

# The meaning of human motor pattern

Volume 12 Issue 3 - 2022

Jacek Bojakowski

Department of Neurology, Medical University of Warsaw, Poland

**Correspondence:** Jacek Bojakowski, Department of Neurology, Medical University of Warsaw Banacha 1a 02-097 Warsaw, Poland, Email jabo@wp.pl

**Received:** December 21, 2021 | **Published:** May 30, 2022

## To the editor

Polycletos from Argos, 450-415 BC, described the “contrapost” as a harmonious canon of human body posture, which we can see in Doryforos and many other ancient and Renaissance art objects. A few decades later however, Skopas from Paros, 370-330 BC, showed how beautiful the human body can be in expressing even ecstatic movement. The game of recognizing the movement of his Bacchae brings us pleasure similar to that which a clinician using the TWSTRS<sup>1</sup> scale circumscribes the type of cervical dystonia, before botulinum toxin therapy. The relevance of human motor pattern was demonstrated by Vaclav Nijinsky in his choreography for the Rite of Spring (Igor Stavinsky). This event, on 25<sup>th</sup> of May 1913, was hailed as the beginning of modern dance. There are many people who have called it the beginning of modern art. One tried to prove that it was the cause of the outbreak of the First World War.<sup>2</sup> However, in fact, only the motor pattern of dancers on stage changed. The doubts about the illustrative role of dance was expressed by Isadora Duncan: “If I could tell you what it meant, there would be no point in dancing it”.<sup>3</sup> Those words illustrate the emancipation of dance from any other kind of art, but make the description of body movement on the stage much more difficult (Figure 1).

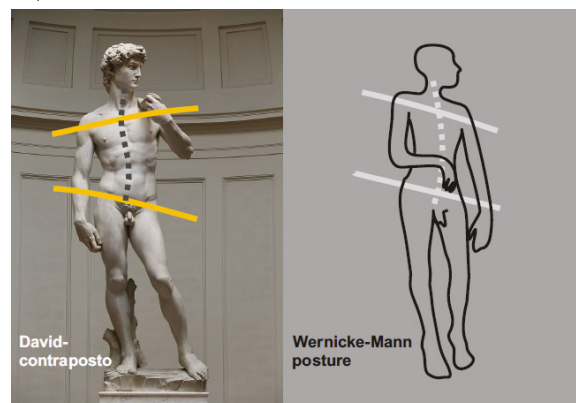
The motor activity of the human body has universal and very individual features. Decisive objective factors such as gravitation, external space circumstances (including social), health or disorder and fatigue are complemented by stage of development (depending usually on age), individual abilities (including height, weight, coordination), motivation, emotion, knowledge, experience, imagination, mood, obsessions and habits. Among clinical aspects, we can list: skeletal defects, arthropathies, myopathies, dystrophies, movement disorders such as spasticity with plegia or paresis, cerebellar Parkinsonian syndromes, athetosis, dystonia, chorea, balism, tremor, tics, compulsive obsessions, pain, proprioception disturbances. It is obvious that perception of human motor activity depends on many other features, such as the occupation of recipient for instance. Then the interpretation of them will be different. Making small sculptures showing the human body in special movement, I’m waiting for different perception and interpretation of them. Neurologists suggested different diagnoses than orthopedists and I observe a different reception from groups of sculptors, painters, dancers or movie makers.

Motor pattern changes after a stroke as demonstrated by Wernicke-Mann posture (so different than classic contrapposto) Figure 2, lets us establish “strassen diagnosis” before neurological examination. More controversial is the comparison of the Wernicke-Mann posture with some Baroque sculptures, where parallel positioning of both - pectoral and pelvic girdles is very common. We can then discuss the motor pattern of an allegorical figure from the Hodovica church whether she is post stroke, dystonian or tetanic, because of the girdle’s positioning, retrocollis, neck rotation and palm arrangement. The fantastic imagination of Johann Georg Pinsel (an active sculptor in Eastern Galicia in the XVIII century), induces anxiety and an enigmatic impression to treat the person shown in Figure 3, as a clinical case. Independently from the suspected diagnosis, this,

difficult to recognise, motor pattern, suggests special abilities of the person figured. The author refers to words of Isaiah the Prophet, that the afflicted means chosen by the Lord (6), and for popular religion that the sick have special abilities through contact with ghosts. There are many examples that motor disturbances not only limit, but force an alternative way to execute and be active in spite of handicap. Development of an alternative motor pattern is the chance Figure 4.



**Figure 1** Miniature sculpture. Isadora. Height 22cm. Metal, own technique. Jacek Bojakowski.



**Figure 2** Girdle inclination and vertebral column bending in contrapposto and the Wernicke-Mann posture.



**Figure 3** Allegorical figure from the Hodovica church by Jan Jerzy Pinsel.



**Figure 4** Staś is drawing (with permission of Staś and his parents).

## Acknowledgements

None.

## Conflicts of interest

The authors declare no conflicts of interest.

## References

1. CL Comella, GT Stebbins, CG Goetz, et al. Teaching tape for the motor section of the Toronto Western Spasmodic Torticollis. *Scale Mov Disord.* 1997;12(4):570–575.
2. Modris Eksteins: Rites of Spring: The Great War and the Birth of the Modern Age Mariner Books; 1st edition. 2020.
3. <https://www.goodreads.com/quotes/62793-if-i-could-tell-you-what-it-meant-there-would>
4. Borys Woźnicki. Johann Georg Pinsel, Bosz, Olszanica. 2013.
5. <https://encyklopedia.pwn.pl/haslo/Pinsel-Jan-Jerzy-rzezbaz-Hodowicy;353926.html>
6. Isaiah 48:10.