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THE ANTHROPOCENE
TELLS US THAT OUR
TECHNOLOGIES
ARE CHANGING THE
PLANET; BUT WHAT
ARE THEY DOING
TO US?

AS OBJECTS OF DESIGN AND MANUFACTURE, MACHINES TEND TO BE QUITE PLIANT TO THE WHIMS OF AUTOMATION. HUMANS, ON THE OTHER HAND, NEED TO CHANGE THE WAY THEY ACT TO ACCOMMODATE SUCH NOVEL PROCESSES. WE MIGHT BE DOCILE, BUT OUR HABITS CREATE INERTIA. THE MACHINES WE WORK WITH ARE A WAY TO TRAIN BEHAVIOR, TO TEACH HOW TO ACT, TO MOVE, TO THINK. WITHIN SUCH CONFIGURATIONS LIE NOT JUST CONSTRAINT AND CONTROL, BUT ALSO LINES OF FLIGHT.

When Zoe Beloff, a New York-based artist, heard that Baruch College was discarding its collection of mid-century 16mm instructional films, she rescued dozens, then chose two, about seemingly unrelated topics, to put into dialogue with one another. *Motion Studies Application* demonstrates the methods of Frank and Lillian Gilbreth, early-twentieth-century American management consultants and efficiency experts whose work blended time and motion studies with workplace psychology. In the film, a male supervisor tests and times the efficiency of female workers' motions while they engage in a variety of tasks: sorting pegs, stuffing envelopes, wrapping packages. The film was meant to inspire other managers and industrial engineers to instill similar discipline in their own workplaces. In the well-organized workplace, labor, machines, supplies, and shops would all seemingly array themselves into an optimal workflow; they would automate – which, etymologically, means to self-will or self-animate – in accordance with the imperatives, the animating authorities, of efficiency and productivity.

In the other film, *Folie à Deux*, a male psychologist interviews a mother and daughter who, in their mimicking of one another's verbal and bodily tics, display characteristics of contagious psychosis, the 'madness of two'. The film echoes Albert Londe's nineteenth century work at the Salpêtrière Hospital in Paris, where his chronophotography documented patients' comportment and supported Jean-Martin Charcot's studies of hysteria. While the Gilbreths photographed bodies – or, rather, body parts – honed into efficient machines, "Londe photographed bodies that refused to be coordinated, whose inner rebellion was expressed in motions that were excessive and strange," Beloff explains. "So we see that from the very beginning of motion picture recording, the productive body was shadowed by its unproductive double."¹

Beloff splices together these two archival tales – of women performing, acting either as conduits of production or embodiments of symptoms, and men evaluating them – and intersperses the found footage with reenactments by a contemporary actress (Kate Valk of the Wooster Group) who lip syncs and mimics the gestures of both the female subjects and male analysts. Those gestures range from the regimented, efficient movements of

envelope-stuffers to the mental patients' nervous, erratic gesticulations: waving hands, twirling hair, pulling mindlessly at skirt hems – 'productive' only in the sense that they can aid the psychiatrist in diagnosis.

Beloff's composite film serves as an index to her exhibition, 'The Infernal Dream of Mutt and Jeff'.² All the furnishings, objects and media artifacts we see on-screen – the library tables and stacks of paper, the clocks and measurement grids – are also present in the various stations around the gallery, staged as a production studio where *Motion Studies Application* might have been created. We encounter scenes, furnishings, and tools of regimentation – apparatuses for automating (i.e., willing, effecting) gesture, rendering hands and limbs optimally productive and objects optimally compliant.

Beneath the projected film we find an industrial oak library desk, circa 1930s, furnished with a desk lamp and rotary phone of slightly more recent vintage, a fountain pen, ink bottle and blotter, on top of which sits a perfectly centered sheet of paper with a perfectly irregular ink spot. A period film camera, barndoor studio light, and slat-back chairs face the desk. While there are no actors or efficiency researchers present in the gallery, we can easily imagine the space animated as a motion-study laboratory – with a test-worker performing her clerical duties for the camera, capturing gestures that researchers would later scrutinize and transform into things, engineerable techniques and market-able commodities.³

Along the east wall we find time-lapse photographs of a woman performing various tasks: lifting materials from the ground, sorting pegs, conducting an orchestra. Her body is drawn out into a blur, but her hand movements are clearly traced by looping streams of light. The Gilbreths created cyclegraphs – pattern drawings – like these by attaching tiny lamps to workers' hands and recording their motions. Adjacent to the photos sits a waist-high sawhorse workbench painted matte black and gridded with white lines that extend up and across the wall, creating an environment of pure geometry to aid in the tracking of movements. Within this geometrized space, wire sculptures mimic those ghostly lines of light from the cyclegraphs – concretizing, reifying, movements that, in the Gilbreth's estimation, represent

the “paths of least waste”, the most efficient means of performing particular tasks.⁴ That gridded environment, part of the Gilbreths’ research and development apparatus, (unwittingly) adopts Leon Battista Alberti’s 15th century method of perspective drawing and renders it economically operational, ‘productive’. By allowing one to abstract and analyze reference images, the Gilbreths’ grid facilitates the production of a gestural model, which subsequently lends itself to use as a pedagogical, disciplinary tool for testing working subjects’ movements against the ‘ideal’.

On the other side of the room: another workbench, atop which we find a stack of manila mailing envelopes, a stack of business envelopes, a tower of 8.5x11” paper, and a large timer. A series of instructional posters hang on the wall facing the table, with an industrial black pendant lamp above casting a warm glow. Here, we could imagine a test-worker folding and stuffing against the clock. While her gaze would undoubtedly be focused on her clerical task, she might, in-between takes, have an opportunity to look up and draw inspiration from the posters in front of her.

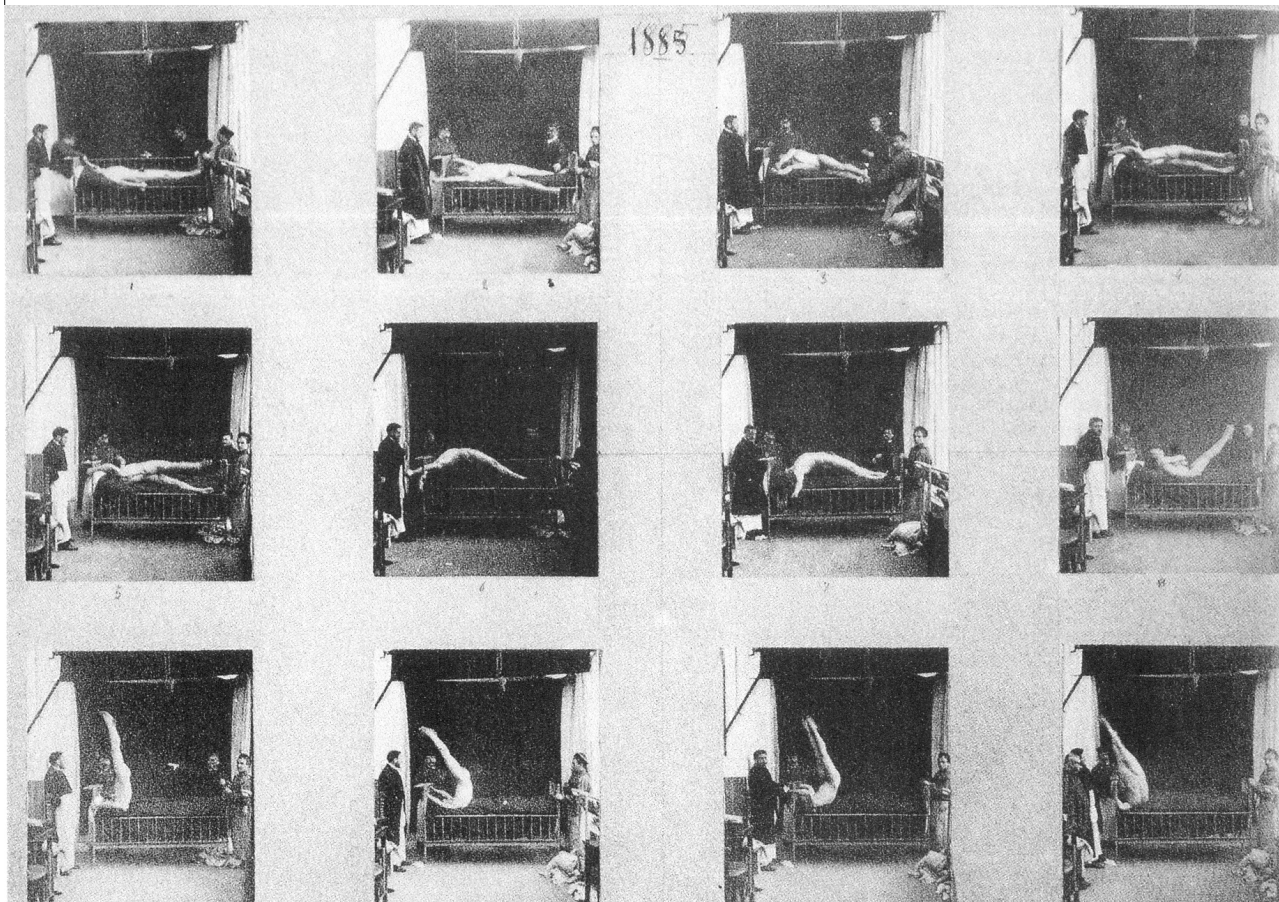
Projected in a nook immediately inside the gallery’s entrance are another set of archival films, which serve not only as namesake, but also as animating spirit for the installation as a whole. Vintage *Mutt and Jeff* animations show the two title characters, stars of an American comic strip that ran in newspapers from 1907 to 1983, in a variety of predicaments and protests: descending to hell in search of fire to keep themselves warm (the titular ‘infernal dream’); or rising up against their creator, illustrator Bud Fisher, when they learn that he has long been profiting from their misfortune. In the latter film, *On Strike*, Mutt and Jeff demand better labor conditions, and when denied, decide to take things into their own hands. The duo draft themselves a drawing studio (perhaps inspiring Beloff to stage her own production studio) and imitate Fisher’s gestures in animating *themselves*, casting themselves as heroes in their own ‘thrilling rescue’ cartoon. Unlike the mother and daughter’s mimicry in *Folie à Deux* that served to confirm their illness and justify their institutionalization, Mutt and Jeff’s mimicry, while still perhaps a bit ‘mad’ in its ambition, offers a potential means of self-determination and liberation. They aim to draw themselves free of exploitation. Ultimately, however, they discover that making an animated film takes a lot more than just will; it takes skill and patience (3,000 drawings for a single reel!), which they lack. Thus, Mutt and Jeff’s attempts to ‘automate’ – to self-animate – their own production fail; their dreams of autopoiesis (self-creation, self-making) burn them out. Mutt and Jeff ultimately

return to their maker, hats and hand, and offer to work for him pro bono.

In Beloff’s meticulously staged studio, however, where objects and gestures are trained to be compliant, we encounter hints of other strategies for resistance. The ink spill on the desk, for instance, offers an inkling of release from an otherwise overbearing system of aesthetic order and gestural control. The instructional posters, whose staid presentations mask their parodic messages about ‘the antics of capital’ and slapstick comedy, intimate another order, too. The very tools and furnishings supplied to promote efficient action – models and clocks and neat piles of office supplies – have the potential to enact automatic, ‘self-generating’ action that reflects different selves, different subjectivities. The ‘auto’ in automation can be driven by the rules of scientific management and the virtues of economy and efficiency, or, alternatively, by rebellion and even, as Beloff’s triptych film suggests, by irrational, pathological desires.

The Gilbreths argue in *Fatigue Study*, one of their several books on motion study and scientific management, that workplace furnishings – “the work bench or table or other device for holding the work; the chair, foot rails or rests, or other devices for affording rest to the body or some part of the body; the material worked on and its placing; the tools or other devices by which the work is done” – dramatically impact the worker’s comfort, engagement, and productivity.⁵ Given their awareness of the power of the built environment to shape behavior, it should be no surprise that, before meeting efficiency expert Frederick Winslow Taylor in 1907 and embarking on his career as a consultant, Frank Gilbreth was an inventive bricklayer and building contractor, renowned for developing mechanical innovations to increase workers speed, like an adjustable bricklayer’s scaffold and cement mixers.⁶

In Beloff’s studio, such scaffolds, rails, and stacks seem to invite their own undoing. And in her centerpiece film – whose three channels stage a dialectic between the workshop and the ward, economy and excess, rationality and psychosis – all those *accoutrements* of efficiency, even the standard-issue furnishings, become what Beloff calls ‘philosophical toys’, or props to imagine other modes of existence.⁷ Here, we envision the ‘dream life of technology’: how technology is rendered in people’s dreams, or what it could be, if conditions were otherwise.⁸ In the imaginary space of Beloff’s triplicate-screen, male voices emanate from female mouths (transforming the ‘auto’, the self, into an Other); erratic gestures generate Doppler-esque sound effects; ink spills over desks and runs down staircases; bumbling hands make a mess of things; tics and aberrations multiply;

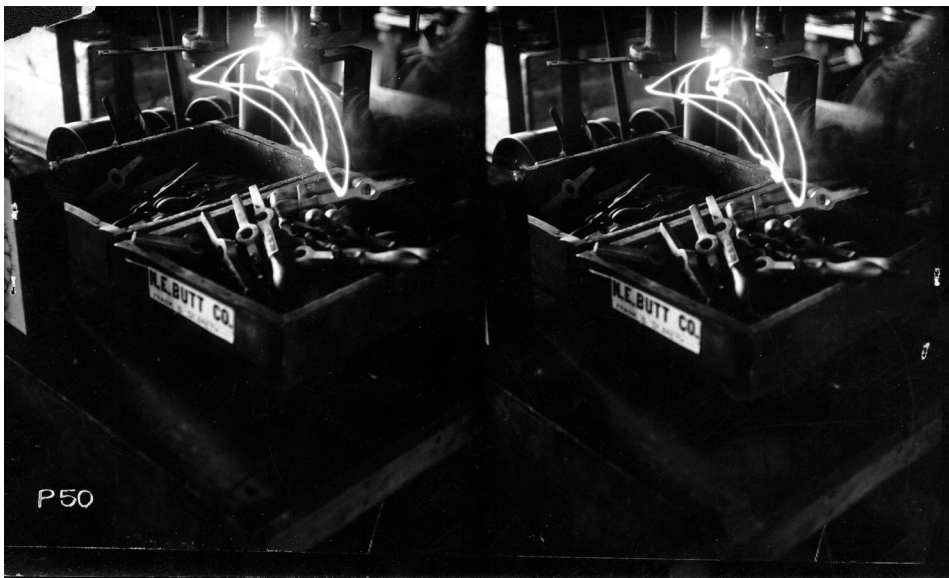


HYSTERIA IN HUMANS by Albert Londe, 1885.

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THE INFERNAL DREAM OF MUTT AND JEFF by Zoe Beloff at Momena Art, Brooklyn, 2016.
Photo: Zoe Beloff.



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TWO CYCLES ON DRILL PRESS SHOWING 'HABIT' POSITIONING after transporting by Frank B. Gilbreth, 1915 (est.). Note the 'hesitation' before 'grasping'.

Photo: The Kheel Center for Labor-Management Documentation and Archives.



INSTALLATION VIEW OF INSTRUCTIONAL POSTERS AND WORKBENCH. The Infernal Dream of Mutt and Jeff by Zoe Beloff at Momena Art, Brooklyn, 2016.

Photo: Zoe Beloff.



STILL FROM MUTT AND JEFF: ON STRIKE, Bud Fisher Films, 1920.

slow-motion acts of abandon elicit eerie exhalations; chairs drop in from above; tables disassemble themselves; time and gravity reverse themselves; entropic breezes deconstruct neat towers of paper, then reconvene again into orderly piles.⁹ The apparatus of moving-image-making – microphone stands, cameras, revolving stages – are present in several scenes, too, highlighting the artificiality of the image, as well as the myths – of productivity and decorum – they're often employed to espouse. In some scenes, when technologies seem to animate themselves, those objects are identified by their proper names on title cards: 'The Language of Things Part 1: Filmosound Specialist 460', 'The Laughter of Things Part II: Schaeffer Fountain Pen', 'Fig. 7: The Foreign Body of the Apparatus (Bach Auricon Pro-600)'.

In Beloff's screen-world, escaping the stultifying rigidity of a fully regimented, efficiency-driven automated existence isn't simply a matter of abandoning the clock and the grid, or bursting outside the wireframes – as so much of our contemporary asynchronous, 'flexible' workforce has done (only to find themselves carrying many of the risks once absorbed by corporate employers, and enjoying only very tenuous rewards).¹⁰ Flex-timing and freelancing, by further 'casualizing' workers' labor and subjecting their bodies to capricious, round-the-clock demands, might even accelerate their marginalization or obsolescence amidst the impending rise of an 'intelligent' automated workforce, a 'robot revolution'. Uberization leads not to self-determination; it's merely the new infernal dream, burning up its adherents' own bodies,

personal belongings (independent contractors put their own cars, homes, technical equipment, and so forth, on the line), rights, and legal protections.

Those black-and-white on-screen sages from the past – whom Beloff rescued from the dumpster of filmic history – instead impel us recognize, even embrace and exaggerate, the pathological underpinnings to our neoliberal compulsions. Perhaps we need to explore the productive potential of the irrational and inefficient, the generativity of the resistant object. These things are 'productive' not because they generate more widgets and greater profits, but because they just might promote autonomy rather than automation, fulfillment rather than financial gain. Perhaps we need to reconceive the workstation as an oneiric space where we can imagine the dream-lives and defiant spirits of our staplers and Slack channels; envision the workshop as a stage-set for the enactment of purely frivolous gestures or new subjectivities; or repurpose corporate communications as a platform for ventriloquizing and parodying management-speak, for disrupting disruption. Of course not everyone has the luxury of such fantasies; some repressive employers extinguish all unprofitable and playful dreams, and some bodies are subjected to inflexible controls. Yet maybe a little conceptual slapstick, Beloff proposes, can help us recognize – and maybe even mimic, act out, give voice to – the absurdity of productivity-as-teleology in its various historical forms, whether yesterday's assembly-line rigidity, today's Uberized flexibility, or tomorrow's robot workforce.

1 Zoe Beloff, *The Infernal Dream of Mutt and Jeff* (Sheffield: Site Gallery 2011), pp. 9.

2 The piece was originally commissioned by Site Gallery in Sheffield, UK and the Museum of Modern Art in Antwerp, in 2011. The specific installation referenced here and photographed is from Momenta Art, Brooklyn, January 28 – March 20, 2016.

3 Brian Price, 'Frank and Lillian Gilbreth and the Manufacture and Marketing of Motion Study, 1908–1924', *Business and Economic History*, vol. 18, 1989, pp. 1–12.

4 Frank B. Gilbreth and Lillian

M. Gilbreth, *Applied Motion Study: A Collection of Papers on the Efficient Method to Industrial Preparedness* (New York: Sturgis & Walton Company, 1917), pp. 90–91. See also Scott Curtin, 'Images of Efficiency: The Films of Frank B. Gilbreth'. In: Vincenz Hediger and Patrick Vonderau (eds.), *Films that Work: Industrial Film and the Productivity of Media* (Amsterdam: Amsterdam University Press, 2009), pp. 85–99.

5 Frank B. Gilbreth and Lillian M. Gilbreth, *Fatigue Study: The Elimination of Humanity's Greatest Unnecessary Waste*

(New York: Sturgis & Walton Company 1916), p. 28.

6 Price, p. 1.

7 Zoe Beloff and Karen Beckman, 'Impossible Spaces and Philosophical Toys: An Interview with Zoe Beloff', *Grey Room* no. 22, Winter 2006, pp. 68–85.

8 Zoe Beloff, 'The Dream Life of Technology', January 1997. At www.zoebeloff.com/beyond/dreamlife.pdf (accessed 15 June 2016).

9 It's notable that most of these aberrant objects are analog, 'dumb' – as opposed to 'smart', networked, trackable, data-

generating technologies – which perhaps renders them more conducive to rebellious application. See: The Drawing Center NYC, 'Drafts Phase I: Zoe Beloff, The Infernal Dream of Mutt and Jeff'. At www.youtube.com/watch?v=UYHW0chufFs (accessed 16 June 2016).

10 Mike Pepi, 'Asynchronous! On the Sublime Administration of the Everyday', *e-flux* no. 74, June 2016. At: www.e-flux.com/journal/asynchronous-on-the-sublime-administration-of-the-everyday/ (accessed 16 June 2016).