Labanotation: a universal movement notation language

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Le danseur est un orateur qui parle un langage muet

Igor Stravinsky

This paper describes how a universal language for notating dance and, more generally, movement was elaborated, known as "Kinetography Laban", or rather "Labanotation". It was devised by choreographer and movement theorist Rudolf von Laban, who outlined it for the first time in 1928, in the journal *Schrifttanz*. His system differs from precedent notation systems in that Labanotation is rigorous and universal, as it is based not on one particular style or technique but on the general principles of kinetics underlying human motion. Its geometrical and abstract symbols also free it from language constraints, thus making it universally comprehensible. Through his kinetography, Laban freed dance from the transience of individual performances, thereby providing a way to capture and reproduce dance, to hand down choreographic masterpieces for posterity and to simplify movement analysis in other branches of study as well.

European culture, and as a matter of fact all cultures, has often tried to recover or invent a perfect and universal language, one that could both express contents rigorously and be highly comprehensible for all people (1). This quest involved several fields of knowledge, and was often moved by the will to heal the ancient wound of Babel's

mythical confusion. It seems, however, that failure is inescapable if intrinsic restrictions are taken into account: being more rigorous implies less clarity, and vice versa.

The question of a universal language applies, however, not only to spoken languages, but to artistic or non-verbal languages as well. With the focus on dance, there seemed to be little chance as well. Gino Tani's comment (8) on Hans von Bülow's statement "In the beginning was the Rhythm" was clear: "Of all the arts, modern aesthetics brings the origins back to Rhythm, which is nothing but the immanent law governing the heavens and the constellations, the divine and universal law through which everything lives and moves and dances in the eternal carols of the stars, in the red streams of the hearts. And of all arts, if any priorities can be set within the primordial and sacral trinomial formed by dance, music and poetry, attention must be focussed, logically and intuitively, on the first of human manifestations: gesture and movement".

Not by chance, many cosmogonies of the great myths and of ancient religions have their starting point with the act of dance.

Owing to their ancestry and intimate relationship with human nature, movement and, consequently, dance can communicate directly and immediately to everyone.

A different question arises when focussing on the historical process that brought about a language for "writing" dance which would make it independent from single transient performances, and that would provide it with a more reliable recording instrument than the dancers' memories or oral tradition.

The process started in the distant past, but was fully concluded only in the twentieth century, thanks to Rudolf von Laban's "Kinetography Laban" or "Labanotation". This is a radically innovative system, an effective compromise between the need to be rigorous and detailed when describing movement and the need to be universally comprehensible.

While music notation was first elaborated according to modern principles in the 11th century and became a standard in the 18th century, dance notation started later and followed an arduous path, marked by several failures (4). The difference is certainly due to the greater complexity of dance, which, opposed to music, can express itself in spatial-temporal co-ordinates thanks to the number of simultaneous actions that the human body can perform.

The first attempts to capture dance were made in the distant past, and pictorial representations in ancient tombs and on Greek urns bear witness to that. This is "prehistory" with respect to the creation of notation systems, since iconographic

representations cannot contain all the information needed to reconstruct movement, just as intrinsically ambiguous words cannot.

The first known attempt to create a notation system dates back to the second half of the 15th century, and is to be found in the Cervera manuscripts from Spain. It is a simple system, based on the five steps of Renaissance *Basse danse*. The method is also recorded in *L'art et l'instruction de bien danser*, which is very likely to be the first printed document about dance, written by an anonymous author from the late sixteenth century and re-presented in *Margaret of Austria's Dance Book*. Explanations on how to perform the steps and on the scenographic elements are presented in many books of the time, the most renowned of them being Thoinot Arbeau's *Orchesographie*, published for the first time in 1588 and often republished. Thus began the history of notation in Europe, a history closely linked to that of dance (2, 3). Time saw the systems become more complex in their attempt to describe movement with increasing accuracy. As in every history, progress and regression were recorded, due to the changing preferences for representation methods and according to different practical needs: from systems based on the tracking of dancers' steps on the floor to essentially visual or abstract-symbolical systems. Each system grew around one of the basic aspects of all notation methods, concentrating either on the type of movement analysis, the graphical representation or the level of description (2). The latter can vary from being a simple mnemonic support (in the least complex systems) to describing accurately how the body uses space, time and energy (in the most advanced systems of the 19th century). Between the 17th and the 18th century, mainly graphical recording systems prevailed, i.e. schemes showing the tracks of dancers' steps on the floor. In this regard, the rose-like structure published by Fabrizio Caroso in *Nobiltà di dame* in 1600 is of note. In 1700, Raoul Auger Feuillet published a new notation system in Paris. It was the result of the development of dance in the ballets at the Sun King's court and was eminently capable of transcribing the baroque dances for couples of the time. This system spread widely even outside France, particularly in England, but it was abandoned when "social" and theatrical dance began to take different paths. The separation intensified after the French Revolution, when social dancing left the court or upper class milieu, and consequently was greatly simplified. Theatrical dance, on the contrary, became more complex than baroque dance, but since the stage was the expression of the less educated social classes, notation systems were soon abandoned.

During Romanticism, several notation systems were proposed. The two most popular methods were German and Russian. Bernard Klemm based his on abstract symbols and music notes showing rhythm, while Vladimir Stepanov's, published in 1892, concerned the *Alphabet des mouvements du corps humain*. However, all the systems of this time were closely related to their inventors' subjective experiences. As Ann Hutchinson wrote (2): "the creation of a notation system involves many personal aspects of those who elaborate that system: their experiences, their research and comparison with other systems". An attempt at overcoming this subjective restriction was made in the twentieth century by Rudolf von Laban, whose work was a breakthrough in the history of dance notation systems. As a matter of fact, he did not intend to create just a system for reconstructing choreographic movements, but a real language, symbolically rigorous and universally comprehensible.

Laban wanted to create a notation system that could serve all types of dance and, indeed, all types of movement, and he did so by studying the physics and the mathematics underlying all spatial movements of the human body both analytically and functionally. Hence the long-lasting effectiveness and universality of a system which is not founded on one particular dance style or technique but on the laws of kinetics.

Rudolf von Laban (b. 1879, Pozsony, Hungary–d. 1958, Addlestone, England) was a charismatic and magnetic man. A dancer, a researcher and a theorist in the fields of dance and movement, he founded central European free dance, which evolved into German modern and expressionistic dance. His adventurous life was marked by deep idealism and deep disillusions. He lived in Europe's most important cultural centres of the first half of the century: Paris, Vienna, Munich, Zurich, Berlin and London, and met many of the intellectuals and artists of the time. He lived through the two world wars, the Weimar Republic and the rise of Nazism. Clashes with the Nazi regime forced him to leave Germany, where his works were burnt, and he found shelter in England, where he eventually died.

Laban started his career as a painter and designer, but dance and, indeed, movement soon became his main interest. Under the influence of *Naturphilosophie* he developed a romantic vision of movement, on the assumption that all creatures derive from original principles and are biologically ordered following a plan. He believed that life is part of nature's cosmic movement, and that movement is characteristic of all living creatures. Laban spoke of the *Dance of Nature*, believing that the formal construction of nature followed the same spatial and physical universals that are the

essence of dance. Therefore dance was the expression of original rhythm, which is by itself the essence of the world. As reported by Evelyn Dörr (10), Laban and his group of liberal intellectuals "tried to use this romantic vision to formulate a new concept of community and to offer a new reference system to counter a seemingly decaying society, as if to confer greater meaning to life. They were pursuing a final motive for man's place in the universe". Movement as theatrical expression is consequently self-expression, self-analysis, but it is also a moment of community living.

Laban chose movement as a basis for analysing the relationships between mind and body and between individuals and groups. When in England, he availed himself of the help of industrialist F.C. Lawrence to study the relationship between time and movement in manufacturing, working out not only the most efficient placing of work tools, but also the most appropriate movements to reduce effort. For a few years after 1940 he cooperated with Lisa Ullmann in the area of dance teaching. Laban's studies had a profound impact on sectors other than dance as well: theatre, non-verbal communication, ergonomics, psychotherapy, pedagogy, physical therapy, sport and even animal behaviour.

Drawing on his studies of choreutics and eukinetics, i.e. of movement from the point of view of space and quality respectively, Laban began creating a dance notation system, the premise of which he expressed in *Coreographie* (1926). He observed that the structure of natural shapes (crystal, plant, animal) is subject to laws similar to those underlying harmonious body movement. Human motion was, therefore, a sort of continuous creation of fragments of crystal shapes. He found systematic principles to classify movement sequences into regular solid figures, which were identified by Plato in antiquity as cube, octahedron, tetrahedron and icosahedron. In the first issue of the first real dance journal, *Schrifttanz* (written dance), published in Vienna in 1928, Laban described his movement notation system. Initially known as *Kinetography Laban*, the system was then renamed *Labanotation* in the United States, and has undergone no substantial changes since.

Laban's purpose in creating this system was to give artistic dignity back to dance, and to finally fulfil the dream of making dance reproducible and therefore independent from single performances, thus preventing the loss of choreographic masterpieces and popular dances. In this way he provided a concrete answer to questions that dancers had certainly been asked for a long time, as Muriel Topaz points out (10), that is, whether dance can persist after the choreographer's invention and the

dancer's performance; whether it can be documented; whether it is a real form of art, which can be recorded, analysed, studied; and whether it can belong to history and be handed down to posterity.

Kinetography Laban may be considered a Rosetta stone thanks to which the kinetic content of all forms of dance and movement can be understood. Its abstract and non-verbal symbols free it from language constraints, thus making it universally comprehensible and effective for international exchange and research (4).

When studying movement, Laban selected *weight*, *space*, *flow*, *time* and *energy* as fundamental parameters. He took rationalistic explanations into account, based on physical laws by which the weight of the body is subject to gravity; the skeleton is a system of levers pulled by nerves and muscles, through which determined directions in space are followed; the flow of movement is controlled by neural centres reacting to internal and external stimuli; movements require a certain amount of time, which can be measured exactly; and the source of movement is the energy produced by combustion within the body. Yet, also, over and above this physical description, there is one more concept distinguishing human motion from the movements of inanimate objects, that is *effort*: "the origin and interior aspect of movement", as Laban himself stated (5).

Labanotation is therefore based on the analysis of direction, level, time of the moving part of the body, and on the type of movement. Configurations are represented through components answering the following questions: "what?" (body), "where?" (space), "when?" (time), and "how?" (the modality of performance in space). In a first phase Laban thought that movement could be indicated by using a cross to represent the body. At Kurt Jooss's suggestion he took Feuillet's idea of using a vertical axis to represent the body when standing. The axis divides the body into two symmetrical parts (right and left). On both sides of the axis, parallel lines are drawn, thus enabling the different parts of the body to be identified (see fig. 1). Notation is from bottom to top.

The basic symbol is the rectangle. The position of this symbol in the columns parallel to the axis indicates which part of the body is moving. Modifications of the shape of the rectangle indicate the direction of movement (for example, if one corner of the rectangle is taken out, forward or backward movement is indicated; if the rectangle becomes a right or left-pointing triangle, movement to the right or to the left is indicated) (see fig. 2). The shade of the symbol indicates the level of movement (black: down; striped: up; with a dot in the centre: parallel to the floor). The length of the symbol indicates the duration of movement (long symbol: slow movement; short symbol: quick movement).

Since the central line represents time and time is divided into regular intervals, rhythm is marked univocally without needing to resort to music notation (see fig. 3). To sum up, each symbol contains four types of fundamental information (see figures 1-6): time (length), direction (shape), level (shade) and moving part of the body (position with respect to the axis). The notation system includes further symbols apart from the rectangle and its modifications, in order to enable a description of all forms of flexion, extension, rotation, contact, relation, etc. According to Laban, fixed positions and immobility are mere illusions, since life is a flow not a stasis: therefore his notation system privileges a description of movement rather than fixed positions. Moreover, and in line with verbal languages, Laban described motion through a grammar that defines the relationships among the words of the movement and their functions within the sentence of the movement. As Ann Hutchinson points out (4): "the actions of the movement are the verbs; the moving parts of the body are the nouns; the way the action is carried out and the degree or modality of change are described by the adverbs". Again, comparably to a language, the system can be used in a sophisticated or in a simple way.

Given its universality and its wide range of application outside the sector of dance, Labanotation has spread widely, and books describing it have been translated into a number of languages. There are specialised centres for teaching this notation technique in several countries. The most important centres are located in Great Britain, France, Germany and Hong Kong. Biennial world conferences are held in the United States and Europe alternatively.

The first centre to receive Laban's inheritance was New York's "Dance Notation Bureau". Ann Hutchinson, one of Laban's pupils, Helen Priest, Jeany Price and Herietta Greenhood founded it in 1940, encouraged by US critic John Martin.

The Dance Notation Bureau records all types of dance through Labanotation, and has created an archive containing hundreds of recorded dances. It trains experts in notation and reconstruction working both in classical and contemporary dance. It has recently dealt with adapting the system to more effective dance recording technologies. There is already a totally computerised system, and current work is focussed on making computers translate notation into moving figures and vice versa.

Notation systems other than Labanotation have been and will be proposed, partly because of new computer technologies. Undoubtedly, however, the success of this type of notation lies not only in the principle of universal and accurate description of

movement, which inspired Laban's work throughout, but also in the democratic cooperation of a number of people who have contributed to its development and diffusion all over the world.

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Figures

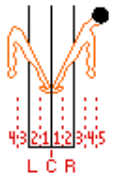

Fig. 1 *Division of the staff into columns:* **L** = Left**, C** = Center**, R** = Right**; 1** = Support column**, 2** = Leg column**, 3** = Body column**, 4** = Arm column**, 5** = Head column

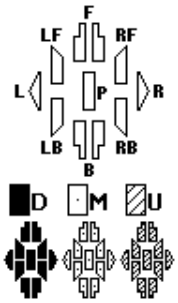

Fig. 2 *Directions and level of movement:* **F** = Forward, **LF** = Left forward, **RF** = Right forward, **L** = Left, **R** = Right, **P** = Place, **B** = Backward, **LB** = Left backward, **RB** = Right backward, **D** = Down, **M** = Medium, **U** = Up

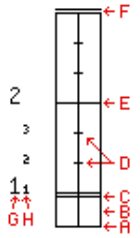

Fig. 3 *Indication of time:* **A** = Line at the start of the staff, **B** = Starting position, **C** = Beginning of the movement (double line), **D** = Indication of time subdivision, **E** = Start of a measure, **F** = End of the movement (double line), **G**, **H** = Numbers indicating time subdivisions (large numbers: measures; small numbers: subdivisions)

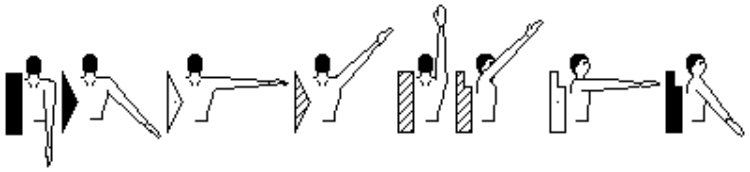

Fig. 4 *Arm movements*

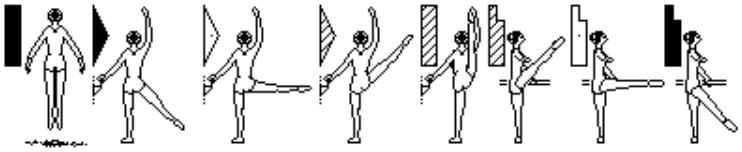

Fig. 5 *Leg movements*

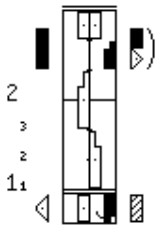

Fig. 6 *Example of movement sequence*

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