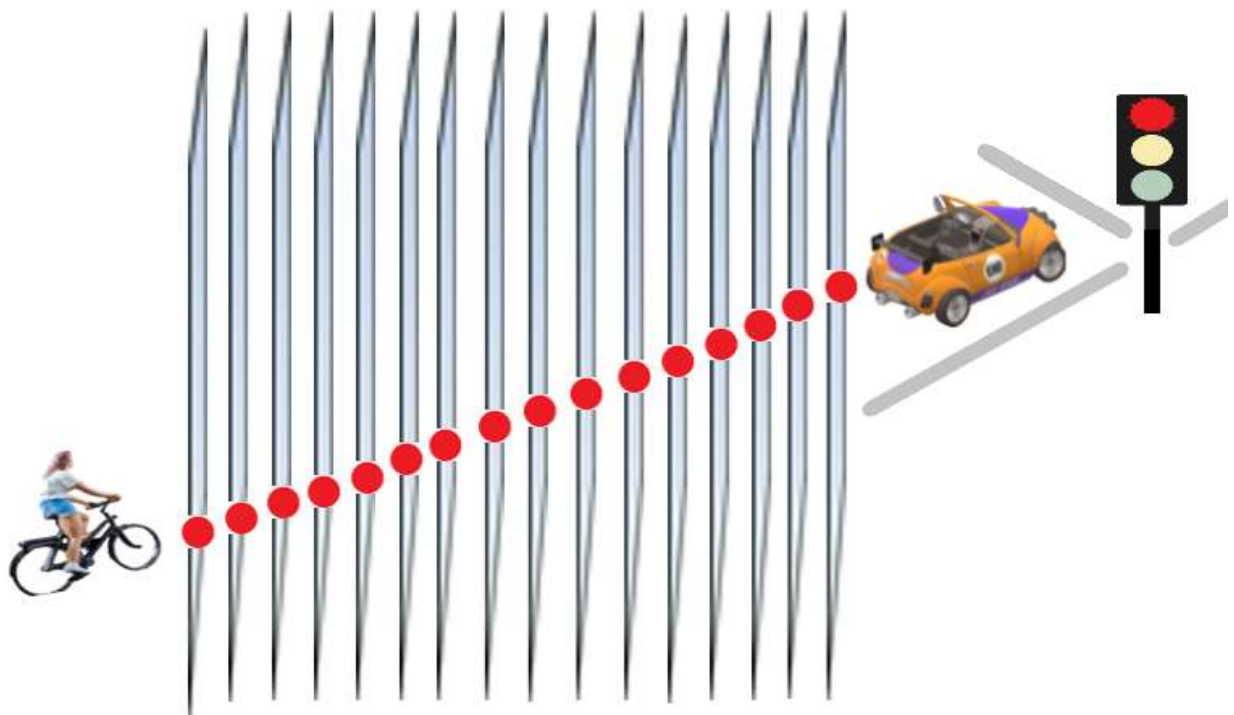# BICYCLING

Prior to bicycling from A to B we always first construct a perceptual image of a latent action trajectory shape out of the perspective of the bicycle and its passenger – The scientific evidence

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

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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 foci[1], in accordance with J.J. Gibson's theory, which includes both the movement of the animal/organism and the movement of the environment. While cycling towards a car waiting at a traffic light, one autonomous focus remains engaged with (the movement of) the waiting car, 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 bike along an external action trajectory shape (toward the waiting car), which universally represents a throwing action.

This article specifically focuses on the two foci involved in the egocentric throwing action of the bicycle, for example, to stop it precisely behind a waiting car. 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 perception processes individually but also reveals as a novelty that a coupling within the egocentric throwing action itself is capable to occur[2].

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 bicycle over a pre-planned action trajectory shape between the current position of the bike and the waiting car[3]. This perceptual image is therefore determined in advance within a tactical consideration and involves identifying the future sequential positions the bicycle 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 bicycle is going to fill in that perceptual image step by step. Thus, it can be observed within a line segment shape that

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[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

[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/376809405_Bicycling_-_Scientific_evidence_that_random_motor_activity_implicitly_leads_to_the_factual_occurrence_of_an_internal_and_an_external_focus_and_how_their_dominancy_evolutionary_has_reversed

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 focus[4].

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 bicycling, we always first create a perceptual image of a latent successful action trajectory shape before we actually perform any action.

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 cycle towards a car waiting at a traffic light. The only instruction given is to cycle only if the test subject believes there is a realistic possibility of actually stopping behind the car.
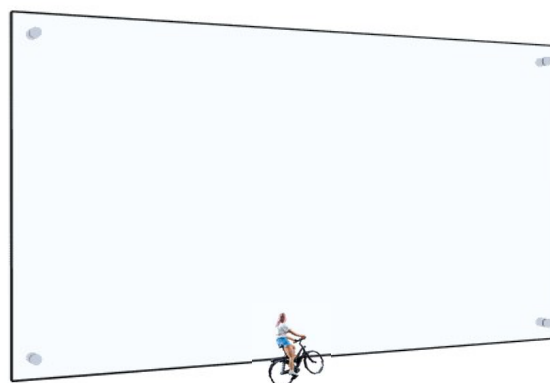
Images: The scientific proof is based upon the competence to visualize a giant huge glass shopping window. The left image shows a normal dimension of such a window. In relationship to the scientific proof you need to magnify that image 10 to 20 times. Like in the right image.

Choose a random road with a car waiting at a traffic light and create the following circumstances:

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

| Situation 1 | Situation 2 | Situation 3 |
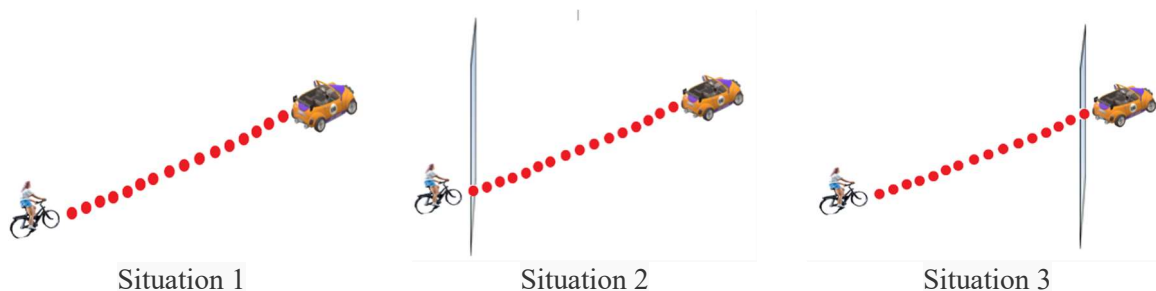
[4] https://www.researchgate.net/publication/375335993_The_tau-coupling_process_within_bicycling_demonstrates_that_we_absolutely_do_not_need_a_motor_plan_Executing_an_external_action_trajectory_shape_over_which_the_bicycle_moves_dictates_all_internal_sens

Prior to bicycling from A to B we always first construct a perceptual image of a latent action trajectory shape out of the perspective of the bicycle and its passenger – The scientific evidence

Images: In situation 1 a test subject will cycle normally. In situations 2 and 3, where a giant glass storefront is placed between the bicycle and the waiting car, the test subject will not start cycling with the intent to end up directly behind the car. This is because there is *one* (!) position P that is perceived as blocking the bicycle.

Conclusion:

In situation 1, you and/or the test subject will cycle towards the waiting car. In situations 2, 3, and 4, you and/or the test subject do not initiate a movement action with the intent to end up directly behind the car. 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 bicycle or near the car makes no difference to the test subject. If there is a large shop window anywhere clearly present, the test subject will not initiate a biking action with the intention to end up directly behind the car.. This applies to every conceivable position P of the shop window, from the very first position P(0) near the bike to a shop window occupying the last position P(n) just before the car.
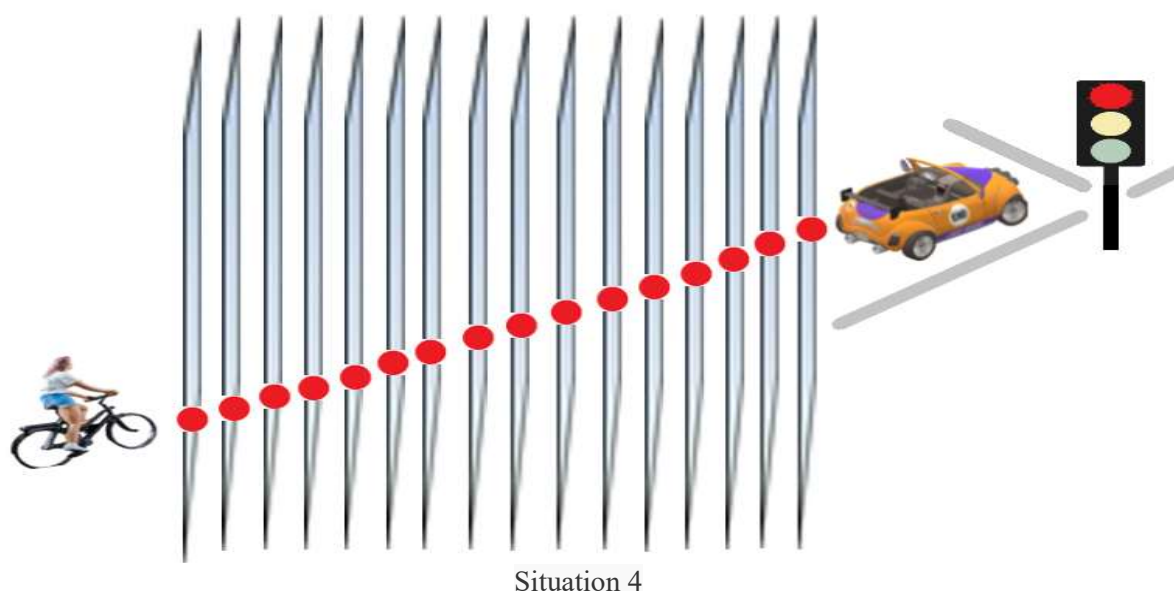

Situation 4

Image: In situation 4, it becomes clear that prior to the actual execution, we consider all consecutive *future* (!) positions of the bicycle. It doesn't matter where the shop window is positioned between the bike and the waiting car; 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 the biking 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 bicycle and the waiting car beforehand, clearly determining whether each position P allows the bicycle (including the passenger) to pass through so that it can ultimately reach the car. 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 bicycle and the car beforehand if that specific position P(x) is also allowing the physical dimensions of the bicycle (including the passenger) 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 biking action, we first form a perceptual image of the entire latent action trajectory shape before we actually execute anything.