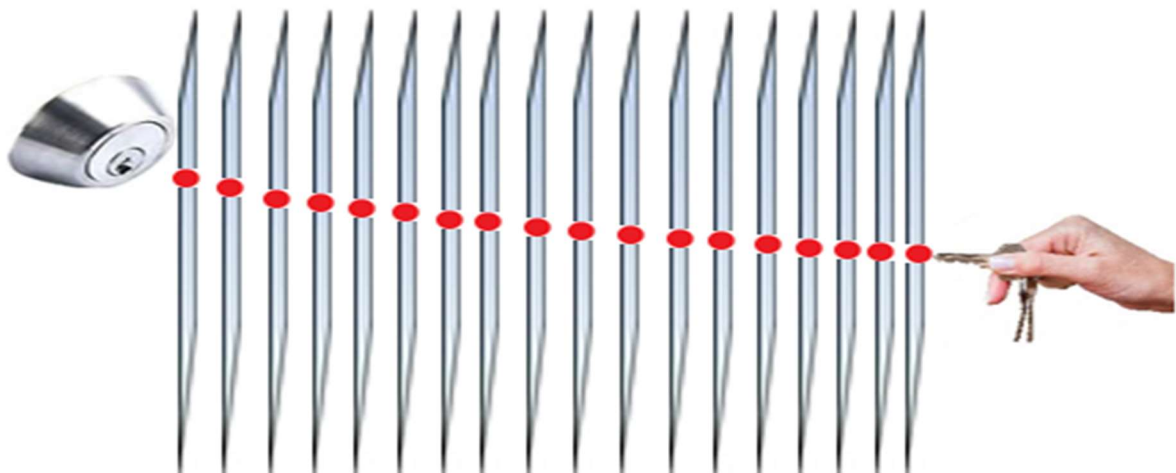


LOCK OPENING

Prior to opening a lock we always first construct a perceptual image of a latent action trajectory shape out of the perspective of the key
– The scientific evidence



Caught In A Line
The explanatory model of all motoric movement actions

N.J. Mol
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Introduction

The explanatory model of the motoric movement action provides a universal explanation of all functional perception processes within all goal-directed actions. It demonstrates that performing any conceivable action always requires the simultaneous perception of three autonomous foci¹, in accordance with J.J. Gibson's theory, which includes both the movement of the animal/organism and the movement of the environment. When opening a lock with a key, one autonomous focus remains engaged with (the movement of) the lock, which universally represents a catching action. The other two autonomous foci are concerned with the perception of movement within the egocentrically executed action, i.e., the movement of the key along an external action trajectory shape (toward the lock), which universally represents a throwing action.

This article specifically focuses on the two foci involved in the egocentric throwing action of guiding a key towards a lock. The explanatory model shows that every conceivable throwing action requires a compelling cooperation between an autonomous internal focus and an autonomous external focus.

This insight, that two autonomous foci are present instead of a single undivided motor action, not only allows a final and ending specification of all individual perception processes but also reveals as a novelty that a coupling within the egocentric throwing action itself is capable to occur².

The explanatory model of the motoric movement action thus provides a complete description of the *tau*-coupling process, wherein the essence of the task, the primary focus, is executed through (the perception of) the movement of the key over a pre-planned action trajectory shape between the current position of the key and the lock³. This perceptual image is therefore determined in advance within a tactical consideration and involves identifying the future sequential positions the key must occupy to achieve a successful action. Sequential positions of any object effectively always create line segment shapes, and when the action is actually executed, the current position of the key is going to fill in that perceptual image step by step. Thus, it can be observed within a line segment shape that the *gap* of the latent positions *P* gradually disappears and, in full accordance with the findings of D.N. Lee, produces the *tau*-value, which plays a crucial role in the completion of the motor action in cooperation with the secondary focus⁴.

The explanatory model of the motoric movement action partly relies on logical reasoning but also presents scientific evidence. This chapter provides scientific proof that within the opening of a lock with a key, we always first create a perceptual image of a latent successful action trajectory shape toward the lock out of the perspective of the key before we actually perform any action.

¹ [The cortical streams mediate the grasping of a cup equal as they mediate within the nerve spiral \(youtube.com\) https://www.youtube.com/watch?v=QP4vPVAw-Yg](https://www.youtube.com/watch?v=QP4vPVAw-Yg)

² D.N. Lee did indeed identify the *tau*-value associated with the primary focus, but he considered the egocentric action as one indivisible whole. His lifelong quest to find the phenomenon it should be connected to remained unsatisfied because he never realized that the coupling occurs within the egocentric action itself.

³ https://www.researchgate.net/publication/376653908_Scientific_evidence_-_From_random_motor_activity_to_the_execution_of_deliberate_actions_demands_shifting_the_internal_and_external_focus The tip of the key can solely be moved along an action trajectory

⁴ https://www.researchgate.net/publication/375724085_The_tau-coupling_process_when_opening_a_lock_with_a_key_demonstrates_that_we_absolutely_do_not_need_a_motor_plan_Executing_an_external_action_trajectory_shape_along_which_the_tip_of_the_key_moves_dict

Prior to opening a lock we always first construct a perceptual image of a latent action trajectory shape out of the perspective of the key – The scientific evidence

The scientific evidence

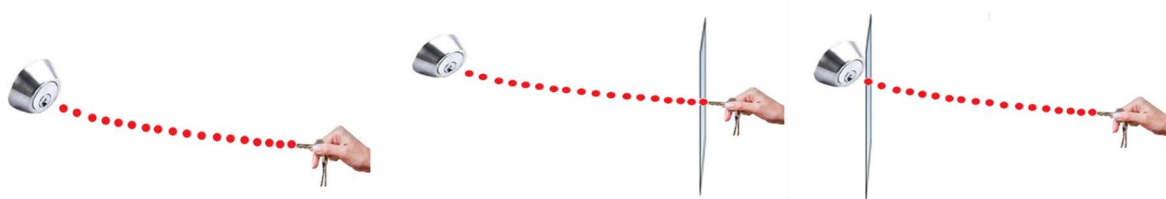
The evidence is very straightforward. You can verify it yourself through an empirical study where you are the test subject or you ask a test subject to open a lock with a key. The only instruction given encompasses to only start the action if the test subject believes there is a realistic possibility of actually getting the key into the lock.



Images: The scientific proof is based upon the competence to visualize a giant huge glass shopping window. The left image shows a normal dimension of such a window. In relationship to the scientific proof you need to magnify that image 10 to 20 times. Like in the right image.

Choose a random lock with its corresponding key and create the following circumstances:

- Situation 1: Do not alter the environment (zero measurement). Let the test subject open the lock normally.
- Situation 2: Place a giant huge glass shopping window (height 20 meter x width 30 meter) between the key and the lock, close to the key.
- Situation 3: Place a giant huge glass shopping window (height 20 meter x width 30 meter) between the key and the lock, close to the lock.
- Situation 4: Place a giant huge glass shopping window (height 20 meter x width 30 meter) between the key and the lock, at any random position P.



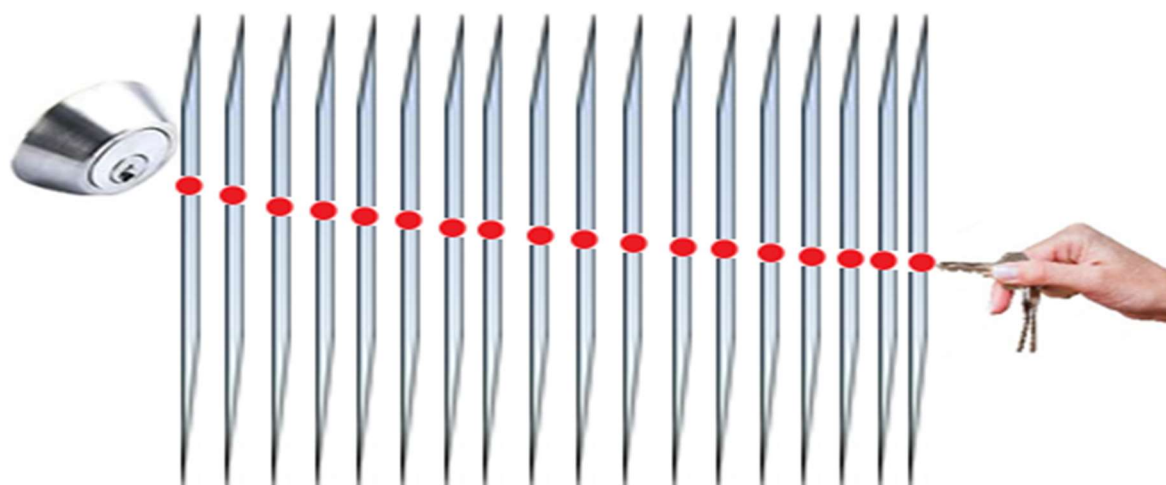
Images: In situation 1 a test subject will normally open the lock. In situations 2 and 3, where a giant glass storefront is placed between the key and the lock, the test subject will not start this motoric action with the intent to actually get the key into the lock. This is because there is *one* (!) position P that is perceived as blocking the key.

Conclusion:

In situation 1, you and/or the test subject will just open the lock. In situations 2, 3, and 4, you and/or the test subject do not initiate this action with the intent to actually get the key into the lock. Situations 2 and 3 do not provide significant insight on their own, but situation 4 clarifies everything. Whether the giant glass shop window is placed near the key or near the lock makes no difference to the test subject. If there is a large shop window anywhere clearly present, the test subject will not initiate this opening action with the intention to actually get the key into the lock. This applies to every

Prior to opening a lock we always first construct a perceptual image of a latent action trajectory shape out of the perspective of the key – The scientific evidence

conceivable position P of the shop window, from the very first position $P(0)$ near the key to a shop window occupying the last position $P(n)$ just before the lock.



Situation 4

Image: In situation 4, it becomes clear that prior to the actual execution, we consider all consecutive *future* (!) positions of the key. It doesn't matter where the shop window is positioned between the key and the lock; the action is not performed. Mathematically, one can argue that an uninterrupted series of consecutive positions P creates a line segment or line segment shape (action trajectory shape). The image provides a perfect visual representation that within this lock opening action, we first form a perceptual image of the entire latent action trajectory shape before we actually execute anything.

This means that we assess every position $P(0-n)$ between the key and the lock beforehand, clearly determining whether each position P allows the key to pass through so that it can ultimately be inserted into the lock opening. In relationship to which it can be observed that if one position P is not *empty* (!), the mission is aborted. Upon which you can draw the factual conclusion that we will have *to look at* (!) c.q. we will have to perceive every position $P(x)$ between the key and the lock beforehand if that specific position $P(x)$ is also allowing the physical dimensions of the key to pass. Mathematically, an uninterrupted series of consecutive positions P can be designated as a line or line segment shape (action trajectory shape). This completes the scientific proof that within a lock opening action, we first construct a perceptual image of the entire latent action trajectory shape out of the perspective of the key before we actually execute anything.