessed 4 September 2017].

[28] Krauss, "Photography in the Service of Surrealism", (p. 28).

underscoring the vibrancy, affectivity, and dynamism of the nonhuman – and human – materialities that comprise our world. Modernity may be characterised by a drive towards transcendent immateriality, but, as I have argued throughout my analyses, the art it afforded remains stubbornly preoccupied with all the dazzling, impertinent quirks of thorough materiality.

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