

Rudolf Laban demonstrating
Kinetographie, ca. 1930.

Taylorism Transfigured: Industrial Rhythm and the British Factory

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In 1964, Forrest Mars Sr. entered the Chicago boardroom of Mars, Inc., as its newest chief executive officer. Wearing what was described as an “unfashionable tie and a wide-lapelled suit,” Forrest opened the meeting by laying out his vision for the company whose chocolates, pet food, and instant rice had made his family the third-richest in the world. Then, suddenly, he paused. “I’m a religious man,” he stated. Pausing again, he slipped to his knees at the head of the long conference table. A number of the meeting attendees, who assumed Mars was groping for a dropped pencil, were taken aback as he began, instead, an invocation: “I pray for Snickers. I pray for Milky Way. . . .”¹

Even those who were already aware of Mars’s religious leanings—he had been associated with the company in one capacity or another for more than three decades—were startled to see his piety brought so explicitly into the boardroom.² Three years later, however, a writer profiling Forrest Mars for the magazine *Fortune* glimpsed a connection, arguing that “Mars’s litany had purpose. His listeners, without knowing it, were being introduced to a basic tenet of Forrest Mars’s management system: all members of an organization must be united in a coordinated drive to a single objective—profit—through faith in the company’s leadership and product.” The metaphor, however, was relatively quickly dropped as the author moved to a discussion of Mars’s fidelity to the dicta of scientific management. “Trained as an engineer,” he explained, Mars “has thought through his operating methods down to the finest detail, defined his goals completely, evolved an intricate system of controls through charts and tables—and woe betide any executive who wavers on the well-marked path to profitability.” Ultimately, the piece set Mars’s dedication to instrumental reason against his personal Episcopalianism, concluding—seemingly in jest—that, “Whether it is prayer or logic that does it, Mars’s operating methods seem to work.”³

For the article’s author, it seemed unlikely that the realm of the spirit and the techniques of scientific management had anything to do with one another. Known for his intensity, his periodic rages, and a devotion to privacy bordering on paranoia, Mars’s prayers were easily written off as just another peculiarity of his temperament. The reporter may have been

flummoxed by the pairing of reason and ritual, but the juxtaposition was not, in fact, uncommon. As a growing number of contemporary scholars have shown, twentieth-century businesses often functioned at the productive intersection of prayer *and* logic, rather than prayer *or* logic.

Though the study of the relationship between spiritual practice and the rationalizing, maximizing, and profit-seeking impulses of capitalism is certainly not new—taking its most famous form in Max Weber’s 1905 *The Protestant Ethic and the Spirit of Capitalism*—interest in the subject has recently been rekindled.⁴ But while Weber posited that, by the early twentieth century, the religious underpinnings of the Protestant ethic had become largely vestigial, new research by scholars like Bethany Moreton, Kathryn Lofton, Fred Turner, Richard J. Callahan Jr., and Chad E. Seales has brought fresh attention to the ongoing intertwining of religion and industrial (and post-industrial) capitalism.⁵ Via close historical analysis, this scholarship has revealed how modern industry and spiritual practice have regularly been codependent, working in tandem “to regulate bodies—geological, demographic, and biological—and fit them into the requisite disciplines of modern labor and consumption.”⁶ At the same time, new work in religious studies has shown how religion is often “not only *lived* but *produced* within nonreligious sectors,” drawing attention to the significance of practices previously dismissed as mere “spirituality” and sites beyond the church or synagogue.⁷ Scholars in multiple fields have also begun to appreciate how the close study of technological systems and material tools—from office cubicles to mining processes—can help reveal how these relations functioned on the ground, creating new forms of expertise, experience, and discipline.⁸

In the article that follows, I examine one telling example of this coproduction, focusing on a technology designed to spiritualize the mid-twentieth century factory. Specifically, I explore the development and use of “Industrial Rhythm,” a system for recording and controlling the bodily movements of factory workers, adopted by Mars but also by other companies in Britain in the 1940s. Created by a German choreographer and movement theorist named Rudolf Laban and a British cost and works accountant named Frederick Lawrence, Industrial Rhythm’s stated purpose was to produce both maximal efficiency and new forms of spiritual engagement, incentivizing workers not with higher wages but with fulfilled souls. But unlike the Weberian paradigm in which steady toil—and the attendant accumulation of wealth—served as a signifier of divine election, Laban and Lawrence sought to make industrial labor a deeply fulfilling gift in and of itself. With the right tool in hand, they believed, work could become not an act that pro-

claimed one's eventual salvation but a vital means of experiencing the divine in the here-and-now. This transformation, Laban and Lawrence hoped, could help ensure industry's continued operation in an era in which industrial managers were facing increasingly widespread, confrontational, and effective challenges from the forces of labor. Industrial Rhythm's history, therefore, unveils one powerful way in which the cultivation of profits and the cultivation of souls were understood to function productively alongside one another, even—or perhaps especially—as the ties between them were increasingly publicly disavowed. While not quite a prayer for Snickers, it was an appeal to the transcendent nonetheless.

Movement Studies

Before entering the realm of industrial consulting, Laban was best known as a dancer and choreographer. Born in 1879 in Bratislava, in the 1910s and 1920s Laban became one of the founding figures of German expressionist dance (*Ausdrucks Tanz*), a movement characterized by its rejection of ballet's formal structures and its embrace of obvious emotion and subjectivity. Laban was also obsessed with the creation of a tool for recording dance—an equivalent to music notation that would make the ephemeral permanent and, in his estimation, at last bring dance into the modern age.

After years of experimentation, Laban published his version of such a system, called “Kinetographie,” in 1928. Consisting of a blank score containing three parallel, vertical lines, it is read from the bottom upward, with horizontal bar lines indicating time, much as the vertical bar lines do in music notation. The center line represents the spine: actions taking place on the right side of the body are written on the right side of the staff and actions on the left side of the body on the left. Symbols clustered around the center line indicate movements of the feet, and, moving outward, invisible radiating columns provide space to indicate movements of the legs, torso, arms, hand, and head. Each body part can move in any of three planes—forward-and-backward, side-to-side, and diagonally in either direction—and can be performed at a high, middle, or low elevation, relative to where the body part is normally found. The direction of movement is represented by a symbol's shape and its elevation by the symbol's shading. With this system in hand, Laban boasted, any movement of any kind could, at last, be completely and objectively recorded and prescribed.

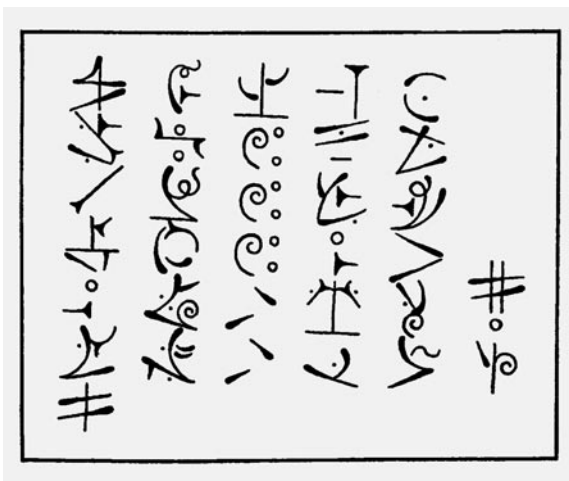
Closer examination, however, reveals that Kinetographie was also entangled with more mystical elements and aims. Though the final version of the script evokes the regularity of the machine age, earlier drafts produced throughout the 1910s and 1920s drew on an aesthetics borrowed explicitly from

ancient scriptures and runic inscriptions.⁹ And though Laban publicly fashioned himself as the first scientist of movement—reading widely in physiology and physics—he was also a committed Rosicrucian and Freemason and embraced a set of beliefs in which movement, meaning, and the universe are bound by supernatural threads.¹⁰

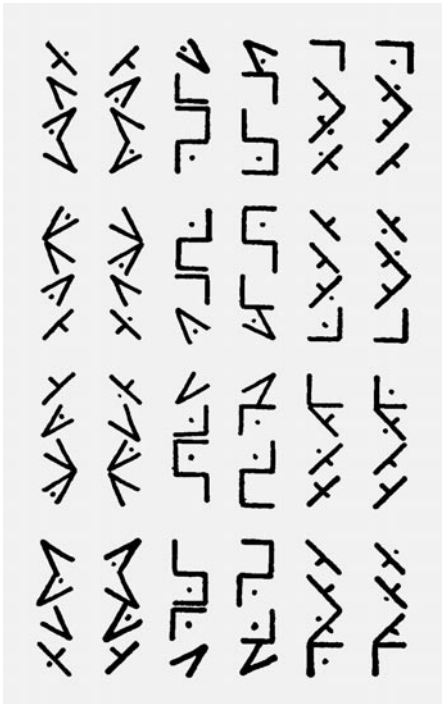
The truth of this proposition, he noted, was often ignored in the modern age but had once been self-evident. In particular, Laban contended that the moving body had been deployed across time immemorial by religious leaders—whether in the “old, erotic prayer exercises” of non-European cultures, the ecstatic temple dances of the Greeks, or in Catholic ritual, built on bowing, kneeling, and gestures of blessing. Such practices, he argued throughout his 1926 book *Gymnastik und Tanz* (Gymnastics and dance), were “designed to train the body to obey disciplined movements and thus reunite spirit and body,” and dance was thus a “spiritual necessity,” uniquely able to uplift the soul, discipline the desires, and connect human beings both to one another and to a larger cosmic order.¹¹ Kinetographie, therefore, was not mere stenography; it was a kind of spiritual technology designed to control movement—and thus also the internal recesses of the human soul—across time and space.¹²

Capitalizing on this heady blend of the technical and the divine, Kinetographie saw immediate success in Germany, garnering praise both within and beyond the dance community.¹³ Most notably, it was used to organize what Laban called movement choirs (*Bewegungschor*): groups of five to five hundred individuals who were taught a sequence of particular movements to be performed in unison, designed to provoke elevated emotional states, community feeling, and union with nature. Movement choirs were also one of the ways in which Kinetographie became part of the Nazis’ cultural program after 1933. In fact, from 1934 to 1937, Laban served as the Third Reich’s minister of dance, responsible for—among many other duties—the organization of a massive movement choir for the 1936 Olympics.¹⁴

By the end of 1937, however, Laban had fallen out of favor with the regime and left Germany. He went first to Paris, then to England, where—thanks to the efforts of a former student, the dancer and choreographer Kurt Jooss—he was offered an artistic residency at an institution known as Dartington Hall. Founded in 1925 by Leonard Elmhirst, an English agricultural economist, and his wife, Dorothy Payne Whitney, the American heiress, arts patron, and social reformer, Dartington was envi-



Above and opposite:
Rudolf Laban. Early notation
drafts, from *Choreographie*
(1926).



sioned as a new kind of multipronged entity, one that would combine a progressive school, arts instruction and performance, productive farmland, and light industry in a single unit. This union, its founders hoped, would provoke a wholesale economic, cultural, and spiritual regeneration of Dartington's surrounding area—devastated by an agricultural depression that began in the 1870s—and eventually serve as a model to be emulated elsewhere, providing a new kind of remedy for modernity's upheavals. Within a decade, Dartington acquired a following among elite British progressives. Aldous Huxley sent his child there, as did Ernst Freud and Bertrand Russell, the American documentary filmmaker Robert Flaherty, and the scientist J.D. Bernal.¹⁵

When England entered the war in 1939, Laban's status became more precarious. Along with all other foreign "aliens," he was required to relocate away from the southern coast, moving to a small cottage in Wales.

He continued receiving a small allowance from the Dartington trustees but was warned that the fund would soon run dry. It was C.C. Martin, the head of Dartington's Arts Department, who would solve Laban's problem, envisioning a new role Kinetographie might play in the larger mission to reimagine the relations between art, industry, and spirit. In August 1941, Martin suggested that Laban meet with F.C. Lawrence, an accountant and businessman who had been a member of the Dartington Hall board of trustees since 1930. Describing Lawrence as a "prominent business man in the North of England who is interested in a study of the movements which working men have to make to do their job," Martin explained that "businessmen in this country are coming to the conclusion that there is a right and a wrong way of performing all such movements, and it has been suggested to me that the script [Kinetographie] might make a very useful basis for the recording of such movement and its study." While factory management might at first appear a rather mundane fate for this groundbreaking artistic tool, Martin shared his belief that the project had its own revolutionary potential: "if the script could be made available to industrialists at the present time it would be performing a national and even world-wide service of a kind which you never envisaged for it."¹⁶

While scholars have debated the precise extent to which scientific management in general—and motion study in particular—penetrated industrial practice in the United Kingdom, the average factory owner or worker would have been familiar with the concept and perhaps its execution as well.¹⁷ Whether via Frederick Winslow Taylor's stopwatch, Frank Gilbreth and



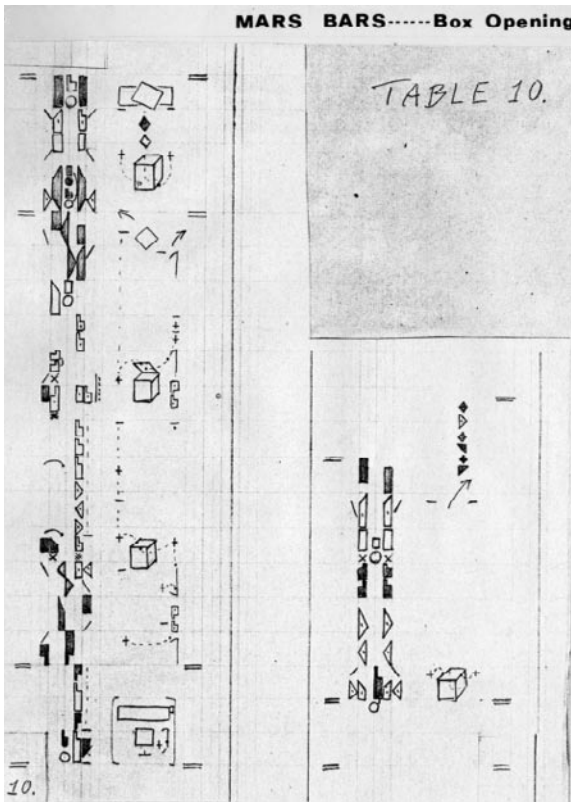
Lillian Gilbreth's elaborately charted "therbligs" and cycle-graphs, or Charles Bedaux's *B* units, the aim of such studies was to subject each and every movement a worker made to close inspection, analysis, and reform, all in the service of soaring production numbers.¹⁸ Some praised the ingenuity and "scientific spirit" of such interventions, but others noted that work managed in this way became so controlled, so parceled out, so divorced from the exercise of judgment that it could not help but be alienating. Moreover, though exponents of scientific management almost uniformly paid lip service to the project of fatigue reduction and industrial welfare, many intuited that their true aim was profit at whatever cost. Use of the Bedaux system precipitated at least thirty-six strikes in the years 1929–1939, and the Bedaux central office eventually recommended that its consultants avoid using the term *Bedaux* in the field, so poisoned had the association with increased speed, reduced pay, and diminished autonomy become.¹⁹

Lawrence's consulting firm employed various forms of motion study, but Lawrence himself had long been unsatisfied with the practice. Some of his complaints were pragmatic—his own attempts at recording motions had resulted in the "utmost difficulty in making useful records, either by description or by sketches."²⁰ His other objections, however, were more foundational. "I don't care for it," he noted. "It doesn't get at the thing, but people go round with a stop watch and bit of paper, instead of looking at the person."²¹ Scientific management seemed, for Lawrence, hopelessly divorced from the realm of the human, a state of affairs he found both practically and morally troubling. His hope was that Laban's involvement might begin to resolve both concerns, his notation providing a workable recording method, and his artistic and philosophical commitments producing a less degrading mode of management.

Laban, for his part, did not need much convincing. In his

Above: Bakers dressed as traditional breads at the Festzug der Gewerbe (Pageant of Trades), 1929. Courtesy Trinity Laban Conservatoire of Music and Dance Archives, Greenwich, UK.

Opposite: Notation for "Box Opening," Mars Bars, 1942. Industrial Rhythm\Mars Confections Ltd.\Charts (L/F/80/11), Rudolf Laban Archive, University of Surrey. © University of Surrey, no reuse without permission.



initial reply to Martin, Laban assured the arts administrator that “the idea to use my script for the notation of industrial operations interests me tremendously.”²² Indeed, Laban had experimented with the notation of working movements once before. In the summer of 1929, fresh off the publication of *Kinetographie*, Laban helped direct Vienna’s *Festzug der Gewerbe* (Pageant of Trades). Designed as a unifying celebration for the city’s workers, the four-mile-long parade involved more than ten thousand participants and representatives from four hundred trade groups. In the months before the festival, Laban spent time with each of the groups, recording in *Kinetographie* the “traditional” movement elements of each craft and using these movements as the basis for each group’s parade choreography. In the aftermath of the festival, Laban claimed a marked increase in worker contentment, asserting that the participants

“turned to their trades with far more understanding and love, and that the revival of old traditions especially helped to make their work pleasanter and lighter.”²³

Kinetographie itself, moreover, was fairly easily adapted to novel ends. Ultimately, Laban and Lawrence arrived at a system in which the original methods for indicating direction, level, and length of movement were retained, but the staff itself was compressed into just two parallel lines. On and around the first line were written the movements of the body, while the second line held symbols representing the materials, parts, or tools workers would employ at a given moment.²⁴ Between the two lines additional symbols were inserted to indicate *how* movement was to be performed: a shaded triangle, for example, indicated a “strong effort,” while an unshaded one represented effort that was “weak or relaxed.”²⁵ In contrast to existing methods of motion study, *Kinetographie*—now renamed “Industrial Notation”—would record not just the time a given movement took but also its rhythmic dynamics and qualities.

With the new Industrial Notation in hand, Laban and Lawrence—with the crucial assistance of Lisa Ullmann, a former Jooss dancer; and Lawrence’s niece, a mathematician—devised a basic procedure for industrial evaluation. The team would make an initial site visit to a factory, where Laban and Ullmann would spend several hours getting to know its operations, watching and notating workers’ existing movements. Days later, they would return to the factory, arms full of sheaves

of paper filled with new, intricately plotted work procedures. Using the notation, Laban or one of his assistants would instruct the workers in the new movements, which they were expected to mimic exactly. Further observation and notation would determine whether workers were following the set patterns and allow them to be compared against one another. To aid in this task, Laban and Lawrence eventually hoped to enlist foremen “of average intelligence” who could be trained to read Industrial Notation “and use this means of control after a few days exercise.”²⁶ The analytical work of determining *which* movements to perform would be left to Laban and Lawrence.

On its surface, therefore, Industrial Rhythm did not look so different from existing forms of motion study, a hazard Laban and Lawrence well recognized. “We have felt some slight resistance to our work,” Laban acknowledged, “because of working in the shadow of Bedaux.”²⁷ Laban and Lawrence, however, consistently stressed that their objective was not solely increased production. Focusing only on an unending increase in output, they maintained, would ultimately be self-defeating. Excessive hours and high speeds led inevitably to wastage, nervous exhaustion, and greater losses than those that would result from a more measured plan of action. As an internal memorandum sketching out the planned work at one company noted, “To offer them 100% maximum output, or any increase of output at all” would be “like promising a patient an increase of fever instead of a balance of his well being.”²⁸ Their goal instead was to alter workers’ emotional experience of their own labor. Though Laban and Lawrence claimed that the use of Industrial Rhythm would almost always *result* in higher performance and profits, such commercial concerns were ostensibly not its main aim. Their vision concerned something far more profound and all-encompassing than output, a dream perhaps best distilled in the words of the new system’s slogan: “To Bring That Swing and Lilt in Labour, Which Makes Efficiency a Pleasure.”²⁹

Work and Spirit

One of the first companies to engage Laban and Lawrence’s services was Mars. In 1942, the main production plant in Slough—like the rest of wartime industrial Britain—was in the midst of a speed-up, producing millions upon millions of the caffeinated and highly caloric chocolates to supplement the mess kits of British soldiers. Though the company sought to motivate workers with reminders of the significance of their service, insisting that for both “the fighting forces” and the “kiddies in the Shops” it was “the extras” like Mars Bars that made it “easier to stand the strain . . . to work, to fight and to play the game,” morale continued to suffer.³⁰ Years later,

Lawrence described the scene in the wrapping division, where about sixty young women worked: “The girls were at the end of a conveyor stretching right back to the confectionary kitchen . . . facing an endless parade of little rectangular bits, marching down there about twelve abreast. It was a horrible sight to see these things coming at you.” Each worker picked up and wrapped a new Mars Bar every 3.75 seconds, for a total division output of approximately 58,000 chocolates per hour, 518,000 per day, and 15 million per month.³¹ Fatigue and demoralization set in quickly; despite its best efforts, the company could not seem to overcome a constant struggle against mistakes, waste, and absenteeism.³²

Laban and Lawrence’s early communications with Mars management focused on the company’s significant turnover problem. “It would appear to us,” they noted in their initial proposal, “that the strain under which some of the operators must work will manifest itself in non-attendance and in an increase in Labour Turnover, which are both expensive and disruptive of continued high output.” They also reminded Mars that—given the wartime labor situation—the issue was unlikely to resolve itself, noting that “at the present time recruits cannot be specially chosen from applicants for vacancies and you suffer from the employment of those whom normally you would not employ.”³³ A week later, the company formally engaged Laban and Lawrence for a full study and training program.

Following a day of observation and notation by Laban, Lawrence, and Ullmann, the Industrial Rhythm group diagnosed Mars with an epidemic of “over-hastiness” and an excess of muscular tension. The solution they offered was simple. Over the course of about a week, Ullmann would teach the employees new ways of physically approaching their work, both on the line itself and in series of daily, forty-five-minute preparatory classes. For the wrapping line, for example, Ullmann sketched out an intricate set of hand and arm movements that required the women to alternate moments of strain with those of relaxation, producing an agreeable rhythm that repeated every few seconds. The ultimate goal, they promised in a pamphlet titled *What We Would Like to Tell Your Workpeople about LILT IN LABOUR*, was a more pleasant and pleasurable workday.³⁴

Crucially, though, the “lilt” or “pleasure” Laban and Lawrence continually referenced was neither the simple secular satisfaction of a job well done nor the relative contentment that came from the absence of injury or fatigue, long the goal of Taylorist reformers.³⁵ They had, in truth, a more ambitious aim, believing instead that the industrial workplace—if aided by the right movements and gestures—could become a site for a new,

collective spiritual awakening. The theory underlying this premise—that movement connected the individual to a larger supernatural order—had long motivated Laban’s work, from his experimental theatrical practice in the 1910s to the movement choirs he organized for the Nazi state. As he began collaborating with Lawrence, however, Laban began to suspect that the most appropriate site for harnessing movement’s power was no longer the cathedral, the stage, or the auditorium but the factory. It was in the factory that so many people spent so many of their days and thus there that Kinetographie could be most powerfully deployed.

Laban’s plan was to shape workers’ everyday movements into a new kind of ritual, one that turned the wrapping of a candy bar or the repetitive pulling of a lever into an opportunity for transcendence. In a brief passage on work in his first book, a theoretical text on movement and dance published in 1920, Laban noted,

When the priest advises men to carry God’s name in their hearts when doing even the meanest of work, this seems to many to be arrogant. A priest can easily always carry God’s name in his heart because his profession constantly reminds him of God, or at least it should. Not every profession reminds of God. Some activity excludes this thought completely during work.³⁶

The philosophical contemplation of the divine, however, was not what Laban had in mind for the Mars workers. He envisioned instead an experiential, embodied form of religious practice modeled on cultic celebrations.³⁷ Doing so, as he instructed his early readers, could make the daily toil of any worker as spiritually nourishing as that of “an artist, an actor, a priest, or a scholar.” Reminding them that “this inner festive conviction can, in fact, be held aloft by every kind of work,” he exhorted his readers to realize that “in you exists joy as a constant inner festival. All you have to do is release it.”³⁸

But just as a Catholic priest mediated his congregants’ access to God, by the 1940s Laban was convinced that this festive release needed to be carefully managed, ideally from above. The technological mechanism for that control was Kinetographie. With its neat columns and black-and-white shapes, Kinetographie could ensure that workers were making the right movements, selecting some, discarding others, monitoring constantly for compliance. The resulting practices would put workers in tune with the fundamental rhythms of the universe but also be regular and easily comprehensible: an ecstatic dance ruled by a bureaucratic technology. As Laban clarified in an early Industrial Rhythm memorandum, “newcomers must be instructed in order to adapt themselves to the

great pattern. Failures and irregularities must be corrected or rejected and—last/not least—the co-ordination can and must be perfected by improving more and more the performance of each single detail.”³⁹ Nothing would be left to chance. This orientation made Laban a natural partner for Lawrence, who, as an engineer, rhapsodized about Laban’s discovery of regular, implementable rules of enchantment. As Lawrence summarized in one admiring explanation of Industrial Rhythm’s inner workings,

there are rules of rhythm just as there are rules for everything else worth while in life, and these can be codified by Laban in a practical form so that the industrial controller of effort can apply them and thereby give beauty even to the most monotonous and despised work in a factory.⁴⁰

Lawrence and Laban also shared a conviction that something significant had to change if industrial society, writ large, was to endure. In an unpublished manuscript they began writing together during the early years of their collaboration, titled “Man and the Commonwealth,” they catalogued the horrors that had plagued the West over the past several decades. But rather than blaming these traumas on the “mere will” of certain “demagogic personalities,” the two men took aim at underlying economic realities, arguing that the pace of industrialization had resulted in both unprecedented economic inequality and—even more important—a mounting and insidious discontent with the experience of work itself. “People do not grasp how swift, how profound the transition from crafts to industry” was, they wrote, but the aftereffects of this transformation could be felt everywhere.⁴¹ Workers who spent day after day on an assembly line, making seemingly meaningless, repetitive actions left the factory frustrated, anxious, and spoiling for a fight.

But while Laban and Lawrence worried about the current state of affairs, they also took a strong stand against any attempt to slow what they saw as desirable industrial and technological progress. There was no going back, only forward; the notion that the solution to industrial society’s woes was a return to “fetishized” forms of medieval craft work was, they held, fundamentally unrealistic. “New forms of labour,” they contended, “have come into existence, which must be recognised and accepted by the broad masses, as fundamentals for new joy in the performance of everyone’s productive task.”⁴² This shift, Laban and Lawrence explained, was only natural. “Spiritual life,” they explained, had “always been borne by the struggle for sustenance of the human race and changes with the form of that struggle.”⁴³ Assembly lines and complex machinery were

not going away; nor, Laban and Lawrence argued, should they. The fundamental problem was not industrial development itself but the fact that human beings had not yet devised a way to harmonize their spirits with the rhythms of the machine.⁴⁴

As Laban and Lawrence stated in a 1943 business prospectus, Industrial Rhythm's true power derived from its capacity to shape "not only outer movements" but also a worker's "inner attitude."⁴⁵ Even more significant, workers need not even be aware of the process for the system to function. As they emphasized elsewhere, "it is not at all necessary or even possible that the workmen become clearly conscious of this effect."⁴⁶ The newly managed movements would automatically produce a rash of profound self-transformations, correcting the "mismatch between material progress" and "the masses' mental and spiritual growth," ensuring the ongoing functioning of modern industrial society.⁴⁷ Laban and Lawrence's efforts to control movement always represented an intervention intended to reverberate far beyond industry itself. In a letter to friends, Laban admitted these "revolutionary tendencies" and highlighted the fact that his workplace movement research was intended to help produce the "new mentality which we feel to be necessary . . . in modern industrial life."⁴⁸ Industrial Notation, he argued, held the key to the full and final reconciliation of human beings and the new systems of production.

Rhythm in Action

By 1943, inquiries from prospective clients—Pilkington Tile, J. Lyons Tea, the Manchester Dock Workers, the Royal Air Force—began arriving at a steady pace. Lawrence had to turn down at least one interested businessman on the grounds that the team was already working for his competitor. Laban and Lawrence also spoke regularly at meetings of the Manchester Association of Engineers, and one of their top associates toured nearly every chapter of the American Institute of Industrial Engineers, drawing crowds of more than one hundred in New York, Columbus, Louisville, Fort Worth, Dayton, and San Francisco. In 1947, further evangelizing for their project, they published a book about Industrial Rhythm, *Effort*, that saw at least two printings.⁴⁹

In practice, Laban and Lawrence's work continued much as it had at Mars. Though the changes they suggested varied as the substance of the work changed—tinning bacon, capping medical vials, boxing tea, mixing aggregate, chopping wood—the underlying format remained largely the same: an initial evaluation, followed by the production of new Kinetographic scripts and the introduction of daily movement classes. At Glaxo, for instance, Laban introduced a new method for capping medical vials, contending that the new scheme would extract the

drudgery from even this most dull and repetitive act. “For a girl with correctly applied effort and automatized working to the correct rhythm,” he noted, “there is no hardship in working on this one job continuously during normal working hours, day after day.”⁵⁰ At St. Olave’s Curing and Preserving, the Industrial Rhythm team promised that the introduction of a “steady rhythmical flow of production” would decrease turnover and boost individual efficiency by 20–25 percent by engendering not only “physical health and contentment” but an “increased will to work,” a “strengthening of the bodily and moral (nervous) power of resistance,” and an “increased will to co-operate with fellow workers and Management.”⁵¹

Laban held that movement training could wholly eliminate even seemingly deep-seated conflicts between management and workers. One factory that engaged Laban and Lawrence’s services was plagued by profound rancor between shop-floor workers and their immediate superiors. In evaluating the situation, Laban largely dismissed the traditional causes of such disagreements—pay scales, working conditions, fickle foreman—and laid the blame squarely upon workers’ physical movements. He urged company managers to consider “the well-known fact that the uninterrupted contraction of joint muscles—especially those of the arms and hands—as well as over-violent movements during these contractions, provoke nervous tensions which lead easily to emotional states such as ‘anger,’ ‘impatience,’ and even ‘fury.’” Because the workers were unaware of these effects, Laban warned, they instead blamed their foul moods “on external circumstances, of which slight deficiencies of administration become naturally the first target.”⁵² By altering the mill workers’ movements, Laban believed he could influence their emotional states and, in so doing, create a factory without conflict.

But even as Industrial Rhythm’s leaders touted these quotidian benefits, they continued to suggest, albeit subtly, that the stakes were higher than aching backs or workplace altercations. In a lecture to the Manchester Association of Engineers, for example, Laban told the story of a pale, sickly girl in the Mars factory, who—once fatigued and depressed—blossomed under the tutelage of Industrial Rhythm’s instructors. She came, in fact, to love her daily labors, entering an almost trance-like state as she worked, “a story,” which, Laban argued, “should cure all that sentimental nonsense about the dull monotony of a factory worker’s life.”⁵³ They told tales of employees finally working together in harmony, swept away by the all-embracing communal rhythms of production, of factories that functioned first like well-integrated “organisms” and then like well-tuned “orchestras.”⁵⁴ In notes titled “Early Notes on Industry for Our Instructors!,” Laban even provided a mantra that instructors

could share with workers undergoing training: “I am entering into a great unit—the greatest and most natural unit of liltfully functioning human beings—I am integrating myself into the creative energy which acts naturally through me.”⁵⁵

Laban and Lawrence promised, moreover, that the benefits first realized on the factory floor would eventually spill over, first into workers’ personal lives and then into society at large. At Mars, they assured workers that “you will find that your own personality will become stronger and freer,” creating an “inner sense of ease and calmness from which you will get the greatest satisfaction.”⁵⁶ Indeed, Laban and Lawrence posited that the emotional returns from this method would be so great that they might eventually dwarf the motivating influence of other factors, up to and including wages. “The times,” they wrote, “when it was thought that satisfaction was only to be had through money have passed.”⁵⁷

What workers thought about these claims is difficult to determine; their voices appear only in the margins of company records. In a set of reports on Industrial Rhythm’s consultancy at Tyresoles, a tire reconditioner and manufacturer, for example, the on-site trainer noted that most of the women seemed eager to attend the regular movement classes. One might imagine that—if nothing else—the courses provided a welcome break in a long day of labor. At least one employee, however, seemed more skeptical of the effort’s value, reportedly taking part in the courses in a “manner which is somewhat disturbing the others who take the training very seriously.”⁵⁸ Resistance was also greater among long-standing male employees, who—unlike the newer female workers who joined the labor force out of temporary wartime necessity—resented the increased surveillance and had well-established working methods they were reluctant to abandon. On the managerial level, however, several of the companies who adopted Industrial Rhythm seemed satisfied with what seemed to be real (if unquantified) improvements in morale and regular (if small) increases in production.

These companies’ willingness to experiment likely stemmed from multiple sources, including the unprecedented influx of untrained workers required by the war. Their curiosity, however, was also piqued by Laban and Lawrence’s promises to arouse workers’ sense of joyful belonging, shifting their sense of loyalty toward their employers and away from the trade unions that were then reaching the height of their power.⁵⁹ In a confidential report submitted to J. Lyons and Company, the Industrial Rhythm team noted a particularly volatile situation in the mill, where—even before Laban and Lawrence arrived—there was “without doubt a kind of agreement between most of the workers in a wish to resist measures and procedures of the administration or management.” This dissension, they further

suspected, “could probably be traced to common talk, a tendency to form or enter a union, or suchlike organisatory propaganda. This unity or common feeling of the workmen is, in any case, concentrated on negative criticism and not on helpful collaboration.”⁶⁰ The report, however, assured J. Lyons that a way out was at hand: amid all the grumbling was one man who stood apart, quietly avoiding the simmering rebellion in the rest of the division. Unlike the others, they noted, he naturally “performed his work with just that restricted effort which these operations require,” and it seemed that his movement qualities had freed him from the rest of the division’s self-defeating discord (and their concomitant interest in unionization). As the report continued, “it is characteristic that the man working in the right rhythm is the only one who is really aloof from, or immune against, the negative attitude of the team.”⁶¹ He would, instead, be cooperative and dedicated to his employers, knowing that they were all working toward the same higher goal. Laban and Lawrence further suggested that this man be tapped as a trainer for new employees; while the existing workers’ bodily habits might be too engrained for Industrial Rhythm to fully remedy—a situation that was not helped by their indifference to the training procedures—newcomers, “even men or youngsters who are not particularly strong physically,” could be properly instructed from the start. In time, the situation would remedy itself.

But not all of Industrial Rhythm’s clients were on board with Laban and Lawrence’s long-term vision. Tyresoles, for example, requested to end their contract earlier than planned, citing insufficient evidence of the program’s immediate impact on the company’s bottom line. In the letter informing Laban and Lawrence of his decision, P.G. Hamilton, their primary Tyresoles contact, first blamed new financial straits caused by the escalating war in Japan. The remainder of the letter, however, revealed another anxiety. “We do think,” he wrote, that “it is very important to show what the actual saving and tangible results are. If the idea of Laban training is to go ahead on a considerable scale, you will have to show results in £S.D. If it is not going ahead neither you nor we would be interested.”⁶² For Hamilton, anecdotal reports of sylphs ecstatically tossing tires were insufficient; the real proof was in profits and production.

In their response, Laban and Lawrence first addressed Hamilton’s concerns head-on, citing favorable production reports. They also, however, refused to waver in their insistence that Hamilton misunderstood Industrial Rhythm’s fundamental aim. “It is intended,” they patiently explained,

that the application of the Laban Methods shall fit the Women employees for the work they are called upon to

do and ensure the optimum production from their efforts, but we wish to submit also that the institution of the Courses will be means whereby the relation between Employer and Employees will be improved and in the present circumstance we feel this is a matter of the greatest importance.⁶³

The goal was not production alone but rather a comprehensive emotional remaking of the relationship between workers, their work, and their employers. One measure of the sincerity of Laban and Lawrence's belief in Industrial Rhythm's healing power was their willingness to provide follow-up support at no cost even after the contract had been pulled, "so that no harm may come to future Trainers."⁶⁴ These entreaties, however, fell on deaf ears; Laban and Lawrence remained at Tyresoles only through the conclusion of the initial contract.

Taylorism Transfigured

Despite the failure at Tyresoles, Laban and Lawrence continued doggedly in their work, attracting a steady stream of interested clients through the 1950s. They also retained an unyielding faith in both their product's power and its necessity, though they sometimes publicly downplayed Industrial Rhythm's metaphysical elements. One early draft manuscript of "Man and the Commonwealth" speaks clearly to this fact. The original text reads as follows:

Human movement in work is first of all witness of the will of man to live. It is a thrust towards happiness, and this will and this thrust have a deep root, which becomes also visible in man's working movements. Movement springs from the desire to fulfill some fundamental rhythm and to be in tune with something, which man conceives of as the infinite or the divine. Man is aware, he knows without proof, that his life is part of a divine conception of eternity, and it is against the background of such harmony, that conscience measures all things.⁶⁵

In a subsequent edit, however, Laban crossed out both references to the spiritual, replacing them with more secular turns of phrase. The "infinite or the divine" to which man hoped to attune himself became simply, "his experiences," and the "divine conception of eternity" became the "greater whole." This occasional whitewashing of the stranger, more mystical aspects of Industrial Rhythm was in part a canny marketing strategy designed to assuage the fears of engineers and executives already inclined to be skeptical of the dancing consultant who appeared on their doorsteps.

For others, however, Laban and Lawrence's promise of societal redemption through the individual body remained the root

of its appeal. Mid-century Britain had no shortage of anxiety about the costs—both individual and cultural—of industrial life. Nor was it short of bitter arguments about the appropriate remedies. Increasingly powerful trade unions sparred with conservative business interests, while the Left engaged in rancorous internal battles about the relative merits of incremental reform and revolution.⁶⁶ In this climate, Industrial Rhythm filled a particularly useful niche. In its use of the vocabulary of estrangement and alienation, in its criticism of the dehumanizing specialization of industrial production, and in its elevation of labor as central to the human species, Industrial Rhythm strategically drew on Marxist rhetoric. But though Laban and Lawrence did express support for increasing workers' wages—and even voiced some enthusiasm for centralized economic planning—the core of their program located the responsibility for adapting to new conditions of production in the individual's own body. Revolution was never on the table. Indeed, the most critical responses to Industrial Rhythm painted the program as a tool for making workers content with their own subjugation. A 1942 piece in the *Derby Daily Telegraph* spoke to such anxieties, as the author addressed the would-be reader directly: “‘What,’ you will say, ‘isn’t it bad enough tending a machine all day, or all night? Do they expect us to dance for joy as well?’”⁶⁷

Laban and Lawrence's disinterest in radically altering larger structural conditions becomes particularly evident in their attitudes toward workers' pay. Though they repeatedly claimed an investment in the “just remuneration of labor,” they even more often declared that money—in the end—would come to be beside the point. As Laban wrote in 1944, “There is, I think, no kind of moral exhortation which can replace the gross sportive pleasure in skilled performance. No fines or command or extra remunerations can compete with the enjoyment of an effectively performed movement.”⁶⁸ This outlook was also communicated to potential clients, as in a proposal to J. Lyons in which Laban and Lawrence noted that Industrial Rhythm would “offer balance in the workman's reaction towards incentives,” creating a more sensible equilibrium between “pleasure in rhythmical function” and “satisfaction of financial greed or need.”⁶⁹ Elsewhere, Laban admitted that—given the economic realities—the “industrial worker . . . will rarely have the possibility to enjoy the last result of the perfect product,” making it all the more necessary that he take pleasure in “the results of his performance of a detail.”⁷⁰ For Laban and Lawrence, wages, economic restructuring, and top-down political change would not save the twentieth century from its own demons. They proposed instead another kind of religious practice: a renunciation of the satisfactions of the flesh in favor of the deeper

comforts of the (embodied) spirit.⁷¹

Laban and Lawrence were, moreover, far from alone in their attempts to build a version of modernity founded on the aestheticized spiritualization of new work processes. Dartington Hall—the institution that first brought Laban and Lawrence together—was imagined largely along such lines.⁷² As Elmhirst wrote in *Faith and Works at Dartington*, the 1937 pamphlet that became one of the estate’s calling cards, Dartington’s synthesis of intellectual, cultural, aesthetic, and economic practices drew on a model previously best exemplified by religious institutions: “Till the Reformation the Church attempted such an aesthetic synthesis by means of the Mass and of its ritual, its mystery play and holy day festivities. It aimed to guide the feelings as well as to steer the reason of its varied flock.”⁷³ In adapting to twentieth-century conditions of production, Elmhirst and Whitney ventured, these spiritual techniques would again become necessary. At the same moment, in Adolf Hitler’s Germany, the Bureau of the Beauty of Labor’s promotion of programs of joyful physical exercise and material beautification intended to “reconstitute the soul of the German worker” as an attempt to reconcile the vision of traditional, rural arcadia came with the demands of an industrial society gearing up for war.⁷⁴ In Spain, the Catholic organization Opus Dei sought to sanctify technocratic expertise as central to the “work of God.”⁷⁵ In this light, Industrial Rhythm emerges not as the idiosyncratic experiment of two well-matched eccentrics but as one in a larger series of efforts to remake modernity at the nexus of faith, technology, and capitalism.

In a 2010 book, *Chocolate Wars*, Deborah Cadbury told the story of the Cadburys, Frys, and Rowntrees, British Quaker chocolatiers who believed they could live out the tenets of their faith through their businesses. Charting their rise in the nineteenth century and their decline by the mid-twentieth, Cadbury argued that the Quaker firms’ eventual collapse could be attributed in part to the rise of “men such as Frank and Forrest Mars,” a “tough breed of entrepreneurs in the twentieth century unshackled by religious conviction.”⁷⁶ There were, in fact, real differences between the business practices favored by the Quaker capitalists and those that came to characterize Mars, Inc. The history of Industrial Rhythm, however, suggests that this disparity cannot be understood as the result of a total abandonment of the old-fashioned faith of the past for the hard-nosed, profane capitalism of the future. It was not that Mars and his ilk were fundamentally without religious conviction but rather that that conviction took new forms, blending scientific management and faith, the sacred and the secular in ways that disrupted simple binaries.

Industrial Rhythm was in many ways the perfect crystalliza-

tion of this larger set of efforts. By paying attention to and elevating bodily work—and making much of its purportedly ancient and mystical connections to the divine—Laban and Lawrence assured their clients, workers, and Britain at large that industry would not stamp out humankind’s spiritual life. At the same time, they promised that the messy, primordial forces the body unleashed would be harnessed for the benefit of capitalist production and social stability. As Laban and Lawrence’s contemporaries well knew, Industrial Notation itself was a technology of bureaucracy and rationalization, a paper tool whose resemblance to those employed by Taylor or Gilbreth was immediately evident. In its pledge to remove the contradictions between these seeming dualities—past and future, reason and religion, body and spirit—lay its power. What Laban and Lawrence believed that the traditional Taylorists did not was that monetary incentives alone might prove insufficient to stabilize the social order; the creation of a new kind of person who found spiritual value in labor would also be crucial to its functioning.⁷⁷ Notation, therefore, was not just a tool for solving a geographically or temporally specific problem; it was a technology designed to support the long-term existential maintenance of a world committed to industrial progress. It was not, perhaps, the kind of overt religiosity that Forrest Mars exhibited, but its new, more furtive form was part of its power.

Throughout Kinetographie’s history, a seemingly strange linguistic quirk appeared with unusual frequency in news stories about Laban’s notation system: the authors referred to the notation not as *script* but as *scripture*.⁷⁸ For at least some of its users, it seemed to be just that: a guide to a superlunary realm free of the contradictions between human fulfillment and rampant economic growth, spiritual satiation and production targets. Like all forms of scripture, however, notation could also be used as a cudgel, a technology of indoctrination that elevated industrial production itself into a new kind of deity.

Notes

1. Harold B. Meyers, "The Sweet, Secret World of Forrest Mars," *Fortune*, 1 May 1967, 155.

2. Forrest was the son of the company's founder, Frank Mars, and had been involved in Mars, Inc.'s operations from its beginnings. In 1933, however, he fell out with his father, leaving the country to create a separate Mars division in the United Kingdom; he later returned to the United States and ultimately ran the reunited enterprise. Joël Glenn Brenner, *The Emperors of Chocolate: Inside the Secret World of Hershey and Mars* (New York: Random House, 1999).

3. Meyers, 155.

4. Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Stephen Kalberg (New York: Oxford University Press, 2010).

5. Bethany Moreton, *To Serve God and Wal-Mart: The Making of Christian Free Enterprise* (Cambridge: Harvard University Press, 2010); Chad E. Seales, *Religion around Bono: Evangelical Enchantment and Neoliberal Capitalism* (State College, PA: Penn State University Press, 2009); Richard Callahan Jr., *Work and Faith in the Kentucky Coal Fields: Subject to Dust* (Bloomington: Indiana University Press, 2008); Kathryn Lofton, *Oprah: The Gospel of an Icon* (Berkeley and Los Angeles: University of California Press, 2011); Richard Callahan Jr., Kathryn Lofton, and Chad E. Seales, "Allegories of Progress: Industrial Religion in the United States," *Journal of the American Academy of Religion* 78, no. 1 (March 2010): 1–39; and Fred Turner, "Millenarian Tinkering," *Technology and Culture* 59, no. 4 supplement (2018): S160–S182. For a recent analysis of Weber's personal engagements with the mystical, see Jason A. Josephson-Storm, *The Myth of Disenchantment: Magic, Modernity, and the Birth of the Human Sciences* (Chicago: University of Chicago Press, 2017), 269–301.

6. Callahan, Lofton, and Seales, 4.

7. Courtney Bender, *The New Metaphysicals: Spirituality and the American Religious Imagination* (Chicago: University of Chicago Press, 2010), 46.

8. See, for example, Kathryn Lofton, "The Spirit in the Cubicle: A Religious History of the American Office," in *Sensational Religion: Sensory Cultures in Material Practice*, ed. Sally M. Promey (New Haven: Yale University Press, 2014), 135–158; Robyn d'Avignon, "Spirited Geobodies: Producing Subterranean Property in Nineteenth-Century Bambuk, West Africa," *Technology and Culture* 61, no. 2 supplement (2020): S20–S48; and Turner, "Millenarian Tinkering."

9. See, for example, the experimental notation systems published in Rudolf von Laban, *Choreographie* (Jena: Eugen Diederichs, 1926). See also Laban's discussion of ancient forms of writing throughout Rudolf Laban, *Die Welt des Tänzers* (Stuttgart: Walter Seifert, 1920).

10. Laban's interest in religion, spirituality, and the supernatural is particularly evident in his early works, including *Die Welt des Tänzers*. For a cogent analysis of Laban's dance practice as an explicitly religious endeavor, see Marion Kant, "Laban's Secret Religion," *Discourses in Dance* 1, no. 2 (2002): 43–62. For an account of Laban's time in Monte Verita, an experimental life-reform community in Ascona, Switzerland, and its influence on his spiritual outlook, see Martin Green, "Rudolf Laban," in *Mountain of Truth: The Counterculture Begins, Ascona, 1900–1920* (Hanover, NH: University Press of New England, 1986), 83–115. On Laban's belief in the need for a new science of dance ("Tanzwissenschaft"), see, for example, Laban, *Die Welt des Tänzers*, 64–65.

11. Rudolf Laban, *Gymnastik und Tanz* (Oldenburg: Gerhard Stalling,

1926), 15, 128. All translations by the author unless otherwise noted.

12. In broad strokes, Laban's promiscuous borrowing, both from the sciences and from a variety of faith traditions (particularly those of the non-West), mirrors the approach of many of the figures Courtney Bender analyzes in *The New Metaphysicals*, her study of contemporary "spiritual practitioners" in Cambridge, Massachusetts. Bender argues, moreover, that such forms of thought and practice are as crucial to understanding the religious landscape as more doctrinally narrow or institutionalized forms of religion.

13. The simultaneous embrace of a future-oriented program of technological development and a backward-looking, *völkisch*, authoritarian nationalism was widespread in Germany during both the Weimar and Nazi periods, providing a particularly fertile ground for Laban's Kinetographic project. See Jeffrey Herf, *Reactionary Modernism: Technology, Culture, and Politics in Weimar and the Third Reich* (Cambridge, UK: Cambridge University Press, 1984).

14. For the most complete account of Laban's work under the Nazis, see Marion Kant and Lillian Karina, *Hitler's Dancers: German Modern Dance and the Third Reich*, trans. Jonathan Steinberg (New York: Berghahn Books, 2003).

15. Michael Young, *The Elmhursts of Dartington* (London: Routledge and Kegan Paul, 1982); and Victor Bonham-Carter, *Dartington Hall: The History of an Experiment* (London: Phoenix House, 1958).

16. C.C. Martin to Rudolf Laban, 12 August 1941, in Rudolf Laban Archive, L/E box 50, folder 50, National Resource Center for Dance, University of Surrey.

17. For an overview of the literature on this subject, see Arthur J. McIvor, *A History of Work in Britain, 1880–1950* (Houndmills, UK: Palgrave, 2001), 93–110. On the divergent reception of scientific management in the United States and the United Kingdom, see Craig R. Littler, *The Development of the Labour Process in Capitalist Societies* (London: Heinemann Educational Books, 1982). On scientific management in Europe and the United States more broadly, see, among others, Charles S. Maier, "Between Taylorism and Technocracy: European Ideologies and the Vision of Industrial Productivity in the 1920s," *Journal of Contemporary History* 5, no. 2 (1970): 27–61; and Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (New York: Basic Books, 1990).

18. Frank Gilbreth and Lillian Gilbreth were known primarily for their motion studies, in which they observed workers' movements using a variety of tools and prescribed the "one best way" of accomplishing any given task, usually by minimizing the total number of movements performed. Bedaux and his followers claimed the ability to scientifically calculate the degree of fatigue caused by a given working action and, therefore, the time a worker would require for recovery. Bedaux used these calculations to determine how many such actions could be expected of a laborer in a given length of time and to set pay rates and bonuses. The system was employed particularly widely in the United Kingdom. For a contemporary critique of the Bedaux system, see W.F. Watson, *The Work and Wage Incentives: The Bedaux and Other Systems* (London: Leonard and Virginia Woolf at the Hogarth Press, 1934). On the relationship between the Gilbreths' movement-study work and Taylor's time-study program, see Brian Price, "Frank and Lillian Gilbreth and the Motion Study Controversy, 1907–1930," in *A Mental Revolution: Scientific Management since Taylor*, ed. Daniel Nelson (Columbus: Ohio State University Press, 1992), 58–76.

19. McIvor, 166.

20. F.C. Lawrence to Rudolf Laban, 22 August 1941, in Rudolf Laban Archive, L/E box 66, folder 22.

21. "Oral History with F.C. Lawrence, Conducted by John Hodgson," 21 June 1973, in John Hodgson Collection, 1/4/10–1/4/24, Special Collections, University of Leeds.

22. Rudolf Laban to C.C. Martin, 20 September 1941, in Rudolf Laban Archive, L/E box 50, folder 50.

23. Rudolf von Laban, *A Life for Dance: Reminiscences*, trans. Lisa Ullmann (New York: Theatre Arts Books, 1975), 143.

24. Analysts and trainers also had the option of using an even more simplified version of the notation, called an "Effort Graph," in certain circumstances. "Laban Lawrence Industrial Notation," January 1943, in Rudolf Laban Archive, L/E box 22, folder 3.

25. "Laban Lawrence Industrial Notation."

26. "Laban Lawrence Industrial Notation."

27. Rudolf Laban, "Rhythm of J. Lyons & Company, Greenford, Tea Factory," 1944, in Rudolf Laban Archive, L/E box 72, folder 2.

28. "Concerns Our Offer to Mars-Bar Limited," 12 December 1942, in Rudolf Laban Archive, L/E box 72, folder 12.

29. Paton Lawrence and Company, *What We Would Like to Tell Your Workpeople about LILT IN LABOUR; Mars Confections Ltd.*, 25 January 1943, in Rudolf Laban Archive, L/E box 72, folder 14.

30. Paton Lawrence and Company, *What We Would Like to Tell Your Workpeople*.

31. "Mars Confections, Ltd., General Notes," 14 December 1942, in Rudolf Laban Archive, L/E box 72, folder 12.

32. "Oral History with F.C. Lawrence."

33. "Mars Confections Limited, Record of Visit," 12 November 1942, in Rudolf Laban Archive, L/E box 72, folder 12. With millions of men sent to the front at the outbreak of World War II, industrial labor shortages were common. In response, the government passed the National Service Act of 1941, providing for the near-universal conscription of women (and men of nonmilitary age) into war work. New laws also made it illegal to discharge, transfer, advertise for, or hire new employees without the consent of one's local National Service Officer. As a result, the companies that hired Laban and Lawrence were largely staffed by women who often were new to the labor force, a factor that may have further fueled their employers' willingness to experiment with new management techniques.

34. Paton Lawrence and Company, *What We Would like to Tell Your Workpeople*.

35. See Rabinbach, *The Human Motor*.

36. Laban, *Die Welt des Tänzers*, 122; translation from "The World of the Dancer," n.d., in John Hodgson Collection, 1/1/36.

37. This orientation toward embodied modes of experiencing divinity is consonant with Laban's long involvement in Rosicrucianism and Freemasonry. As Kant discusses, Laban understood dance as central to establishing a new "religion of the act." Kant, 44.

38. Laban, *Die Welt des Tänzers*, 122.

39. Rudolf Laban, "Working Rhythms and Their Observation and Notation," n.d., in Rudolf Laban Archive, L/E box 65, folder 1.

40. F.C. Lawrence, "Dance into Industry," n.d., in Rudolf Laban Archive, L/E box 65, folder 13.

41. Rudolf Laban and F.C. Lawrence, "Man and the Commonwealth," July 1945, in Rudolf Laban Archive, L/E box 46, folder 37.

42. Laban and Lawrence, "Man and the Commonwealth."

43. Laban and Lawrence, "Man and the Commonwealth."

44. "Report: J. Lyons," February 1944, in Rudolf Laban Archive, L/E box 55, folder 01.
45. "Laban Lawrence Industrial Notation."
46. "Special Report on the Effort Situation in the Mill, J. Lyons and Company (Confidential)," 27 March 1944, in Rudolf Laban Archive, L/E box 72, folder 7.
47. Laban and Lawrence, "Man and the Commonwealth."
48. Rudolf Laban, "Letter to 'Friends' Re: Industrial Work," n.d., in Rudolf Laban Archive, L/E box 52, folder 57.
49. Rudolf Laban and F.C. Lawrence, *Effort* (London: Macdonald and Evans, 1947).
50. "Glaxo Laboratories Limited, Report of Observation of Operators Engaged on Hand Packing Units," January 1944, in Rudolf Laban Archive, L/E box 62, folder 14.
51. "St. Olave's Curing and Preserving Co. Ltd., Record of Visit," 20 November 1942, in John Hodgson Collection, 1/1/149.
52. "Special Report on the Effort Situation in the Mill."
53. Rudolf Laban, "Lecture Notes, Manchester Association of Engineers," 1944, in Rudolf Laban Archive, L/E box 55, folder 01.
54. Rudolf Laban, "The Stage of Work," n.d., in Rudolf Laban Archive, L/E box 64, folder 68.
55. Rudolf Laban, "Early Notes on Industry for Our Instructors!," n.d., in Rudolf Laban Archive, L/E box 64, folder 52.
56. Paton Lawrence and Company, *What We Would like to Tell Your Workpeople*.
57. Paton Lawrence and Company, *What We Would like to Tell Your Workpeople*.
58. Lisa Ullmann to F.C. Lawrence, 27 May 1942, in Rudolf Laban Archive, L/E box 71, folder 1.
59. As historian Arthur McIvor notes, "The wartime crisis, state intervention, the revival of trade union power and the return to full employment combined to drastically shift the balance of power in the workplace from capital to labour." McIvor, 104.
60. "Special Report on the Effort Situation in the Mill."
61. "Special Report on the Effort Situation in the Mill."
62. P.G. Hamilton to F.C. Lawrence, 18 March 1942, in Rudolf Laban Archive, L/E box 55, folder 01.
63. F.C. Lawrence to P.G. Hamilton, 7 March 1942, in John Hodgson Collection, 1/1/148.
64. F.C. Lawrence to Major Palmer, 16 May 1942, in John Hodgson Collection, 1/1/148. Laban and Lawrence's wholehearted belief in their product mirrors Herman Miller's sincere conviction that the company's Action Office could serve as a space of sensory transformation and spiritual flourishing. As Kathryn Lofton has argued, Miller was not simply a "mountebank selling talk of the individual's salvation for the price of physical freedom" but rather was engaged in a serious attempt to produce a "new kind of frame for spiritual experience." This sincerity, Lofton points out, has been too often ignored by those who underestimate the "religious valence of corporatism in American history." Lofton, "The Spirit in the Cubicle," 137.
65. Rudolf Laban, "Movement in Work," 1944, in Rudolf Laban Archive, L/E box 46, folder 41.
66. For a history of the British labor movement written in the midst of—and in response to—these conflicts, see E.J. Hobsbawm, "Trends in the British Labor Movement since 1850," *Science and Society* 13, no. 4 (Fall

1949): 289–312.

67. Joan, “Derby and Joan,” *Derby Daily Telegraph*, 24 September 1942.

68. Laban, “The Stage of Work.”

69. “J. Lyons Tea: Notes on Incentives,” 1943, in Rudolf Laban Archive, L/E box 55, folder 01.

70. Laban, “The Stage of Work.”

71. Still, even if monetary remuneration would ultimately prove superfluous, Laban and Lawrence recognized the ways in which it could serve as a motivating factor in the near term. At least once, they proposed the development of a system in which pay would be determined neither solely by hourly wages nor by piece rates but in part by an evaluation of the “internal effort” a given worker put forth, as measured by his or her bodily movements, suggesting a further entanglement between “rational” or bureaucratic forms of control and the production of new psychological or spiritual states. “St. Olave’s Curing and Preserving Co. Ltd., Record of Visit.”

72. Dartington Hall itself was modeled on a similar community in Santiniketan, Bengal, composed of an ashram, experimental school, library, gardens, and, eventually, an Institute for Rural Reconstruction. Founded by the Nobel Prize-winning poet and polymath Rabindranath Tagore—best known in the West for his “mystical and otherworldly” poetry—the complex was intended to spark new economic, cultural, and spiritual life in the rural area. Tagore was interested in demonstrating that new Western technologies of production could be embraced without succumbing to the same perils that had befallen industrializing Europe or replicating colonial structures of power. After meeting Tagore in New York City in 1920, Elmhirst founded and directed the Institute for Rural Reconstruction from 1921 until 1924; Whitney funded the venture.

73. Leonard Elmhirst, “Faith and Works at Dartington” (1937), quoted in Young, 216.

74. Anson Rabinbach, “The Aesthetics of Production in the Third Reich,” *Journal of Contemporary History* 11, no. 4 (1976): 43–74. Rabinbach also highlights the ways in which the Nazi program was itself influenced by the English garden city movement at the turn of the twentieth century.

75. Lino Camprubí, *Engineers and the Making of the Francoist Regime* (Cambridge: MIT Press, 2014); and María González Pendás, “Modernity Consecrated: Architectural Discourse and the Catholic Imagination in Franquista Spain,” in *Modern Architecture and Religious Communities, 1850–1970*, ed. Kate Jordan and Ayla Lepine (London: Routledge, 2018), 30–48.

76. Deborah Cadbury, *The Chocolate Wars: The 150-Year Rivalry between the World’s Greatest Chocolate Makers* (New York: Public Affairs, 2010), xii. The author is a member of the Cadbury extended family, though not a direct beneficiary of the chocolate dynasty. See also Brenner, *The Emperors of Chocolate*.

77. Laban later advocated for the integration of dance practices derived from Industrial Rhythm into English primary and secondary schools. See Rudolf Laban, *Modern Educational Dance*, ed. Lisa Ullmann, 2nd ed. (New York: Frederick A. Praeger, 1968); and Rudolf Laban, “Industrial Rhythms in Dance Education,” n.d., in Rudolf Laban Archive, L/E box 31, folder 39.

78. See, for example, “Notes from Central Europe,” *Dancing Times*, 1928, 393–397; and “Laban Appointed Ballet Master at Berlin,” *Dancing Times*, 1930, 248–250.