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In visible hands: the work of stop motion

Abstract

This essay puts artists, historians and theorists into conversation with each other in the context of an examination of stop-motion work process. Stop-motion film-makers frequently blur the boundaries between work and play as they practise their painstakingly labour-intensive craft, and this essay considers how the work of the animator's hands is evoked (in implicit and explicit ways) in two key examples of late-twentieth-century stop-motion film. Starting with Adam Smith's metaphor of the 'invisible hand' as a figure for self-regulating tendencies within capitalism, and extending into far more critical re-examinations of the figure by C. Wright Mills, I discuss the visual culture of workplace efficiency analysis and its relationship to the history of stop-motion film. I focus in the remainder of the essay on representations of work process in Henry Selick's Tim Burton's The Nightmare Before Christmas *and Peter Lord and David Sproxton's* Confessions of a Foyer Girl. *I argue that these films' contrasting considerations of work are enmeshed within ambivalent considerations of the political economy of cinematic production and distribution.*

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Figures 1–3: Hand work in Confessions of a Foyer Girl, *Peter Lord and David Sproxton (BBC, 1978).*

In his 'Foreword' to the volume *A Century of Stop Motion Animation*, Peter Lord refers to stop motion as 'a form of film-making which refuses to be mass-produced' (Harryhausen and Dalton 2008: 9). Lord's observation coheres with a now-standard scholarly narrative that places early stop motion on the margins of popular animation history: as Donald Crafton, Kristen Thompson and Michael Frierson have all separately demonstrated, cel animation proved more amenable than other animated forms to streamlined, stratified, 'Taylorized' work processes developed during the 1910s, practices that in turn helped transform an unusually labour-intensive art form (hand-drawn cartoons) into a viable commercial product (see Crafton 1982: 137–67; Thompson 1985: 106–20; Frierson 1994: 83–106). Frierson, especially, has shown how stop motion – an intensely physical process that involves frame-by-frame manipulation of models, puppets or other concrete media, and that throughout its pre-1990s history tended to be produced by individuals or by small teams crafting their painstakingly slow creations in the confines of a single, quasi-theatrical space – did not traditionally lend itself to parcelling-out of tasks and assembly-line production practices that eventually defined cel animation and led to its dominance of the field (see Frierson 1994).

Elaborating on his ideas about the special (and especially 'resistant') properties of stop motion, Lord continues:

> The joy of model animation – its whole *point* [sic] both for the animator and the viewer – has always been its intimacy. It's all about close focus – fingers, hands, touch. It's the feel of a puppet in the animator's hands – a unique blending of sculpture and performance. When an animated character is seen moving on screen, the animator is ever-present, everywhere in the shot, an invisible spirit transforming the puppet into a living being. Magically, the animated performance has much of the immediacy and vitality of a live one.
>
> (Harryhausen and Dalton 2008: 9)

The idea of an animator as an invisible decision-maker, performing work between frames rather than within them – echoing Norman McLaren's foundational remarks about the centrality of 'what happens between each frame' – provides a charged instance of an interpretive formulation central to Cinema Studies more generally: that is the idea of what Robert B. Ray (in the mid-1980s) called Hollywood's 'invisible style' – a style (exemplified but not limited to continuity editing conventions in live-action features) that according to Ray 'conceal[s] the pattern of choices that constitute style in any art form', and that renders 'even the most manufactured narratives […] spontaneous and "real"'. While Lord's observations about the 'magic' of stop motion and its resistance to mass production would indicate a refusal of the form to be contained within a capitalist dynamic, Ray's argument about 'invisible style' suggests just the opposite: to 'conceal' the work of film-making (as stop-motion animators necessarily do) is to 'create [consumer] desires, by reinforcing ideological

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proclivities, by encouraging certain forms of political action (or inaction) […]. [In so doing,] the movies worked to create the very reality they then "reflected"' (Ray 1985: 54–68).

It might (reasonably) seem outlandish to place stop-motion icons like the Abominable Snowman, the California Raisins, long-suffering Gromit or spirited Coraline alongside live-action heroes and heroines who populate the classic Hollywood narratives analysed by Ray. Indeed stop motion, rather than simply replicating the dynamics of live-action film, presents an unusually complicated extension of the problematic relationship between ideology and cinematic conceal-ment that Ray scrutinizes in his work on live-action features. This complexity is crystallized in Lord's ambivalent depiction of the animator, whose handiwork is simultaneously 'invisible' and 'ever-present, everywhere in the shot' (Harryhausen and Dalton 2008: 9). Theorists of capitalism as diverse as Adam Smith, Walt Whitman and C. Wright Mills have used the figure of the 'invisible' or 'unseen' hand as a way of measuring pressures exerted upon human subjects by economic and/or ideological forces far beyond their comprehension or control. Smith's eighteenth-century hypoth-esis of the 'invisible hand' paints a more-or-less approving picture of individual self-interest oper-ating (however inadvertently) in the services of the social whole (see Smith 1776) while Mills, in the mid-twentieth century, uses the metaphor of the 'unseen hand' to alert his readers to the sinister coerciveness of emerging US business models, through which 'a thousand rules you never made and don't know about are applied to you by a thousand people you have not met and never will' (see Wright Mills [1951] 2002: 189). (For Whitman, in 'Song of Myself', the 'unseen hand' was a figure of erotic fantasy.)

In the pages that follow I will look closely at stop-motion animation work process. I will start by turning the lens around on the culture of the Taylorized workplace; as early twentieth-century researchers scrutinized the bodily movements of labourers in hopes of promoting ever-higher levels of productivity, they also produced a vivid record of visual documentation that has an unexpectedly intimate relationship to stop-motion practice. I will then turn to readings of two stop-motion films, Selick's feature-length *Tim Burton's The Nightmare Before Christmas* (1993) and Sproxton and Lord's short *Confessions of a Foyer Girl* (1978), in order to show how concerns about work – and more point-edly about work's intertwined relationship with play – permeate the form and content of both. The stop-motion animator's hand, both palpable and concealed, provides a figure that enables the explo-ration of changing work processes in the present-day animation industry, where older and newer representational technologies coexist in uneasy proximity to one another (see Wells 2002: 141).

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The Taylorized workplace, whose profound impact on the course of animation history was demon-strated by Crafton, has a relationship to stop-motion work process that is as close as it is conflictual. Operating under various names including 'scientific management', 'time-and-motion analysis' or

simply 'work study', early twentieth-century experts in the United States and the United Kingdom observed and interpreted the bodily movements of workers on the job, and went on to develop a surprisingly rich and elaborate set of strategies for visualizing labour. The visual products of 'work study' included diagrams, drawings, maps, photographs and instructional films; for work analysts, verbal accounts and statistical data were tools insufficient for the task, and their inventions (which ranged from wacky to punishing to occasionally quite humane) are related to the history of stop motion in ways that exceed the obvious matter of their shared preoccupation with bodies moving incrementally through space and time.

The ephemeral documents and objects that comprise the archive of early time-and-motion study have an unsettling beauty that is largely the product of a tension between their nearly impenetrable abstraction and the sheer physicality of the processes that they diagram and codify. Here, for example, is a work-study visualization of a stenographer's hand motions from 1939 (see Figure 4):

The Gregg Writer, where this diagram appeared, was '*A Monthly Magazine for Stenographers, Secretaries, and Typists*' that put into practice the principles of work study developed by Frederick Taylor, Frank Gilbreth and many other lesser lights in the constellation of workplace efficiency research. John Robert Gregg, who edited the magazine, was himself a leading figure in this movement, concentrating his own research on text production in the US office. Gregg doled out advice to stenographers along the lines of 'Do not call attention to yourself with unnecessary movements or allow yourself to fidget,' and his characterizations of ideal text workers could be remarkably undernuanced: in his words, a stenographer should function as 'an efficient cog in the office machinery' (Gregg 1939: 27). Gregg's work exemplified a cluster of work-study tendencies: workers' bodies, thus diagrammed and described, were suspended in a constant state of tension between stillness (the admonition not to 'fidget') and motion (rapid performance of work-based tasks is, after all, the goal of these observations); and they are suspended as well between the categories of the lively and the mechanical.

These same tensions inform the art and craft of the stop-motion animator, as do a number of scientific management practices that bear a weird resemblance to key stages in the process of creating a stop-motion film. A crucial early step taken by many stop-motion animators, for example, is to translate motion arcs into incrementally divided timelines. Lovely examples of this sort of charting abound in the archive of stop-motion history: for example, several charming, hand-drawn images of incremental motion appear in Lotte Reiniger's 1970 how-to book *Shadow Puppets, Shadow Theatres, and Shadow Films* (see Figure 5).

Shadow Puppets, Shadow Theatres, and Shadow Films (1970), p.107 (More recently, the end papers of the lavish companion volume to *Fantastic Mr. Fox* reproduce dope sheets from that film, complete with marginal doodles.) Stop-motion animators, like their work-study counterparts, also negotiate constantly between the lifelike and the mechanical as they invest static materials with the
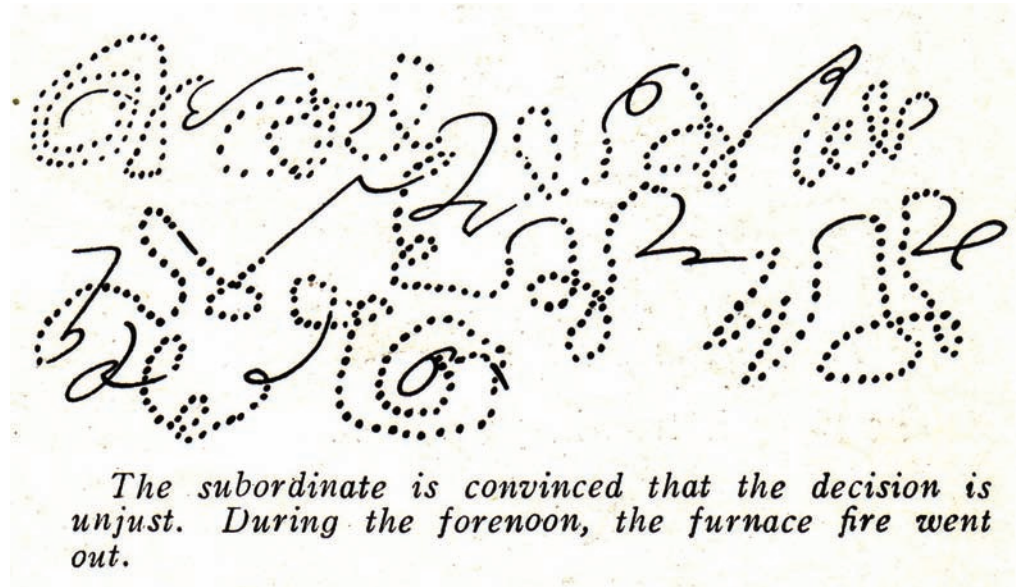
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Figure 4: Motion study of a court reporter's hand, illustration accompanying John Robert Gregg's essay 'Searching Out Lost Motion' in The Gregg Writer *magazine (February 1930), p. 273. The unbroken lines are shorthand marks, while the dotted lines trace the movement of the writer's hand between each notation.*[1]

1. It is worth noting that this diagram appears to be a fabrication; it is difficult to imagine a stenographer executing such hilariously excessive, flamboyant hand motions – including spirals, zig-zags and figure-eights – while on the job.
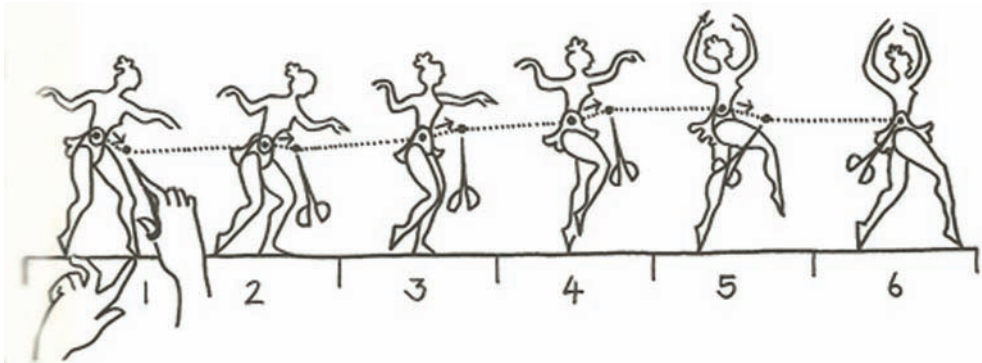
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Figure 5: Lotte Reiniger: alternative motion study from

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power to move. Finally, and equally pertinent to this present discussion, there is the fact that in most (though not all) cases, stop-motion animators work hard not to draw attention to themselves (or in Gregg's terms, not to 'fidget'): the invisibility of their work – the fact that it occurs offstage – is a large part of the point.

Unsurprisingly, 'work study' researchers found film and still photography to be particularly useful tools for creating unvarnished documentation of workers on the job: here, for example, are stills from one of Frank Gilbreth's industrial films recording the eye movements of a typist as she works at the keyboard (see Figures 6–8):

As Gilbreth's experiments grew increasingly elaborate, he began attaching electric lights to workers' hands (or other body parts) and then filming his subjects as they performed their everyday tasks. The filmed evidence, Gilbreth hoped, would enable him to measure both efficient and wasted expenditures of effort. Film, at least at first, seemed an ideal medium for mapping motion arcs over time (see Gilbreth and Gilbreth 1916).

What Gilbreth went on to conclude, however, was that motion media were insufficient for his purposes. Instead, using the same light attachments, he began shooting long-exposure photographs that disclosed light tracks in the air, forming diagrammatic ready-mades painted in light. Finally, Gilbreth spun his experiments further, and more fancifully, by creating sculptural diagrams of frozen motion: based on the long-exposure photographs, these objects modelled movement in three dimensions (see Figures 9–11).

I dwell upon Gilbreth's motion-study techniques largely because of their uncanny similarities to and differences from stop-motion animation. In addition to their fundamental, shared impulse to visualize motion by breaking it down into its tiniest increments using concrete models and combinations of still and motion media, work-study experts and stop-motion animators opposed each other at nearly every point. While stop-motion animators frequently delight in mimetic imperfections like judders and shakes, and while they sometimes prod their audiences' expectations by creating characters that are disconcertingly still, their craft was (as it remains) defined by a process that unfolds over time via the projection of still images in sequence. Time-and-motion analysis, on the other hand, found some of its sharpest expressions in static media that compressed time into a single frame, a single object or a single diagram.

Scientific management experts rationalized their research not only (as would be expected) in terms of increased production volume, but also in terms of humane treatment of workers. One of their key stated objectives was to eliminate or ameliorate bodily stresses and strains (including fatigue or, in rarer cases, boredom). In one of the most fascinating examples to emerge within visual culture of work study, Gilbreth even proposed the creation of what he called 'fatigue museums' (Gilbreth and Gilbreth 1916: 99–113) that would be located at actual worksites. Within these hypothetical 'fatigue museums', tools, workbenches and other workplace fixtures could be

Figures 6–8: Eye movement study of a typist, from Original Films of Frank B. Gilbreth, Parts 1 and 2 (1910–24). *In this example, which comprised a portion of Gilbreth's research into effective keyboard configurations, the camera itself seems to provide a pleasant distraction from the drudgery of typing.*

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2. These figures appear
on unnumbered pages;
they are marked as
Figure 20 and Figure
24, respectively.

Figures 9–11: Light attachments on a worker's hands (9); a long-exposure photograph of a typesetter's work (10); and three-dimensional models of motion tracking (11). Figures 9 and 10 are from Frank and Lillian Gilbreth's Fatigue Study *(1916);*[2] *Figure 11 is from Original Films of Frank B. Gilbreth, Parts 1 and 2 (1910–24).*

exhibited and analysed with an eye towards their potential for encouragement of ever-higher degrees of worker efficiency. (Gilbreth mentions that in one of the few 'fatigue museums' that actually existed, a film editor's workbench was displayed.) The desire to transform workers into 'cogs' coexisted uneasily with an intense preoccupation with workers' feelings, both bodily and emotional.

I have spent a lot of time during the last decade researching how artists and craftspeople in a range of media – working above and below the line – think about and describe their own work process. To an extent that seems to me genuinely striking, commentators on stop motion are fascinated by the question of *what it feels like* to make a stop-motion film. In writings by stop-motion animators and by those who have closely observed their practice, three distinct affective registers get invoked again and again, running the gamut from joy to suffering. The first, which is largely a matter of predilection, is the ability of the stop-motion artist to tolerate and even to take pleasure in a lengthy production process that might seem to an outside observer to be interminable: for example, James Gurney notes (of a distinguished list of model animators including Willis O'Brien, Ray Harryhausen and Nick Park) that they are 'comfortable with working long hours alone. They are capable of dissecting and compressing time, and they're possessed of a rare mixture of patience and concentration' (Harryhausen and Dalton 2008: 8). (Patience, which encompasses a particular attitude towards the experience and marking of time, turns out to be especially important in these sorts of commentaries.) The second register of feeling, more concrete than the first, has to do with an intense responsiveness to the physicality of the form. Barry Purves, for example, describes this responsiveness as a kind of 'high': he writes that 'the whole tactile, physical, arduous, detailed process involved in creating something that really doesn't exist can seem so concrete that the animator, certainly this animator, is often fooled' (Purves 2008: xvi). Finally, the third and most bluntly bodily of these affective registers has to do with the stop-motion animator's ability to withstand genuine physical pain: thus, recalling the three-year work process that yielded Lotte Reiniger's stop-motion feature *The Adventures of Prince Achmed*, one close observer – Louis Hagen – described the small studio that housed Reiniger's trick-table as a 'torture chamber', and recalls that Reiniger and her crew 'had to work on their knees' (see Raganelli 1999).

To some extent, the affective disposition of stop-motion animators – as they and their close observers describe it – coincides perfectly with the workplace practices that Gilbreth, Gregg, Taylor and their followers were trying to promote: it entails an ability to subordinate oneself fully to the task at hand, through endless stretches of time and with tremendous powers of concentration applicable to minute and repetitive tasks. At the same time, however, stop-motion work process sits in an odd place where intensely focused and fine-grained effort shares a lot in common with loafing: days and weeks of effort on the animators' part yield mere seconds of finished film. This paradoxical condition – which might be characterized as unproductive productivity – is

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evoked in marvellously precise ways in the 1993 stop-motion feature *The Nightmare Before Christmas*.

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Tim Burton's The Nightmare Before Christmas, directed by Henry Selick and based on an original treatment (including images and narrative) created by Burton during his time as a low-level Disney staffer in the early 1980s, tells the story of Jack Skellington, an excitable and imaginatively ambitious skeleton whose job is to direct the annual holiday extravaganza of Halloween Town – a grey and orange, slime-sluiced, dreamlike place located among other 'Holiday Worlds of Old' and accessible from the 'real world' through a passageway in a graveyard crypt. Supported from the top down by Halloween Town's mayor and its resident evil scientist, and from the bottom up by a hard-working, unexpectedly earnest citizenry that includes vampires, scary clowns, big-faced bats and bratty undead trick-or-treaters, Jack spends 364 days of every year watching the clock-shaped calendar (prominently displayed on the façade of the town's main building) as he grinds his way towards his production deadline of October 31. Burned out (in a quite literal way) in the aftermath of the Halloween spectacle that opens the film – a spectacle he proudly proclaims to be 'our most horrible yet!' – Jack wanders into a forest and finds himself drawn by force into the parallel world of Christmas Town, where he is delighted and inspired to observe an assortment of unfamiliar sights: colourful electric lights, glistening snow, beribboned packages, carousels, penguins and pies. Returning home, he informs his cast and crew of his plans to overtake the upcoming Christmas – a plan that involves the kidnapping of 'Sandy Claws' – in order to concoct a new kind of holiday production.

Jack's plot, of course, turns out to be hilariously ill-conceived, and in one of the film's most entertaining sequences, he ends up delivering well-intentioned if unorthodox gifts (fabricated in Halloween Town) to the world's children: these include a giant snake that gobbles up a Christmas tree; a maniacal pumpkin-headed jack-in-the-box; and a jaw-snapping wooden duck decorated with bullet holes. These gifts set off a chain of events that encompass squealing children (and their parents), local police (whose phones light up as decoratively as their holiday-decoration counter-parts) and eventually even the military, who hoist gigantic missiles that blast Jack's improvised coffin-sleigh out of the southern California sky. Before the end of the film, Jack returns home and Santa is restored to his proper position in Christmas Town, finally able to deliver more proper gifts to the traumatized children: candy canes, teddy bears and puppies.

I linger over the gift-giving sequence because it contains one of *Nightmare*'s most obviously self-referential jokes, of which there are dozens in the film; these jokes, of course, recall Lord's remarks about the simultaneously invisible and omnipresent hand of the animator in stop-motion cinema. During the 55 days separating the film's opening Halloween extravaganza from its Christmas climax, Jack oversees the residents of Halloween Town as they assist him in his efforts to make Christmas

3. The rating guide appended to the review bore this more vivid warning: '*Some of its creepier imagery is apt to disturb small children.*' [sic]

4. The first round of reviews for the film show clear evidence of the pressure exerted by Touchstone's pre-release publicity efforts; in fact, some larger-circulation papers and magazines (the *Los Angeles Times*, the *New York Times* and *Entertainment Weekly*) published both a conventional review and a separate article dealing with the technical challenges of the film, and with the film's risky relationship to Disney's traditional animated fare.

'OOOUUUURRRSSS!!!' He rallies the talent and divides up the tasks; like any good factory manager (or cinematic art director, for that matter), he pays close attention to the most minute production details, offering bits and pieces of advice and encouragement meant to ensure a consistent vision. However, although he sets out on his gift-giving mission full of confidence, Jack fails to understand that animated toys (unlike their static counterparts) are likely to frighten their recipients: in each case that we are shown, the children's initial anticipation dissolves into abject terror at the point when their gifts start to move. (One child, who for comparison's sake receives a lifeless, unmoving shrunken head, merely looks perplexed and a bit disappointed, despite the fact that his toy is far more gruesome than what the other children receive.) Predictably, when Santa arrives to save the day, he supplies gifts that are either inanimate (the candy cane and the teddy bear) or 'alive' (the puppy). Mirroring the larger *Nightmare* production – where hand-made models are set in motion by the off-screen work of animators – Jack's inadvertently scary presents (which in Peter Lord's terms transform 'puppet[s] into a living being') point towards the possibility of stop motion as an extremely risky strategy for children's holiday entertainment: the film shows how a static object, given the power of mobility, is as likely to be frightening as it is to be wondrous.

This risky quality was a central subject in the first wave of *Nightmare*'s reception, just prior to the film's US release: above all, reviewers wondered whether or not the occasional grotesquerie of the film would render it inappropriate for the child audiences upon which Disney (Touchstone is Disney subsidiary) traditionally relied for its animated holiday feature ticket and tie-in sales. Thus for example, in an otherwise glowing review, Janet Maslin of the *New York Times* cautioned that '[v]ery young children may be alarmed by this film's mock-scariness, but slightly older viewers should be thoroughly in sync with Mr Burton's comic tastes' (Maslin 1993).[3] Others, like Thomas R. King of *The Wall Street Journal*, suggested that the film was 'risky […] in a calculated way'. King (1993) wrote, 'Even if the film doesn't deliver megaprofits, Disney is counting on it to prove that it can attract trendy high-school and college kids who read magazines like *Spin* and *Rolling Stone*.'[4]

One of the sources of this anxiety, as King hints in the above-quoted remarks, is that the film was not only a thematic and tonal but also a stylistic departure for Disney, whose decades-long record of dominance in the field of commercial animation did not include stop-motion features. Stop motion was a strategy for which they felt a pressing need to prepare their audiences, a condition made clear in the publicity materials circulated by the studio in conjunction with the film's (and later the video's) release. The *Nightmare Before Christmas* production notes, for example, are fascinatingly (even compulsively) detailed: they run to sixty surprisingly dense pages. There are of course standard features like artists' biographies and credits; however, even the credits are unusual, being that the large number of personnel on the film caused them to extend to a full ten pages. The notes also include elaborate descriptions of the production process that are packed with numerical data and with repeated references to the 'massive scale' of Selick's undertaking. Readers of the notes

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were compelled to absorb (and reviewers of the film went on endlessly to repeat) a litany of quantitative information meant to sum up the enormous complexity of the animators' work process: the making of *Nightmare* involved 'two years of actual production', 'more than 120 animators, artists, camera operators, and technicians' and '20 individual stages' (Touchstone Pictures 1993: 13–14).[5] Though the film included '74 individual characters' it also required variable versions of the principals: 'There were a dozen Jack puppets, six Sallys, and eight Oogie Boogies,' for example (Touchstone Pictures 1993: 31). Jack himself had interchangeable heads permitting '400 different expressions' (Touchstone Pictures 1993: 32). The mayor of Halloween Town – a particularly complex case, since his head had two faces – required '[t]hirteen different mouth positions for each face' in order 'to handle all the required dialogue' (Touchstone Pictures 1993: 34). Perhaps the most extravagant example is the villain Oogie Boogie, whose burlap exterior was stripped away near the film's conclusion to reveal the 'nearly 3000 individual bugs' (Touchstone Pictures 1993: 35) encased therein. What all these awe-inspiring numbers boiled down to, however, was the completion of a mere '60 seconds of finished animation' per week (Touchstone Pictures 1993: 17).

While these accounts are a statistician's dream (it would be fun to calculate hours of work against seconds of film and to crunch those numbers against the film's profits), they are also an efficiency expert's nightmare. Moreover, placed against the background story of the labour history of animation, which was Taylorized (as Crafton demonstrated) during the 1910s effectively sidelining a form (stop motion) that according to Frierson 'resist[ed] division of labor' (see Crafton 1982: 162–67; Frierson 1994: 84), these notes provide both a poignant reminder of a brutally marginalized art form and a gleeful rejection of an industrial history wherein artistic innovations were circumscribed by demands for rapid, machine-like productivity.

The film stages this confrontation between contrasting production modes in a more-or-less explicit way, during the pivotal 'Making Christmas' number, which cross-cuts between the workers of Halloween Town (who assist Jack in his plot to overtake Christmas by creating alternative gifts, costumes, sleigh, and reindeer) and the elf workers of Christmas Town (who busily perform their normal annual preparations for the holiday). In Halloween Town at the start of the number, the camera swoops across the town square, a picture of liveliness and disorder during the days leading up to Christmas. The workers build an assembly line, but even though it is new it already looks dilapidated, and what is more, they do not appear to know how to use it properly (the mayor enjoys riding atop the assembly line in what appears to be a snowmobile, even though the residents of Halloween Town have never seen snow). Rather than streamlining their work by instituting divisions of labour, the crew in Halloween Town seems determined to devote the greatest possible effort to the smallest possible result: thus, a quartet of singing vampires clusters fussily around a single toy (the aforementioned jaw-snapping duck), embellishing it with tiny, superfluous details like artfully-placed bloodstains (see Figure 12).

5. The authors of these notes are perhaps the only workers in this elaborate production who do not receive a credit.

Figure 12: Bad practice in Halloween Town, from Henry Selick's Tim Burton's The Nightmare Before Christmas *(Touchstone, 1993): a vampire quartet makes a scary toy.*

Figure 13: Good practice in Christmas Town, from Henry Selick's Tim Burton's The Nightmare Before Christmas *(Touchstone, 1993): an elfin assembly line.*

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The assembly line gets occupied by single workers producing objects of their own invention, start to finish, rather than by workers performing sub-tasks in sequence: one character is particularly proud of a stylish little hat that he has made by squashing a rat carcass with a wooden meat tenderizing mallet (Jack strolls by and offers him a gentle critique). Soon the camera pans and tilts upwards to the ever-present calendar, which measures not only the days until Christmas, but also a new way of marking 'Christmas *Time*' (emphasis added): the time joyfully misspent on the Halloween Town factory floor.

At this point, the scene cuts to the calendar in the parallel world of Christmas Town, where we are presented with the far less anarchic (also far less amusing) spectacle of the machine-like efficiency of Santa's workshop. The Christmas Town elves understand what conveyor belts are for (we see Christmas cookies gliding along a belt in regimented shapes and arrangements); they know how to perform repetitive tasks (we see a row of elves, seated side by side on identical machines, sewing identical teddy-bear patterns); their work routines are meticulously predetermined and calculated (see Figure 13).

As the scene cuts back to simultaneous action in Halloween Town, Jack's rickety, skeletal reindeer dangle precariously in the air above his sleigh like broken marionettes, making tiny clacking sounds with their bony mouths. Meanwhile, back in Christmas Town, a group of elves polishes Santa's sleigh as an orderly line of reindeer silhouettes parades across the front of the frame. Halloween Town is all swooping camera work, disorderly activity and idiosyncratic invention, while Christmas Town relies primarily on stationary camera work (with occasional zooms), carefully choreographed, cookie-cutter-style creativity and precise, pre-planned outcomes. Tellingly, Santa's last act in Christmas Town before he is kidnapped is to review his list; it is as if he were reading an accounts ledger, ensuring that these equivocal 'gifts' have been paid for in advance by good behaviour. When Jack takes on Santa's duties and starts delivering gifts, to the contrary, he does not know the children's names; apparently he delivers presents to everyone, regardless of their behaviour during the previous year.

It appears throughout the 'Making Christmas' number that Selick, Burton, composer Danny Elfman and screenwriter Caroline Thompson are having a bit of fun at the expense of Disney's animation legacy, contrasting the work entailed in the making of a pair of holiday spectacles by highlighting the tedious, unimaginative efficiency of traditional Christmas fare with the wildly idiosyncratic, exuberantly wasteful fun of Halloween Town. Christmas Town's factory-like atmosphere is of course reminiscent of the streamlined work processes that enabled cel animation to rise to dominance (and in fact Christmas Town finally does win the battle for ownership of Christmas in the world of the film), while Halloween Town enacts the profligate, improvisatory spirit of *Nightmare*'s own undertaking.

I have suggested in the preceding pages that *The Nightmare Before Christmas* (in both its promotional literature and in the form and content of the film itself) foregrounds its own visual strangeness – its difference from the historically dominant practice of cel animation – by acknowledging stop

6. The northern California setting of Touchstone is explained in the production notes as well as in the short documentary 'Behind the Scenes Look at the Making of the Film' that appears as a bonus feature on the *Nightmare* DVD.

motion as a potentially disruptive (even alienating) form and by celebrating its own massively inefficient creative process. Rich and compelling as they are, however, these self-reflexive gestures in *The Nightmare Before Christmas* are not really accomplishing anything new; in fact, the self-reflexivity of US animation is a topic that has been discussed extensively within Cinema Studies more broadly as well as within the more specialized field of Animation Studies. Dana Polan, in his mid-1980s essay 'A Brechtian Cinema? Towards a Politics of Self-Reflexive Film' uses the Daffy Duck classic *Duck Amuck* (1953) as the basis for an argument that 'uncovering the codes' that might normally be concealed in cinema does not necessarily constitute a politicized aesthetic practice – one that takes seriously questions about history, power and domination, and possibilities for socio-political transformation. While (as Polan notes) 'Daffy undergoes vicitimization at the hands of the animator,' Polan goes on to point out that 'the source of Daffy Duck's *angst* reveals itself to be none of the agents of social domination in the real world, but merely Bugs Bunny' (Polan 1985: 666–68). Terrance Lindvall and J. Matthew Melton, on the contrary, provide a detailed survey of self-reflexivity in US-based animated art in order to argue for the 'carnival[esque]' qualities of cartoons (see Lindvall and Melton 1997: 203–19).

By connecting the visual storytelling strategies of *The Nightmare Before Christmas* to the longer labour history that undergirded US animation practice, I am gesturing, with some tentativeness, towards the politicized underpinnings of the film. Burton himself did this, however playfully and unsystematically, when he described the inhabitants of Halloween Town (who toil away for 364 days of each year under the imperious gaze of the calendar) as 'good, hard-working, blue-collar people who get swept up in this very cheerful spirit of doing something different and fun' (Tim Burton, quoted in Touchstone Pictures 1993: 19). Perhaps recalling his own unhappy experience, just out of college, as what he calls a 'zombie factory worker' (see Fraga 2005: 96) at Disney, Burton (along with Selick, Elfman, Thompson and their cast and crew of thousands) seems in *Nightmare* to have tried to envision a less regimented, less brutally efficient model for animated work production than those that had governed the industry for the previous eight decades. At the same time, however, Burton's own crew could scarcely be described as 'blue collar'; unlike the teams of 'untrained women and adolescents, among whom low salaries and high turnover were the rule' who (as Crafton has shown) comprised the studio staffs of the earliest Taylorized animation shops (Crafton 1982: 164), Touchstone assembled for *Nightmare* an elite group of world-class animators, artists and technical advisors in northern California, where proximity to developments in digital special effects made for an especially rarefied atmosphere.[6]

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Sproxton and Lord's *Confessions of a Foyer Girl* (1978) draws many of these concerns together. *Foyer Girl* displays for the viewer a slice of cinematic industrial life that even scholars highly attentive to

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below-the-line film work tend to overlook: the work performed in the lobbies of down-and-out movie houses during ebbs in the industry's profitability. In *Foyer Girl,* which is set in the United Kingdom during the late 1970s, a soft-core porn film is advertised on the lobby card, the theatre has been subdivided into a multi-screen, and these and other details combine to evoke a period when exhibitors were struggling to cope with rapid declines in cinema attendance (see Hanson 2007; Sims 2001) while foyer girls were struggling to cope with attendant on-the-job boredom. During the film's duration, only one customer appears at the counter, and for the remainder of the short our protagonist chats disjointedly with her co-worker about her busy off-the-job social life; she yawns, repeatedly; at one point she exclaims '*I can't wait to go home*' with an ardour that pierces through her obvious fatigue. Apparently she lacks the legendary patience of her stop-motion creators.

The film's brief, lurid title sequence creates salacious expectations (which are rapidly undermined once the film gets under way): an 'X' rating appears, and tabloid-like titles remind us that one of the promotional strategies some UK exhibitors used at the time was the promise of theatre staff composed of sexy 'Cinegirls' (Hanson 2007: 123). Klaus Theweleit has made useful observations about what he calls 'medial women' – women performing invisible support work in the media industry whose contributions are as crucial as they are devalued (secretaries are a key example) and who (as such) are simultaneously threatening and alluring (Theweleit 1994: 21–22). Foyer girls – cheap to hire and infinitely replaceable, operating at the very bottom of the industrial hierarchy – are nonetheless crucial to its continued functioning.

An early example of the interview-based claymation format that Aardman would refine over the course of subsequent decades in the 'Creature Comforts' series, *Foyer Girl* shares its successors' improvisatory, meandering feel but is somewhat more experimental than the shorts that came later. Our heroine's observations are cross-cut with live-action and stop-motion film footage that alternately reflects and comments upon her utterances, creating a sense that she is both constituted by the discourse of commercial cinema (for example, a car-chase scene accompanies her account of a thrillingly dangerous car ride she had taken with a friend) and that also (as a theatre employee) her labour is one of the cogs that keeps the machinery of cinema operating efficiently. The animation in *Foyer Girl* is far from seamless – at times, for example, the girl's mouth moves and no sound emerges, and the movements of her mouth are at other points badly synchronized with the sound, making short stretches of the voice recording quite difficult to decipher. (Her comments are also periodically interrupted by sound effects and music from the films in progress at her workplace.) The silence of foyer girls in mainstream histories of cinema gets dramatized even as we are presented with the character's recitation of the minutiae of her days and evenings off.

Time is one of the key subjects of her musings: long, slow stretches of work-time, waiting to go home while the clock seems to have slowed to a merciless crawl, followed by the frenetic speediness of her life outside the job. (In addition to riding around in fast cars, she stays out all night and takes

'tablets' so she can make it to work the next day.) The final moments of the film are its strangest and most elaborately self-reflexive: as the foyer girl discusses her favourite cosmetic rituals, the action cuts to a scene of a Frankensteinian laboratory, where she emerges from underneath a sheet on an operating table and looks ruefully into the camera. Both the mechanical and the lively qualities of stop motion are evoked in this transposition of one modelled character – the claymation foyer girl, who remodels herself with cosmetics – into the story of another modelled character – Frankenstein's monster – which is framed within the context of a stop-motion translation of a live-action film.

Perhaps most central to my broader concerns is the fact that the form and content of *Confessions of a Foyer Girl* (like stop motion more generally) bring work and play, labour and leisure, into close proximity to one another. The foyer girl's uneventful hours in the workplace are taken up by thoughts of what happens off the job, thoughts so powerfully consuming that they displace her image from the screen and drown out her voice on the soundtrack. Around the time of *Nightmare*'s release, Henry Selick movingly described stop motion as a kind of 'folk art' – 'There's something very charming about it, the sense of something crafted by actual hands. I think that's something that's been lost' (quoted in Daly 1993: 31). More commonly, however, stop-motion animators describe their intensely difficult work process as the extension of a childhood fantasy of toys coming to life – a laborious activity fuelled by one's earliest experiences of play (see Purves 2008: 20).

Consideration of the entwined, mutually constitutive natures of work and play lifts us out of the longer labour history of animation and places us squarely within a working world that was just starting to take shape at the time of *Foyer Girl*'s 1978 release: that is a world where expressive possibilities are increasingly being generated by computers, rather than being modelled or sketched by hand. When Selick referred to stop motion as 'folk art' he was drawing an implicit contrast to CGI, a form that is frequently cast in the role of stop motion's nemesis by both popular and scholarly commentators. As Lev Manovich has argued, however, computers are themselves important tools for helping us to imagine more flexible boundaries between work and play. He writes:

> The best example of this convergence is a Web browser employed both in the office and at home, both for work and for play. In this respect information society is quite different from industrial society, with its clear separation between the field of work and the field of leisure.
> (Manovich 2002: 65)

Not simply vile usurpers of concrete media, computer-generated animated forms stand alongside stop motion in their potential to smudge conventional boundaries between labour and leisure. This 'convergence' appears also in *Nightmare* and in *Foyer Girl*: during the opening Halloween Town celebration in *The Nightmare Before Christmas*, for example, two characters deliver a mock apology for their spectacularly scary performance by explaining that '[it's] our job!' And the foyer girl manages

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to give herself a manicure while she is in the process of selling a ticket to a customer – again marking a simultaneity of labour and leisure, in this instance through the medium of her hands.

I opened this essay by noting that the 'invisible' or 'unseen hand' is a figure that has made its way through a variety of theorizations of capitalism, from benignly appreciative to far more critical. Given the various resonances communicated by the figure, it seems fair to suggest that both *Nightmare* and *Foyer Girl*, different as they admittedly are, are less interested in a critique of capitalism than they are in imagining a world where profit-making structures remain largely unchanged, save for the fact that workers take pleasure in their efforts. However limited this might be as a mode of anti-capitalist critique, the idea of pleasurable labour – of work and play as a hybrid practice – remains extremely seductive. (It might account in part for the ongoing commercial success of *Nightmare* and its many spin-off products.) Despite their sustained re-engagement of the labour history of animation, these films' implicit vision of an alternative remains fantastic. Stop motion – which partakes of a materiality that is at once exposed and concealed, richly palpable and trickily deceptive – is a practice well tailored to precisely this sort of ambivalence.

Acknowledgements

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