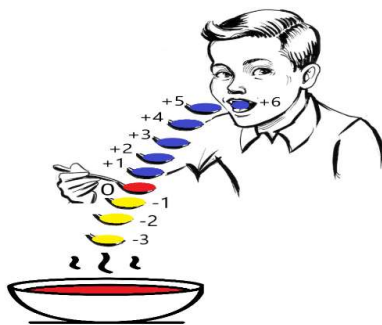


The execution of a nerve spiral requires the compelling cooperation between an internal (secondary) and an external (primary) focus – The clarification of all grasping actions

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*Caught In A Line*

The explanatory model of all motoric motoric actions

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## Introduction

Traditionally, science has assumed that one motor action encompasses one focus. This assumption has seemingly been so logical that it has never been questioned. However, this has led to the absence of a plausible explanation for the functional perception processes underlying the execution of all motor actions, even after 100+ years of movement sciences. In 2016, an explanatory model was found that is capable of identifying all functional perception processes within any imaginable motor action. Beyond any reasonable doubt it conversely demonstrates that every motor action can only be executed through a compulsory coupling of two foci: an internal (secondary) focus must always be directed at an external (primary) focus. In which it should be explicitly noted that these two foci represent entities that fundamentally differ from current scientific terminology.

The explanatory model emphasizes that the essence of a motor task always involves the movement of an action object outside our body along an action trajectory shape, but that the action object will never be capable to move on its own along that line. The action object is often an inanimate object (spoon, tennis racket, ball, letter, pointer (pc) etc.) that we hold during an action, and even though the fingertips, during a grasp action with the hand on the outside, consist of living cells, we absolutely aren't capable of moving them there. The explanatory model unequivocally shows that initiating the movement of an action object outside our body is only possible by using secondary perception of autonomous movements within our body.

Compared to the current state of science, the explanatory model represents a revolutionary breakthrough, revealing that two foci must enter into an obligatory connection simultaneously, and this universal stacking of two perceptions of two autonomous movements occurs in every motor movement action. They are clearly autonomous because they belong to two incompatible worlds. Observations of movement inside and outside the body are actually never able to overlap.

This article focuses entirely on the motoric movement action *nerve spiral*. In this action, you must move a ring connected to a handle from point A to point B without the ring making contact with the spiral. Although presented as a game, this action is entirely comparable to motor actions like eating. We move a spoon c.q. the bowl of the spoon, in exactly the same manner, respectively towards the food and towards the mouth. However, within the nerve spiral, a specific action trajectory shape is prescribed to go from A to B. Due to the fact that you cannot traverse the spiral without touching it with the ring, the explanatory model of all motoric movement actions demonstrates that every conceivable action comprises two autonomous focus points. As a result, we can never execute identical straight action trajectory shapes. Within which the model hastily adds that a parsimonious organism never had the ecological intention to develop in this manner. Performing similar forms instead of identical forms in action trajectory shapes is much more effective and efficient. The nerve spiral undoubtedly shows that every action encompasses two autonomous foci. This leads to the definitive conclusion that these focus points are merely components of an optimization process, and thus, we can never perform an action in an identical manner.

Furthermore, the explanation demonstrates that all conceivable motor actions are based on the same two foci. Due to this universal character, the explanatory model creates the most ultimate ecological argument imaginable. The article does not delve deep into the differences with the current state of science, as there is still no clear consensus on this subject within the scientific community.

The primary focus in relationship to the movement of a ring along a spiral encompasses the perception of movement outside the body

The explanatory model of all motor movement actions, as demonstrated within the nerve spiral, shows that only the ring c.q. the movements of the ring, will execute the essence of the task and therefore represents the primary focus within this action. In relationship to which the explanatory model provides scientific evidence that a motoric movement action always involves two successive autonomous phases. The tactical consideration first aims to create a perceptual image of a latent action trajectory shape over which, in this case, the ring or the movements of the ring promises to become successful, and only then proceeds to actual action.



Images: The nerve spiral solely involves moving a ring attached to a handle from point A to point B. The essence of this task is thus executed solely through the autonomous movements of the ring, and that is why it is the main process we must observe. Just as within any conceivable motor action, the current position of the ring c.q. the action object will always mark the precise separation between the manifest and latent parts of the action trajectory. Completely similar to a marble within a marble run. The nerve spiral is a unique action because the trajectory form of the action is clearly prescribed and visible.

Despite the fact that the nerve spiral prescribes a mandatory action trajectory shape, we still create a perceptual image of a latent action trajectory of the spiral. In this case, we continuously visualize a tight straight trajectory form in front of us. However, even though this is the case, the ring will only be able to be moved by the perception of an entirely different autonomous movement, and the ring will inevitably deviate from the 'perfectly' suggested perceptual image at any point P within the trajectory form that is being mentally projected. This process, therefore, must be accompanied by the double and mutual process of the cortical streams, representing the body's ingenious ecological response to execute every motor action in the most efficient manner possible. The ventral stream and dorsal stream continually interact with each other to correct the inevitable deviations, but this interaction does require a small reaction time<sup>1</sup> that must be measured in tenths of a second. The result is that we (in ac-

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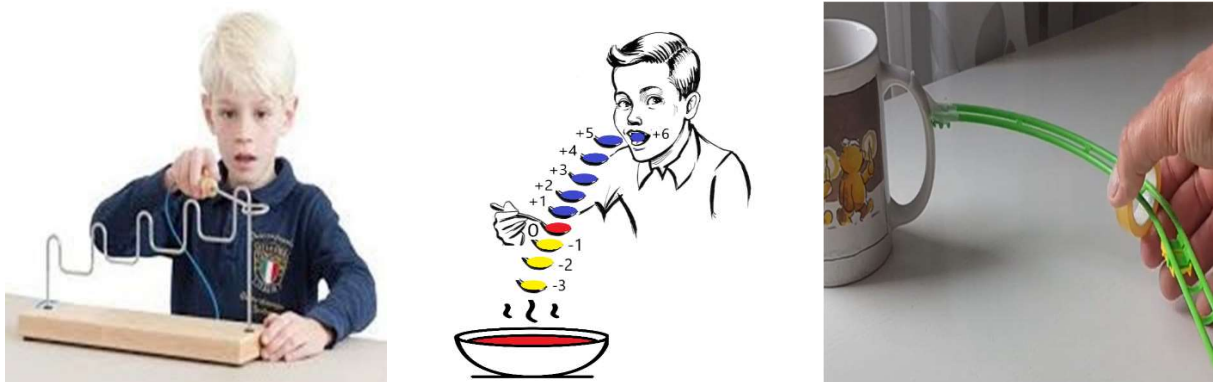
<sup>1</sup> The specific reaction time concerning cortical streams in relation to the explanatory model has never been examined. General information and empirical experiences provide an indication that the reaction time is estimated to be around 0.1 seconds; "It takes about one-tenth of a second for information about the visual scene to reach the back of the brain or the occipital lobes. During the next tenth of a second, the visual information is analysed in two separate ways. Figure 2 shows the two pathways of the dorsal stream and the ventral stream. The dorsal stream runs from the occipital lobes to three locations, the back of the brain at the top (called the posterior parietal lobes), a vertical strip of brain in the centre (called the motor cortex) and the front of the brain (called the frontal cortex). The ventral stream runs from the occipital lobes to the back of the brain at the bottom (called the temporal lobes)": Cerebral Visual Impairment - Working Within and Around the Limitations of Vision; Gordon N Dutton; [http://www.liv.ac.uk/~pcknox/Publications/trimble/CVI%20chapter%20for\\_hers-Dutton.pdf](http://www.liv.ac.uk/~pcknox/Publications/trimble/CVI%20chapter%20for_hers-Dutton.pdf)

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cordance with Bernstein) can never execute one motor action identically, and when performing the nerve spiral, the ring will always follow a distinct zigzag pattern. This leads to the consequence that the ring will come into contact with the spiral at multiple points.

The secondary focus in relationship to the movement of a ring along a spiral encompasses the perception of movement inside the body

When one starts to realize that the primary focus in regard to the nerve spiral solely concerns the movements of the ring, it implicitly becomes evident that the ring itself isn't capable to move at all. This analogy is strikingly similar to a ball during a free throw in basketball or various other inanimate objects like tennis rackets, bicycles, cricket bats, spoons, knives, bottles, pointers (pc) and more, which clearly never move on their own. But even when we grasp a coffee cup with our hand, the explanatory model demonstrates that the hand, and consequently the relevant fingertips, must also be considered as lifeless action objects. The outer layer of the fingertips does comprise living cells, but it is absolutely incapable of moving the fingertips in an action trajectory shape outside the body with those living cells. We can only induce movement in the outer layer of the fingertips through internal body movements. While they may approach the outer surface of the fingertips, they will always remain within the confines of the body. In the case of a ring attached to a handle, we can only perceive (the outer surface of) the handle through (the outer surface of) our fingertips haptically and we can only proprioceptively<sup>2</sup> perceive how movements within our body influence the haptic contact between the handle and the hand.



Images: While presented as a game, the execution of a nerve spiral is fully comparable to motor movement actions such as eating<sup>3</sup>. We move a spoon, or the bowl of the spoon, in exactly the same manner, respectively towards the food and towards the mouth. Even when we want to grab a coffee cup<sup>4</sup>, you can imagine the presence of a ring, like within a nerve spiral, between the fingertips. For the

<sup>2</sup> Proprioceptive perception comprises two autonomous aspects: Limb Position and Movement. The explanatory model makes a clear connection between these two proprioceptive phenomena and their relation to using the ring effectively. The overall ring displacement technique is influenced by our awareness of limb position, allowing us to control the general movement of the ring along the spiral. On the other hand, where perception is specifically transferred to the exact movement of the handle is essential for precise steering of the ring.

<sup>3</sup>

[https://www.researchgate.net/publication/372862585\\_Eating\\_requires\\_the\\_compelling\\_collaboration\\_between\\_an\\_internal\\_and\\_an\\_external\\_focus\\_-\\_Getting\\_the\\_bowl\\_of\\_the\\_spoon\\_to\\_the\\_foodmouth\\_along\\_an\\_action\\_trajectory\\_shape\\_is\\_the\\_sole\\_essence\\_within\\_eati?\\_sg%5B0%5D=-91TM-Ix27P2i2SjyMrxhg5WLBEHRhVJaDbk4LfYfAmxS8c05-M4XuLOF2jEon6g3nprbRU\\_xqKu-XGyIfXbkbQKP5L9KxxrbS5gFHI3.0Yxh\\_8H69KUDVmIWLp35lg6HMzN0qGlFb4xVNfySV3\\_QR-Y5HHJUsqhTvrZ5lRa9rGycAnP42MhJXLz44m5b\\_w&\\_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InByb2ZpbgUiLCJwYWdlIjoicHJvZmlsZSJ9fQ](https://www.researchgate.net/publication/372862585_Eating_requires_the_compelling_collaboration_between_an_internal_and_an_external_focus_-_Getting_the_bowl_of_the_spoon_to_the_foodmouth_along_an_action_trajectory_shape_is_the_sole_essence_within_eati?_sg%5B0%5D=-91TM-Ix27P2i2SjyMrxhg5WLBEHRhVJaDbk4LfYfAmxS8c05-M4XuLOF2jEon6g3nprbRU_xqKu-XGyIfXbkbQKP5L9KxxrbS5gFHI3.0Yxh_8H69KUDVmIWLp35lg6HMzN0qGlFb4xVNfySV3_QR-Y5HHJUsqhTvrZ5lRa9rGycAnP42MhJXLz44m5b_w&_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InByb2ZpbgUiLCJwYWdlIjoicHJvZmlsZSJ9fQ)

<sup>4</sup> [The perception processes during the grasping of a coffee cup - YouTube](#)

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explanatory model It doesn't matter. The stacking of two autonomous foci will always reveal the same universal cooperation.

In the case of the nerve spiral, the goal of the task is also implicitly connected to the perception of the primary focus. As a result, we often are not aware of the secondary focus during many motor actions, especially because these often involve simple perceptions. However, in highly complex motor actions, such as a tennis serve, attention is exclusively directed towards the secondary focus, completely disregarding the fact that the primary focus pertains to creating an outgoing ball trajectory shape (OBT). With some practice, you can consciously perceive the two foci simultaneously within many motor actions. For instance, in a grasping action, you can perceive the action trajectory shape on the outside of your body while simultaneously focusing on movements on the inside of your body. This experience can be replicated during the execution of a nerve spiral as well.