Object, Material and Machine in Rudolf Laban's Industrial Dance

Undoing Dichotomies in European Dance Modernity

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In 1938, after a noted career in German modern dance, Rudolf Laban moved to the United Kingdom where he remained until the end of his life. There, during a stay at Dartington Hall near Devon he met Frederick Lawrence, a management consultant. While staying an advocate of the art of dance, Laban spent a considerable part of the following years working with Lawrence in the field of industry (McCaw 2011). This was not the first instance of his interest in the field of work: in 1929, for example, he had orchestrated Vienna's *Festzug des Handwerkes und der Gewerbe* [Pageant of the Crafts and Trades], in which work/wo/men from different guilds performed dances and choreographically arranged versions of work movements on mobile platforms along the streets of the Austrian capital (Laban 1975, McCaw 2011).

Laban and Lawrence worked in a context of increasing mechanisation of labor, compartmentalisation of tasks for their accomplishment in assembly lines, and growing numbers of women taking up jobs previously held by men. Against this background and for clients in fields including food and drink manufacturing (Mars Bars Ltd.), transport logistics (Manchester Ship Canal Co. Ltd.), equipment production (Tyresoles Ltd.) and agriculture (Dartington Hall Ltd.), Laban and Lawrence transferred the former's practical knowledge, movement analysis concepts and notation to the goals of employee selection, assessment and training: they applied dance-derived notions to the performance of working activities and aptitudes.

Laban's work in industry – and even more its effectiveness – is less well studied than other areas of his activity.[2] One reason for this may be that a great amount of material on this topic comprises of handwritten and/or unsigned notes,

1 This text is based on a chapter of my PhD thesis entitled *Multiple Stories. Expanded Choreography and Choreographic History.*

2 For a book-length work to have treated this topic see Davies 2006.

letters, reports etc., only available in archives. In what follows I will draw from published texts by Laban and his collaborators as well as from unpublished material conserved in the Rudolf Laban Collections (University of Leeds), the Laban Archive (Trinity Laban Conservatoire of Music and Dance) and the National Resource Centre for Dance (University of Surrey Archives & Special Collections). The latter sources, often informal documents pertaining to everyday planning and operation of consulting activities, are written by Laban, Lawrence and their collaborators, forming a collective authorial figure around Laban's person and ideas. When such sources are used, the extent to which one can affirm with certitude that they were written by Laban himself will be noted in the bibliography, all the while considering that documents not – or not certainly – written by him should be comprised in his discursive and conceptual universe.

Based on these sources, I will examine Laban's appreciation of the agents implicated in factory work: workers, but also machines, tools, and materials used in production. I will point out anthropocentric tendencies in his industry-related writings, but also identify both discursive and practical instances of his consulting activity which subvert this anthropocentrism, acknowledging the active role of non-human elements in industrial processes. In doing so, I present Laban's work in industry as a field of negotiation between human-centred and non-anthropocentric views in 20th century (dance) modernity – and as a point of relevance for contemporary debates on the presence, agency and effects of things in dance.

The Human Operating the Machine

The industrial Laban affirmed the centrality, irreplaceability and hierarchical superiority of the human in the process of work. "No mechanisation can eliminate human effort; the handling of the powers of nature must be done by humans," he co-wrote with Lawrence (1979: 73). Machines were, according to him, "accidental accessories only, destined to facilitate the function of the real instrumental body which is the cooperating staff consisting of individual workmen" (Laban undated a: 1b). Laban's privileged view of the human was translated into the consulting practice through attempts to assess how industrial equipment could best fulfil users' needs. Adapting objects to humans, suggestions were made to add bars to trolleys to provide better grip, correct the layout of tables, or change the height or position of pedals, benches and levers (Laban-Lawrence Industrial Rhythm 1944a, 1944b, Paton Lawrence & Company 1948).

This focus upon the human is reflected in the notion of effort, Laban's major publication which was co-written with Lawrence. Effort theory analyses motion in terms of Space, Time, Weight and Flow, considering that these movement characteristics constitute an expression of the inner impulse initiating action (Laban

1950), thus giving effort analysis a psychological relevance. As such, effort primarily concerns human beings[3]: "[n]o inanimate object can make an effort" (Laban 2011: 169). Laban did suggest applying the same effort terms used for humans in the analysis of the movement of machines: "[m]achinery and implements, which can be considered as an extension of human body powers, can be assessed in their effects in W[eight] S[space] T[ime] and F[low] in a similar way as the movement functions of the body itself." (Laban/Lawrence 1946: 31) But while machines may embody and manifest efforts, they could not for him initiate effort-laden movements or possess the inner impulse which for humans colors effort expressions: their effort manifestations constitute "an artificial extension" of human ones (Laban/Lawrence 1979: 91). These sources may therefore point towards the expandability of a human-centred notion (effort) to mechanical agents, but also confirm the dominant position of the human being. Nevertheless, along with an anthropocentric tendency, the sources by/around the industrial Laban also include instances undoing the particular and privileged position of the human – and it is these instances that I would like to present here as manifestations of Laban's only apparently dichotomous approach to labor.

The Object Probing its User

While engaging in a process of optimizing the ways in which tools would facilitate human beings in their tasks, Laban also admitted the need for workers to adapt to the equipment they used, thus subverting a hierarchy he contributed in constructing. In *Effort* Laban and Lawrence insist that "the efficient machine which can be easily operated is driven and assisted by men who should be taught to use their own bodily power in the right way" or that "[m]ind and body must sometimes be trained to match the machines as their structure and rhythm become more and more exacting" (Laban/Lawrence 1979: 8, 82). In this way the choreographer and the consultant reverse a ranking according to which the human laborer constitutes a given to which machines and tools must be unidirectionally adapted. This reversal was mirrored in the practice of industrial consulting as well. Focussing on the need to train workers to efficiently use their body in response to the machines and objects they worked with, Laban and his colleagues suggested the use of token tools to habituate them to the manipulation of objects, or explained the most efficient use of pedals and levers (e.g. Rink 1943). One of the most elaborated examples of Laban's considerations of human adaptation to equipment is to be

3 Non-human animate beings can, in Laban's view, display efforts; however, human actors are still considered superior in their relevance to effort analysis: "[m]an stands at the top of this scale, because he can use all the efforts an animal can use, and […] many more of his own." (Laban 1950: 13)

found in his reflections about parachutes; while these are not directly related to factory work (albeit being related to WW2 military activities for which several industrial products were manufactured) they are worth quoting here:

> Many new inventions demand new movements and combinations of efforts for which the human body engine does not seem to be adapted. Take, for instance, parachuting from an aeroplane. Although this is not exactly an industrial operation in the narrower sense, it shows clearly man's adaptation to the use of machines, and is most characteristic for the new effort-combinations arising in our present form of civilisation. (Laban/Lawrence 1979: 83)

While Laban may not have attributed intention to non-human entities, then, his work acknowledged that their forms, functions and modes of operation had effects upon their users – and thus constitutes an example of partial attribution of agency to non-human agents. This was paralleled by a marked interest in and focus on the motions of machines, objects and materials (among) themselves, independently of the presence and participation of humans. Beyond recognizing that machines can be more efficient than humans (Laban/Lawrence 1979: 8) and notably through a metaphor of the "dance of material," Laban recognized inanimate beings' activity without the human as a reference point:

> This dance of material is unique to modern industry. Metal melts and flows into moulds, bars or pipes bend, fall to pieces, hover in the air, get into exact positions, branch out or are assembled together through the impact of machines almost without human interference […] Logs dance and balance together supported by cranes, turn to the right or left, stand on their ends and glide down slopes. (Laban undated c: 38 f.)

A Common Industrial Dance

Be it in less hierarchical or not completely human-oriented visions of labor, then, Laban partly undid his own anthropocentrism. Moreover, his industry-related writings allow to cast doubt upon the qualitative differentiation between human beings and inanimate entities. The first way in which this blurring and interpenetration of the dichotomous categories "human" and "non-human" is achieved is the use of the one as a model for the conceptualisation of the other. While Laban saw human beings as models for machines (Laban/Lawrence 1946), he also employed mechanical metaphors in order to describe the human body:

> Essentially, the movements of the robot and of man are the same. Arms and hands are the most astonishing tools. They can be used as pincers, hammers or cranes with which an object can be held, punched or transported. Such bodily operations as bending, lifting, walking depend on leverage as in any other machine. There is no bodily action which is not essentially mechanical and even the reactions of the senses are built up on the same principles as cameras, gramophones, radio apparatus, and such like. (Laban/Ullmann 1962: 16)

Here a functional comparability is assumed between tools, machines and the human body, conceived as a device. This has important implications for the ethics of factory management: if the worker is functionally comparable to a machine, s/he may also be viewed as a perishable resource. A set of notes by Laban kept at the National Resource Centre for Dance confirm that he had envisaged this possibility: "the value of a labouring man decreases more rapidly through neglect in maintenance as [sic] a machine" (Laban undated d: 8).

A second way in which a strict dichotomy between human and non-human beings was overcome consisted in the adoption of categories that can include both. Laban's writings express this tendency through the use of organic and biological metaphors to describe aspects of industrial activity: the factory or "industrial plant" – a collective entity comprising, as we have seen Laban elsewhere admit, as many human laborers as machines, tools and materials – is presented as an "industrial organism" to which the notion of growth may be applied; its founder and/or manager is compared to a "germ cell" (Laban undated b: 1-2); the process of producing an object is "almost comparable to the growth of a living organism" (Laban/Lawrence 1946: 36). Such organic metaphors suggest a qualitative and even ontological continuity between industrial entities and living beings, between manufacture processes and biological ones; moreover, they allow such a continuity to be portrayed without the use of anthropomorphic characterizations.

In such ways, industrial processes appear not only as anthropocentrically organized acts – as some of Laban's texts suggest – but also as hybrid agglomerations[4] of motions embodied by workers, machines and materials operating together. Postulating a community of agents implicated in industrial production and acknowledging their interrelations, Laban and Lawrence note that "[t]he sanest way to look at the combination of mechanical devices and human energy is to consider them as a complex unit, like the teamwork of several people, and not as the work of two separate entities" (Laban/Lawrence 1979: 91). It is once again possible to find practical manifestations of this view. A document by Paton Lawrence & Company (the consulting firm for which Lawrence worked) with propositions for

4 I am using the term "agglomeration" in continuity with the sources' vocabulary – for example in the text "New Efforts Appearing in Massagglomerations" (Laban/Lawrence 1946).

Dunlop Rubber Co. Ltd. for example reveals that attention was focussed on such issues as disturbances caused by discrepancies between workers' moves and conveyor belt speed (Paton Lawrence & Company 1943: 2); a document summarising the work done for different clients notes how, for Manchester Ship Canal Co. Ltd., "the lack of rhythm between working gangs and ship and shore cranes and handling equipment" was studied (Laban Lawrence Consultations 1946: 2). To analyse such hybrid-communal work, Laban-Lawrence's industrial movement notation was to be adapted to include symbols for tools and equipment, and to "depict the transport and flow of material through different departments of a production unit and for the graphic representation of the rhythm of the manifold activities within a factory" (Laban 1943: 3, 5).

What such examples make manifest is that Laban, Lawrence and their colleagues saw in factories a possibility of interactive coexistence between human and non-human laborers, rather than only[5] limiting their view to the *topos* of mechanization's threat upon humanity. Correspondingly, they postulated that harmony could – and should – arise between the actions of different industrial production agents. This harmoniously communal work was conceived as resulting from a relation between workers' and objects' kinetic rhythms[6], and was posited as a source of satisfaction rather than the domination of one upon the other:

> To be satisfying, and to give satisfaction, every movement, whether of people, machinery or moving objects, has to be rhythmical. This refers not only to the movement in itself, and in relation to preceding and succeeding movements, but also, when other people, machinery or objects are involved, in relation to their movements. All these movements have to be so timed, spaced and emphasised as to create one harmonious whole. (Laban 1946: 1)

Pleasure and well-being in work is here seen less as the result of an emancipation from mechanical presences or constraints, and more as the outcome of a common subjection of both human and non-human entities in a harmonious, supra-individual totality.

The sources on the industrial Laban manifest his attachment to an essentialized humanity. At the same time, they suggest that he and his colleagues conceived of less human-centred factory hierarchies; focussed on the inanimate in its not always anthropomorphic specificity; defied dichotomies between human and non-human actors through the formulation of a qualitative and functional

5 Such a view is also to be found in Laban's writings, e.g. 1975: 48.

6 In this respect Laban's view reflects early 20th century European dance's wider interest in rhythm – paradigmatic of which is the work and influence of Émile Jaques-Dalcroze – but is also associable with further "choreographic" approaches to labor, notably by Ippolit Sokolov (Bowlt 1996).

comparability; and accepted their interaction in communal, rhythmical, harmonious formations. In these ways, Laban's work on work appears as a territory in which anthropocentric beliefs are present but negotiated and challenged; as a field inviting to acknowledge 20th century European dance history's relevance to a choreography of things *as well as* its role in essentializing the human body and subject. In his book *We Have Never Been Modern*, Bruno Latour writes: "the more we forbid ourselves to conceive of hybrids, the more possible their interbreeding becomes – such is the paradox of the moderns" (1993: 12). Rudolf Laban's work in factories is such a paradoxical combination of an attachment to the particularity of the human on the one hand and a confrontation with its interpenetration with things on the other.

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