

Continuous Inferential Flow in the Psychological System

Event, enacted activity, relational orientation,
and background updating

Version 1.2 | Defence-aligned scientific statement | July 2026

DOCUMENT FUNCTION This statement develops the recurrent inferential flow presupposed by the foundational architecture. It specifies how an event, the organism's own activity, and later consequences can contribute to self-world-future orientation and background regulatory organization. It does not reproduce the detailed theories of psychological defence, capacity, stuckness, clinical disorder, or intervention developed or reserved elsewhere in the document family.

*Mechanism clarification to the Foundational Architecture of Psychological Functioning, Version 2.2,
and Deep Orientation of the Psychological System, Version 2.2*

Executive scientific statement

The psychological system is modelled here as an embodied organism-environment process whose bounded online operation need not require language. At any moment, prior organization, current bodily condition, environmental information, and learned regularities constrain what is perceived, how the situation matters, what action becomes ready or selected, and what occurs next. The organism's own realized activity then generates immediate action-related information, while later bodily, environmental, and social consequences provide further information. These streams recur rather than ending in a single verdict.

The proposed integration is relational. What changes is not only an estimate of an isolated self or an isolated world, but the organism's orientation to what it can undergo and enact, what a presently encountered other can undergo and enact, what the wider world affords or constrains, and what trajectories are becoming possible. The present other is treated as a locally differentiated agent within the world field when reciprocal influence is active. The future is the prospective continuation of the current relational organization, not a separate container alongside self and world. Wider systems enter this field only through a specifiable pathway affecting registration, meaning, resources or capacity, action, or consequences; unrelated environmental facts remain outside the operative process.

The organism's own activity can therefore matter even before an external outcome is known. Enacting, withholding, persisting, retreating, freezing, repairing, attacking, exploring, or setting a boundary can provide information about what this organism does under these conditions and what relations it can bring about. The same outward form, however, can arise under different causal organization. Retreat under dominating fear is not functionally identical to deliberate disengagement that protects viability or preserves a meaningful possibility. Behavioral form alone cannot identify the update.

One event may contribute in different directions at once. A person may preserve self-agency by resisting while also receiving evidence that a present other is dangerous and that the wider situation is difficult to control. Such contributions need not be averaged into one score, consciously registered, linguistically represented, or stored as a proposition. Their weighted integration may alter a diffuse background regulatory condition and, where sentience is independently warranted, a prereflective background self-state.

Direct evidence supports immediate action-related information, bounded action-based recalibration, context-sensitive agency, developmental body-related differentiation, and recurrent sensorimotor feedback. The exact relational-field integration proposed here—including broad updating across self, present other, world, and possible trajectories—is a framework integration and testable hypothesis, not an established universal mechanism.

1. Purpose, scope, and restraints

1.1 The narrow problem addressed

The foundational architecture already states that perception and broader nonlinguistic inference interact recurrently; that realized activity generates immediate action-related information; that later consequences provide additional information; that dynamic self-world-future orientation is continuously maintained; and that repeated weighted updates may contribute to background regulatory organization. What remains underspecified is the connecting process: how an unfolding event becomes a relational update without positing a verbal narrator or an inner observer.

This document supplies that missing mechanism-level bridge. It does not replace the parent documents and does not reopen their full architecture.

1.2 Functional, not homuncular

“The system” denotes the functioning organism. It does not denote a hidden subject that watches behavior, interprets messages, assigns moral grades, or keeps an internal ledger. Terms such as *estimate*, *evidence*, *orientation*, *contribution*, and *updating* are functional descriptions of changes in sensitivity and organization. They do not require explicit propositions, symbols, Bayesian computation, or conscious access.

The term “psychological” identifies the embodied level at which organism–environment activity is organized by relational significance, possible trajectories, capacity, and action. It does not identify a non-bodily origin or controller. The field can be multiscale where family, institutional, material, cultural, technological, or built-environment conditions are causally coupled, but it remains bounded by the operative pathway.

1.3 Nonlinguistic does not mean fully innate

Bounded processes of regulation, perception, contingency detection, action monitoring, learning, and selection can operate without online words or sentences. Their exact integration into the architecture proposed here is not thereby shown to be genetically specified, fully formed at birth, developmentally fixed, or independent of prenatal and postnatal learning. Language can later render, reinterpret, and recursively influence the process, but it is not required for the bounded online operation.

1.4 No sentience or moral criterion

This document does not determine which organisms are sentient. Where sentience is not independently warranted, only functional and regulatory language is used. It also postulates no moral faculty: an action-based update concerns enacted capacity, relation, possibility, and consequence—not guilt, blame, desert, or moral truth.

1.5 Deliberate deferrals

The full structure of psychological capacity, the taxonomy and mechanisms of emotion, bodily symptom tolerance, defence, conflict, stuckness, language-dependent identity, measurement, and intervention are not specified in this statement. Capacity is used only in the parent architecture’s minimal sense of estimated ability and available resources relative to demand. Bodily and affective changes enter the flow as conditions and information, but their detailed generation and regulation remain elsewhere. The separate defence statement locates psychological defence as one possible protective reweighting and realized operation within this flow—not as a parallel monitor and not as a synonym for all protection.

2. The recurrent event-centred process

2.1 Event is broader than external occurrence

An event is any internally or externally generated change capable of altering subsequent processing. It can include an environmental occurrence, another organism's action, a bodily change, the organism's own overt action, or a realized covert activity such as an attentional or regulatory shift. Calling self-generated activity an event does not erase agency; it means that, once realized, the activity becomes part of the causal situation to which the organism is subsequently exposed.

2.2 The minimal recurrent sequence

The process is presented sequentially only for analytic clarity:

1. **Prior organization constrains registration.** Current bodily condition, learned regularities, background orientation, and context affect what is registered and how strongly.
2. **Constructive perception organizes the situation.** Incoming information is integrated into a context-sensitive estimate rather than passively copied.
3. **Broader nonlinguistic inference organizes significance and possibility.** The system becomes differentially sensitive to what is happening, what can be done, and what may follow.
4. **Bodily regulation and action readiness change.** Affective and regulatory processes may alter autonomic, interoceptive, endocrine, motor-preparatory, and impulse-related organization without requiring awareness or overt action.
5. **Selection and activity occur.** One or more tendencies gain relative influence; an overt or covert activity may be realized, inhibited, revised, or abandoned.
6. **Realized activity generates immediate information.** Motor command, proprioception, reafference, interoceptive change, effort, fluency, resistance, and related signals can inform subsequent processing before distal outcomes are known.
7. **Consequences add further information.** Bodily effects, environmental changes, and responses from other organisms can confirm, qualify, oppose, or reverse the provisional action-based contribution.
8. **Relational orientation and background organization are updated.** The altered organization constrains the next cycle.

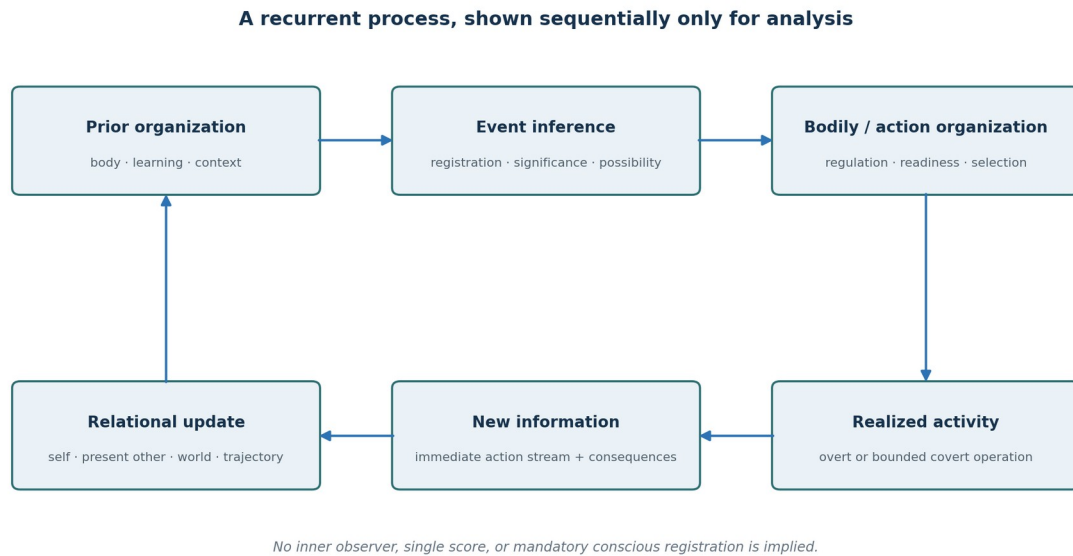


Figure 1. Minimal recurrent flow. The boxes are analytic cuts through one ongoing organism–environment process, not separate inner modules.

These are not eight sealed modules. Several can overlap, recur internally, and mutually constrain one another within a single unfolding event.

2.3 Immediate action information is not the outcome

The distinction is architectural. An organism can obtain information from having begun or enacted an activity even when the external result has not occurred, fails to occur, or is later reversed. Conversely, a favorable external outcome does not prove that the action was freely selected, agentially integrated, or enrichment-oriented. Attempt, realization, agency attribution, outcome, and later consequence must remain distinguishable.

3. The relational organization of an update

3.1 One field, several analytic relations

The update is treated as a change within one organism-relative relational field. Its analytic relations are:

- **Self → self:** how the organism's own activity changes its subsequent condition, agency, estimated capability, integrity, or openness. This is shorthand for self-generated causal influence, not a relation between two selves.
- **Self → present other:** what the organism's activity can bring about in the specific other who is currently encountered.
- **Present other → self:** what this other can do to, permit, block, or evoke in the organism now.

- **Self → world:** what the organism can alter, create, preserve, damage, or make possible in the wider physical and social field.
- **World → self:** what the wider environment—including absent or possible future others—affords, constrains, supplies, threatens, or imposes.
- **Present other → world:** what the encountered other reveals about how agents can alter the shared field. This relation matters only insofar as it changes the organism's orientation.

These relations are analytically distinguishable but causally entangled. A single action can alter several without producing the same direction or magnitude in each.

3.2 The present other is a local differentiation within world

“Present other” refers to the particular other organism actually involved in the current reciprocal event. The category is useful because information about this specific agent may be more local, immediate, and interaction-dependent than a generalized estimate of people or the world. It is not introduced as a fourth top-level DSWFO domain. As experience generalizes across time and contexts, information from present others may contribute to the broader world orientation.

3.3 The world is physical, social, and modifiable

World orientation includes physical regularities and events, resources, hazards, institutions, absent persons, classes of possible others, and the social regularities expected in future encounters. It concerns not only what the world can do to the organism, but also how modifiable the world appears through the organism's own activity and the activity of other agents. System-scale conditions enter the operative field only where a specified coupling changes current or anticipated registration, meaning, resources, action possibilities, or consequences.

3.4 The future is prospective continuation

Future orientation concerns possible next states and trajectories generated from the current organization of self-world relation. It can range from immediate action horizons to symbolically extended human futures. It is therefore treated as the prospective continuation of current relational estimates, not as a third independent store of facts. In humans, anticipatory anxiety can be one phenomenal manifestation of an unfavorable possible trajectory, but the architecture does not reduce all future orientation to anxiety.

4. Activity as evidence

4.1 The bounded established component

Realized activity produces action-related information. Self-generated touch is processed differently from matched external stimulation, and performance can recalibrate perceived affordances (Franchak, van der Zalm, & Adolph, 2010; Kiltner, Engeler, & Ehrsson, 2020). These findings establish an information stream and bounded recalibration; they do not establish the full relational interpretation proposed here.

4.2 The broader hypothesis

The framework hypothesizes that, depending on context and weighting, realized activity can contribute evidence concerning:

- what this organism enacts under current conditions;
- what it can and cannot presently influence;
- what a present other permits, resists, or does in response;
- what kinds of relation are realizable;
- how modifiable, dangerous, supportive, or open the wider world is; and
- what trajectories are becoming more or less available.

This is a content-neutral hypothesis. Practice, avoidance, attack, cooperation, deception, repair, creation, boundary-setting, and withdrawal are applications, not separate principles and not proof of universality.

Domain-specific evidence supports portions of this broader possibility. Conduct can inform self-attribution and efficacy estimates; mandated insincerity can alter perceived self-honesty, perceived honesty of others, and trust; and self-interested unethical conduct can increase state paranoia and reduce affiliation (Bandura, 1977; Bem, 1967; Hillebrandt et al., 2023; Pitesa, Goh, & Thau, 2018). These contents do not by themselves establish a universal relational update.

4.3 Activity is information to more than one system

An organism's activity can simultaneously inform its own subsequent organization and become information for another organism. Posture, dress, timing, proximity, persistence, withdrawal, and indirect conduct can alter another person's estimates even without an intended or semantically encoded "message." The present document primarily develops the actor-side update. Interpersonal signaling and the receiver's inference are compatible extensions, not evidence that the actor consciously communicated or that both organisms construct the same meaning.

4.4 Overt and covert activity

Overt action clearly generates motor, proprioceptive, sensory, and consequence information. Some covert activities—such as a realized attentional shift, inhibition, imagery-dependent regulation, or internal speech—also alter bodily or cognitive conditions and therefore can become input to subsequent processing. The stronger claim that every covert activity is integrated across the full relational field in the same way as overt action remains a separate framework hypothesis. Mere fleeting content, an unexecuted intention, and a realized covert operation must not be collapsed.

4.5 Action, coercion, emotion, and agency attribution

The same objective action–outcome link can be experienced and integrated differently under coercion, fear, anger, or free choice. Experimental work on intentional binding shows reduced implicit sense of agency under coercion and under fear or anger while objective causal structure is held constant (Caspar et al., 2016; Christensen et al., 2019). Therefore, realized movement alone is insufficient: the system's current organization, available alternatives, authorship, and action–outcome contingency can change what the activity contributes.

5. Direction, dominance, and mixed updating

5.1 Directional contribution, not literal points

Everyday language may describe an event as giving “positive” or “negative points” to self, other, world, or future. The scientific formulation is a *directional contribution*: information can increase or decrease organized safety, agency, estimated capability, integrity, relational openness, controllability, and future possibility. No common numerical currency, arithmetic summation rule, central scorekeeper, or explicit record is postulated.

5.2 What “dominates” means

Dominance means greater causal influence on current selection and organization, not whatever reason the person consciously reports. A behavior is not classified as preservation- or enrichment-oriented from its form alone. Classification requires independently specified contextual contrasts and indicators—for example, threat level, coercion, viable alternatives, contingency, interruption by fear, persistence across outcome changes, or subsequent shifts in agency and possibility.

This constraint prevents the model from explaining every outcome after the fact. If no possible observation could count against a proposed organization, the claim has not yet been made testable.

5.3 Mixed contributions are expected

One event can contribute in several directions at once. Resisting an assault may support self-agency and integrity while simultaneously providing negative information about the aggressor, social safety, and future threat. A retreat may reduce immediate danger while also contributing evidence of constrained agency; alternatively, a deliberately chosen retreat may preserve agency, integrity, or a meaningful future. The architecture permits both patterns but does not decide between them from observation of retreat alone.

Mixed updating need not collapse immediately into one valence. Distinct dimensions and relations can remain partly dissociated, compete across timescales, and influence different aspects of subsequent processing.

5.4 Preservation and enrichment need not be separately labelled online

The organism need not explicitly infer, “this action served preservation” or “that action served enrichment.” Preservation- and enrichment-related organization are proposed aspects of the system's active causal weighting. A single action can support both, oppose one while supporting the other, or be locally preferable while degrading broader viability or openness. The interpretive task is to describe their influence without installing an inner commentator.

6. From momentary update to background organization

6.1 No single event defines the organism

An event can produce an immediate provisional change without creating a durable background pattern. Novelty, salience, repetition, prior organization, attribution, contingency, bodily intensity, feedback, and competing evidence can affect whether a contribution is weak, transient, reinforced, generalized, or reversed. The model therefore does not infer a person's background self-state from one outward action.

6.2 Differential integration across time

Repeated and differentially weighted relational updates are proposed to contribute to a relatively diffuse background regulatory condition organized around dimensions such as safety, agency, capability, openness, continuity, relation, and future possibility. Neighboring work models mood as a diffuse integration of recent action-related advantage, but the present multidimensional BSS synthesis remains a separate hypothesis (Bennett, Davidson, & Niv, 2022). Where sentience is independently warranted, this may be phenomenally manifested as a prereflective background self-state. It need not be attended to, verbally known, or accurately represented in reflective narrative.

6.3 Background organization constrains the next event

The background condition is not only an endpoint. It changes what is registered, what appears possible, how threat is estimated relative to minimal capacity, what action becomes ready, and how new evidence is weighted. The process is therefore genuinely recurrent:

prior organization → event processing → bodily/action organization → activity information and consequences → relational update → altered prior organization

7. Developmental and cross-species scaling

7.1 Differentiation is neither complete fusion nor adult structure at birth

The architecture should not assume that a newborn begins with a reflective, adult-like separation of self, other, world, and future. It should also not claim complete undifferentiated fusion. Newborn sensitivity to body-related multisensory synchrony indicates rudimentary organism-related differentiation, while first-person action experience in prereaching infants provides additional evidence of early action-sensitive organization (Filippetti et al., 2013; Skerry, Carey, & Spelke, 2013). Richer agency, relational specificity, generalization, and temporally extended orientation develop through embodied and social experience.

The defensible developmental claim is graded differentiation: bounded biological capacities and early learning processes support progressively more articulated relational organization. This leaves open the exact timing, format, and contribution of prenatal experience, postnatal contingency, attachment, language, and culture.

7.2 Cross-species claims must be layer-specific

- **C. elegans:** proprioceptive feedback and locomotor adaptation warrant a minimal recurrent organism-environment control loop (Ji et al., 2023). They do not warrant a narrative self, a human-like relational field, or a felt background state.
- **Dogs:** yoked-control evidence indicates more positive affective behavior when dogs solve a problem to obtain a reward than when matched rewards arrive without their control (McGowan et al., 2014). This supports a distinction between outcome receipt and control-related activity, but not a verbal self-evaluation.
- **Rhesus monkeys:** manipulation and puzzle performance without an external biological reward supports intrinsically organized activity beyond immediate deficit correction (Harlow, Harlow, & Meyer, 1950). It does not by itself establish the proposed human-scale DSWFO synthesis.
- **Humans:** verbal report, experimental manipulation, clinical observation, and autobiographical narrative provide additional access to relational and prospective organization, but report remains a later and potentially imperfect rendering of the underlying process.

Cross-species continuity is therefore claimed for bounded components and recurrent organization, not for identical content, representational complexity, sentience, or conscious meaning.

8. Scientific status and tests

8.1 Epistemic map

Claim	Status	Current warrant
Self-generated activity produces immediate action-related information	E1	Direct sensorimotor and action-monitoring evidence
Activity can recalibrate bounded self- and affordance-related estimates	E1/E2	Direct action-perception and agency evidence
Coercion and emotional context alter agency integration despite matched objective causation	E1	Experimental intentional-binding contrasts
Own conduct can alter self-attribution and estimates of others or relational trust	E1/E2	Domain-specific experimental and organizational evidence
Present-other information can generalize into broader world orientation	F/H	Plausible learning generalization; exact architecture requires testing
One event can produce simultaneous relational contributions in different directions	F/H	Compatible with multidimensional and mixed-state evidence; exact formulation requires direct tests
Repeated relational updates form the proposed background regulatory condition/BSS	F/H	Neighboring diffuse-state models support plausibility, not the exact synthesis
Future orientation is the prospective continuation of current relational organization	F/H	Component support for prospective processing; exact relational dependence requires testing
Every overt or covert activity updates all relations	Rejected as a current claim	Too strong; broader integration may be weak, absent, local, or transient

8.2 Discriminating predictions

1. **Action versus outcome.** With outcomes matched, self-produced control should alter subsequent agency, capability, or affordance estimates more than passive receipt. With action execution matched, later outcomes should add separable information.
2. **Causal organization versus behavioral form.** Matched outward withdrawal under experimentally varied coercion, threat, viable alternatives, or deliberate choice should produce distinguishable subsequent agency and possibility patterns.

3. **Mixed relational update.** Effective self-assertion followed by continued hostility should improve self-related agency indicators while worsening present-other safety and future-threat indicators; a one-valence model predicts collapse into a single direction.
4. **Local other versus generalized world.** A novel other-specific event should initially alter estimates of that present other more than estimates of people generally; generalization should increase with repetition, similarity, and prior organization.
5. **Prospective mediation.** Changes in present self-world relation should alter immediate trajectory estimates, which should in turn predict anticipatory avoidance, approach, or anxiety-related organization.
6. **Accumulation and reversibility.** Repeated consistent action-consequence patterns should produce more durable background change than a single event, while sufficiently credible counterevidence should qualify or reverse the pattern.

Failure of these contrasts under adequately powered and valid operationalizations must count against the corresponding hypothesis. Unspecified defence, hidden capacity, or inaccessible “deep meaning” cannot be invoked solely to immunize the model.

9. Locked scientific statement

The psychological system is provisionally modelled as a recurrent, nonlinguistic, organism–environment process in which events are continuously organized relative to prior condition, current context, learned regularities, action possibilities, and possible consequences. This organization changes bodily regulation and action readiness; selected overt or covert activity may then occur. Realized activity generates immediate information before distal consequences, and later bodily, environmental, and social outcomes provide additional information.

The framework hypothesizes that these inputs can update one relational organization concerning the organism's condition and agency, the specific other currently encountered, the wider world's affordances and constraints, and possible next trajectories. The present other is a local differentiation within the world field; future orientation is the prospective continuation of the current relational configuration. Self-to-self denotes the effect of self-generated activity on the organism's own subsequent organization, not a second self.

The direction of an update cannot be read from outward behavior alone. It depends on causal organization, context, weighting, available alternatives, agency attribution, and consequences. One event may support self-agency while worsening estimates of another's safety or the world's controllability. These contributions need not be conscious, verbal, arithmetically combined, or stored as explicit judgments. Repeated and differentially weighted updates may alter a diffuse background

regulatory condition and, where sentience is independently warranted, a prereflective background self-state.

Evidence establishes the bounded components more strongly than their proposed integration. Immediate action information, recurrent feedback, action-based recalibration, and context-sensitive agency have direct support. The exact relational field, its mixed directional updating, its developmental differentiation, and its integration into BSS remain framework hypotheses. The dedicated defence statement now uses this flow to locate protective reweighting, candidate defensive activity, immediate relief, and later consequences without adding a separate monitor. Its target hypothesis, protective taxonomy, capacity detail, stuckness, and intervention are not imported into the present mechanism statement.

References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bem, D. J. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, 74(3), 183–200. <https://doi.org/10.1037/h0024835>
- Bennett, D., Davidson, G., & Niv, Y. (2022). A model of mood as integrated advantage. *Psychological Review*, 129(3), 513–541. <https://doi.org/10.1037/rev0000294>
- Caspar, E. A., Christensen, J. F., Cleeremans, A., & Haggard, P. (2016). Coercion changes the sense of agency in the human brain. *Current Biology*, 26(5), 585–592. <https://doi.org/10.1016/j.cub.2015.12.067>
- Christensen, J. F., Di Costa, S., Beck, B., & Haggard, P. (2019). I just lost it! Fear and anger reduce the sense of agency: A study using intentional binding. *Experimental Brain Research*, 237(5), 1205–1212. <https://doi.org/10.1007/s00221-018-5461-6>
- Filippetti, M. L., Johnson, M. H., Lloyd-Fox, S., Dragovic, D., & Farroni, T. (2013). Body perception in newborns. *Current Biology*, 23(23), 2413–2416. <https://doi.org/10.1016/j.cub.2013.10.017>
- Franchak, J. M., van der Zalm, D. J., & Adolph, K. E. (2010). Learning by doing: Action performance facilitates affordance perception. *Vision Research*, 50(24), 2758–2765. <https://doi.org/10.1016/j.visres.2010.09.019>
- Harlow, H. F., Harlow, M. K., & Meyer, D. R. (1950). Learning motivated by a manipulation drive. *Journal of Experimental Psychology*, 40(2), 228–234. <https://doi.org/10.1037/h0056906>
- Hillebrandt, A., Brady, D. L., Saldanha, M. F., & Barclay, L. J. (2023). The paradox of paranoia: How one's own self-interested unethical behavior can spark paranoia and reduce affiliative behavior toward coworkers. *Journal of Business Ethics*, 184(1), 159–173. <https://doi.org/10.1007/s10551-022-05141-x>
- Ji, H., Fouad, A. D., Li, Z., Ruba, A., & Fang-Yen, C. (2023). A proprioceptive feedback circuit drives *Caenorhabditis elegans* locomotor adaptation through dopamine signaling. *Proceedings of the National Academy of Sciences*, 120(20), e2219341120. <https://doi.org/10.1073/pnas.2219341120>
- Kilteni, K., Engeler, P., & Ehrsson, H. H. (2020). Efference copy is necessary for the attenuation of self-generated touch. *iScience*, 23(2), 100843. <https://doi.org/10.1016/j.isci.2020.100843>
- McGowan, R. T. S., Rehn, T., Norling, Y., & Keeling, L. J. (2014). Positive affect and learning: Exploring the “Eureka Effect” in dogs. *Animal Cognition*, 17(3), 577–587. <https://doi.org/10.1007/s10071-013-0688-x>
- Pitesa, M., Goh, Z., & Thau, S. (2018). Mandates of dishonesty: The psychological and social costs of mandated attitude expression. *Organization Science*, 29(3), 418–431. <https://doi.org/10.1287/orsc.2017.1190>
- Skerry, A. E., Carey, S. E., & Spelke, E. S. (2013). First-person action experience reveals sensitivity to action efficiency in prereaching infants. *Proceedings of the National Academy of Sciences*, 110(46), 18728–18733. <https://doi.org/10.1073/pnas.1312322110>