

UNITED WISDOM

Feedback: how an effect changes the process that produced it

World and Consciousness

Andrey Zarinsh & Maria Evilkut

W-14-N01 · EN

@andrey.zarinsh @ilkutki

Feedback: how an effect changes the process that produced it

Epigraph

> *When this circularity of action exists between the parts of a dynamic system, feedback may be said to be present.*

W. Ross Ashby, An Introduction to Cybernetics, 4/11, page 53; first published in 1956, actual second impression of 1957. A complete sentence defining mutual effects between parts, rather than every expressed evaluation.

What this article is about

A result sometimes returns into a process and changes what happens next. A governor responds to speed, someone revises a decision after a reply, and an organisation reconsiders its procedure using information received. The common word does not make these situations identical. We consider feedback through primary models by Maxwell, Ashby, and Carlson with Doyle, keeping mechanics, formal cybernetics, and contemporary engineering theory distinct. Our questions concern the effect's pathway, the selected property, timing, and limits of usefulness. Correction may reduce a deviation, increase oscillations, or remain a message that changes nothing. A model helps frame a question without determining a human purpose or guaranteeing success. Social examples and the reading practice are original, involve voluntary participation, and provide neither therapy nor equipment-adjustment instructions. The article proposes tracing specific connections without making a circular diagram a universal explanation of life.

I. Effects return; time does not

The title contains an apparent paradox. An effect does not undo a past action or send its cause backwards in time. Instead, an action changes some quantity, whose new state affects a subsequent action. Through this pathway, the result becomes a condition of the next step. Placing at least two moments beside one another clarifies the diagram. What happened first? Which part received the consequences? What changed afterwards? Without these transitions, "feedback" can suggest a mysterious power where an ordinary sequence of events is needed. The question concerns later conditions rather than a revision of history.

In Ashby's selected definition, two parts affect one another. This is a formal way of identifying structure, rather than proof of a particular arrow. Receiving a comment does not necessarily

@andrey.zarinsh @ilkutki

close an operational connection: the message may be read without affecting the next action. We use this distinction as an original question when describing a situation. The transition from a result to a changed process needs to be shown, alongside any conversation about that result. Theory thereby helps make the formulation more precise, without establishing in place of observation what has actually happened.

Imagine a small invented project. After the first timetable, participants report that the meeting time is inconvenient. If its organiser keeps the arrangement unchanged, the reply remains information about a difficulty. If the organiser suggests another time and checks participants' availability, a pathway affects the next step. This demonstrates no high effectiveness of the new timetable; another reason may still make it inconvenient. The example distinguishes a message from its use. It comes from no scientific experiment and assumes no obligation to accept every proposed correction. The change and its eventual result remain separate questions.

A result can exert an effect without a person's conscious decision. In a mechanical device, its construction specifies the connection. A social example requires attention, authority, and agreement. Declaring everything one system cannot remove these conditions. A diagram is useful for describing an identified pathway while preserving differences among participants. Reading therefore begins by naming the connected parts and each effect's meaning. Where grounds are unknown, an arrow remains a hypothesis. A circle on a page makes neither the hypothesis factual nor the entire subsequent course of events automatically explained by the structure drawn.

II. What is preserved and what is measured

Feedback does not specify its own purpose. Information can return about speed, errors, available time, or another selected property. Deciding which property to preserve, and within which limits, requires separate grounds. A purpose may be built into a device or agreed by people. Readers can distinguish the observed quantity, desired range, and action intended to affect it. "Correction" then stops meaning an undefined improvement of everything. It concerns a specific question that can be checked without excluding other important properties. The presence of a return pathway supplies no answer about which objective deserves priority.

Maxwell's mechanical problem concerns speed under changes in driving action and resistance. In Carlson and Doyle's contemporary definition, robustness likewise concerns a preserved property under specified variations. We compare these grounds narrowly: before praising stability, identify what is stable and in relation to what. This does not make historical and contemporary devices identical. The comparison clarifies the question without transferring one governor's equation to every activity. A word alone does not disclose which conditions

have already been investigated. Preserving those conditions beside the finding is part of an accurate account of its scope.

In our invented project, the number of meetings held differs from participation quality. Increasing meetings after complaints may raise the chosen count while reducing people’s availability. This is an original distinction among possible purposes, not a published finding about every organisation. Participants might prefer fewer meetings and more clearly stated decisions. If no purpose is identified, the return pathway can serve whichever number is most convenient. Discussing the measure’s meaning therefore precedes treating its movement as evidence that all joint work or relationships have improved. A measure requires its task to remain intelligible.

It also helps to preserve what the selected diagram does not measure. One indicator need not represent a person’s entire life, a friendship’s quality, or a project’s worth. It may suffice for a specific task when its boundaries are stated. A changed question requires another check. Our reading position neither demands a universal measure nor grants a narrow one universal meaning. A result retains significance within its scope. It becomes no final judgment of a person merely because it fits neatly into a table. Measurability and the appropriate reach of a conclusion are different matters.

III. Reducing and reinforcing differ

A corrective pathway can reduce a selected quantity’s deviation, while a reinforcing pathway supports the direction of change. These terms describe a relationship within an identified diagram. They mean neither that the former is always morally good nor that the latter is always bad. Growth may be desirable, while preserving a previous state can obstruct an agreed purpose. Yet desiring an outcome does not establish a mechanism. Trace which change returns and how it affects the next step. Without this distinction, a connection’s sign becomes moral evaluation in place of a description of the operating process.

Consider an original example of preparing a text. A comment about a missing explanation prompts one clarification. If it answers the original question, the connection can reduce that difficulty. Adding an explanation after every doubt, however, can make the text increasingly complex, produce new questions, and prompt still more additions. These are possible sequences, rather than a tested law for all writers. Understanding depends on a specific response to a specific message. Calling something “a comment” determines neither the pathway’s sign nor whether every addition will be useful. The eventual outcome still needs its own reading.

Several changes can also occur together. A longer explanation reduces one ambiguity while increasing reading time. It may help one participant and complicate another’s work. Giving the

whole situation one sign conceals these differences unless the quantity has been identified. Our map can therefore preserve several questions: what became clearer, what took more time, and who needs to participate in the next decision? These questions are no finding of the primary models about a particular group. They show a boundary when a simple description is transferred to joint activity with several purposes and participants.

Where grounds are insufficiently clear, an observed sequence is more useful than a hurried label. A message was followed by a changed action; another result followed; the transition’s cause remains unknown. Such a record does not impoverish the material. It allows later clarification while preserving alternative explanations. A timetable, for example, might have changed because another event occurred alongside the comment. We do not declare every temporal neighbour a demonstrated return pathway. For a drawing to be meaningful, its arrows must correspond to the question and grounds actually available, including their remaining uncertainties.

IV. A pathway takes time

Different intervals can separate an action, its result, receipt of information, and the next response. A current reply may therefore concern a state already changed. In our timetable example, comments arrive after some participants have rearranged other commitments. A correction using older information may create another inconvenience. This is a possible sequence, not an empirical finding about every organisation. It is enough to ask which moment the information concerns and when the decision takes effect. “Fast” alone does not describe response quality. Timing belongs to the pathway, alongside the content of the information returned.

Ashby’s formal account distinguishes an immediate effect within one step from an effect through a longer chain. Maxwell describes linked parts’ motion and the conditions of a disturbance’s behaviour. We use them to read pathway and dynamics separately: a connection does not supply an instantaneous outcome. A model’s particular step also equals no universal minute or day in life. Its time scale needs description. The comparison provides no ready waiting period for a conversation or project, and authorises no mechanical procedure as a rule for another person’s behaviour. Its contribution is a distinction rather than a schedule.

The frequency of incoming messages differs from the capacity to respond substantively. If every reply prompts revision before the previous revision’s result becomes visible, identifying what produced the change becomes difficult. Many actions can occur without a clear checking sequence. In our original situation, this gives a reason to name the next reading time beforehand, rather than require an end to initiative. People can revise an agreement under new circumstances. Recording the reasons prevents waiting and reacting again from becoming two

opposing universal virtues. Each requires its own relation to the question and available information.

A precise timing question distinguishes absence of an effect from absence of an observation yet available. Sometimes a result is visible, sometimes another recording method is needed, and sometimes the original expectation was mistaken. No pause automatically counts as success, failure, or resistance by a participant. For a particular decision, identify the expectation, what is actually available, and which conclusion remains premature. This discipline belongs to our reading practice, rather than a tested therapy for patience. It preserves uncertainty where the diagram does not yet provide a reliable history of every transition and its consequences.

V. Stronger does not always mean more precise

In the selected text, Maxwell describes increased regulating action producing growing oscillations. His mathematical condition belongs to a particular mechanical model. We retain that boundary rather than treating it as proof that every decisive action is dangerous. The example helps ask a separate question: does an added intervention reduce deviation under these conditions, or change the motion’s character? An intention to correct a process differs from its actual response. A device becomes no more stable simply because its designer wanted faster, stronger regulation. The intended function cannot replace analysis of the linked motion.

An ordinary original situation invites a related question without copying a mechanical law. After a delayed reply, someone might send several reminders. The recipient receives more notifications, without necessarily becoming more able to answer. A clarified task, another deadline, or the possibility of refusal may be needed. This is no established causal law about everyone’s behaviour. It shows that pressure’s volume and a next step’s precision are different properties. The meaning of feedback grants no permission to increase influence over someone while agreement and actual conditions remain unclear. A response belongs to that person too.

A stability condition should be read beside the conditions of its derivation. Which quantities enter the model? How small are the deviations considered? Which construction limits remain? Readers need not reproduce every equation to notice the conclusion’s scope. We performed no independent engineering calculation and offer no device adjustments. The historical ground retains its purpose: demonstrating the need to analyse motion. Contemporary application requires a specific check, rather than a famous author’s name transformed into permission to repeat technical actions without the necessary knowledge. Accurate attribution preserves the problem addressed instead of enlarging it silently.

Strong action may be necessary on a task’s own grounds, but those grounds need separate identification. Its place at the end of a drawn circuit does not make it justified. A purpose can be changed, an unsuitable indicator abandoned, or the selected form of control judged inappropriate for the process. These decisions do not follow automatically from a model. Our position avoids replacing discussion of purpose with greater force. Correction remains a specific bounded action, rather than a universal promise to bring every situation into a desired state. A diagram cannot make that promise on anyone’s behalf.

VI. Parts are connected within a whole

A list of parts determines no complete set of connections. Two projects can have similar roles yet different outcomes because decisions travel through different pathways. In one, a participant may change a timetable; in another, only report a difficulty. This is an original distinction about organising work, rather than a finding about every institution. Ask who receives information, who can respond, and where the next action occurs. Missing transitions cannot be filled by assuming an effective circuit from role names alone. The route matters alongside the participants listed, including any limits of their authority.

Ashby warns that describing several circuits does not replace considering a complex whole. Carlson and Doyle emphasise specific internal connections’ importance for preserved properties. Comparing them does not reduce their theories to a single phrase. It shows why a convenient small circle may be incomplete. Our map therefore permits unknown transitions and several distinct relationships. We promise no calculation of an entire organisation from one arrow. Naming the chosen question’s boundary is enough before transferring a part’s property to a whole project or community. The comparison preserves a reason for inquiry rather than closing it.

Improving one form, for example, can make it easier to complete while changing what the next participant receives. Removing an important qualification for brevity leaves less clear information at the following stage. Other solutions are possible; our example predicts no necessary error. It illustrates reading one part’s result beside its onward transmission. Feedback within that part does not necessarily describe every consequence. Praise of a local improvement retains meaning when it does not become an unsupported verdict on the quality of all joint work. A wider conclusion needs grounds at the wider scale it claims.

A whole-system diagram is itself a descriptive choice. More parts can be included, but a drawing’s completeness does not guarantee complete knowledge. With more assumed relationships, distinguishing observed, agreed, and unknown becomes still more important. This requires no collection of others’ personal data to perfect the map. Our exercise uses an open description of a voluntarily discussed task. Participants can keep some conditions private, narrowing the conclusion accordingly. An unavailable ground need not be replaced by

a confident guess about motives or systemic roles. A blank can be a more accurate representation than an invented arrow.

VII. Robust against which changes?

A preserved result depends on the variations anticipated and connections remaining operational. Carlson and Doyle discuss protection against familiar variations alongside vulnerability to different disruptions. Their models and stronger general interpretation remain attributed. We do not claim that every complex system must collapse from a small cause. A narrower reading question suffices: which conditions belong to the stated capacity to preserve a property? “Everything is robust” conceals that work and makes the boundary of actual checking unclear. The property and disturbance class need to accompany the assertion if its strength is to be assessed.

Maxwell also identifies a particular device’s limitation involving friction and normal speed. The grounds differ in period and model, yet both invite us to preserve operating conditions beside results. Past success does not automatically demonstrate future success under every change. This is our limited interpretation of the comparison, rather than a prediction of equipment failure. No independent mechanism test or present reliability assessment of aircraft in the historical examples was conducted. We discuss a claim’s structure, instead of using old statistics as a current safety guarantee. The date and original purpose remain part of the source.

In an original example, joint work may depend on one participant’s availability. A steady timetable during ordinary workload says nothing by itself about a week without them. Constant anxiety or duplicating everything need not follow. A known condition can simply be identified and another acceptable arrangement discussed beforehand. Participation and workload limits remain voluntary. The example confirms no universal effectiveness of backup arrangements. It shows how a clear condition helps avoid demanding permanent availability from someone because a familiar scheme previously looked simple enough. What the arrangement relies upon is separate from what its users owe.

Limits can be recorded without claiming a list of every future event. There are anticipated conditions, changes already encountered, and what remains unknown. Mixing these enlarges a promise beyond knowledge. We propose no guessing of every rare threat. If a new condition substantially changes the question, another ground can be acknowledged as necessary. This reading result is narrower than a universal theory of protection, but more substantial than the general word “fragility.” It permits discussion of a specific property and range while retaining later observation and revision of the chosen way of working together.

VIII. A human reply is no governor component

People can discuss purposes, decline participation, and propose another question. This distinguishes our social example from the mechanical device. Nobody owes a required reaction to preserve an attractive diagram. Agreement concerns a specific arrangement and may need revision. We derive this ethical position from no engineering equation; it is our own condition for applying the comparison. Otherwise, feedback language can justify control never agreed, while disagreement is mistakenly called a person’s defect or developmental failure. A process description cannot settle whether that influence is acceptable to its participants, even when the pathway can be drawn clearly.

One person can assess a result while another decides how to respond. These roles do not always include authority to set a common purpose. In voluntary conversation, clarify whether correction, discussion, or simply being heard is expected. A reply can be useful even when the previous version stays unchanged; the conversation’s task then needs honest identification. We treat lack of change as no necessary failure of a relationship. Feedback as a pathway description differs from a comment as communication. Preserving that difference helps avoid forcing several possible conversational purposes into a single operational interpretation.

Imagine someone declining an extra meeting. The format can be changed or available options clarified while retaining the refusal. Requiring further explanations does not necessarily improve the decision; it may transfer more work to that person. This original example tests nobody’s motives and offers no psychological diagnosis. It preserves the boundary of participation. An arrangement may change because people agreed differently. Respecting that change is unlike automatically tuning a system towards an organiser’s predetermined outcome at any cost. The person’s response is part of negotiation, rather than an error whose removal the diagram has already authorised.

Social application therefore needs more careful language than a mechanism’s description. Instead of promising to make a process work, name the discussed purpose, information, and available next step. Why someone replied as they did can remain unknown. Personal responsibility can be separated from another’s decisions. This preserves joint work’s actual scale rather than abolishing it. In this article it is an author’s proposal, not a demonstrated therapeutic technology or universal organisational rule. Its purpose is to make agreement and authority limits visible where a simple circular diagram does not show them. The comparison remains useful within that boundary.

IX. A map open to revision

Careful feedback reading ends with a clear limited description: parts, sequence, selected property, and the grounds for a transition. Timing, unknowns, and participation conditions are named separately. A full model of the world or final verdict on a project is unnecessary. Clarifying one transition is already a concrete result. It need not become a promise that every action will now produce the desired outcome. A map helps frame the next question while remaining capable of error and revision when information or an agreed purpose changes. Its usefulness includes the limits it makes possible to notice.

An original word may also prove too broad. There is evaluation without changed process, a circuit whose outcome remains unstudied, or local correction within an unknown whole. These distinctions do not devalue discussion; they sharpen its conclusion. The primary texts support this discipline while retaining their own purposes and limitations. We do not declare historical mechanics, formal cybernetics, and contemporary engineering theory one completed account of human life because interaction appears in each. A comparison can preserve differences in method and scope while identifying a specific question shared across them. Shared vocabulary alone does not accomplish this work.

Revising a map need not mean greater control. Narrowing a question, changing how information is obtained, or admitting a ground’s limit may suffice. For a voluntary task, one small next step can be agreed while its untested status remains explicit. This is an original proposal, rather than an exercise trial’s result. It is intended for no equipment adjustment, treatment, or future prediction. Curiosity about systems can coexist with responsibility for application’s scale. Nobody needs to expose themselves or others to risk in order to confirm an appealing diagram in practice. Reading can end before a new intervention begins.

Feedback thus describes one connection between successive actions: a result helps form the next step’s conditions. Its usefulness depends on purpose, pathway, and boundaries. These questions remain specific to a situation and are not replaced by one sign on a diagram. We can study a model attentively without requiring it to explain everything. Comparison offers clarity without promising full control. Its modest outcome is the ability to name an action and its limit more precisely, while leaving people their own responses and another way of participating. The map serves that understanding rather than deciding for its participants.

What this means in practice

Use an open description of a small voluntary task, without hazardous equipment or others’ personal data. Name one discussed property, such as a timetable’s clarity. Separate observation from the desired result. If participants have not agreed the purpose, record that rather than present your own indicator as shared. One question and existing information suffice for the first reading.

Trace the sequence: action, available result, receipt of a message, next step. Give each arrow a ground or mark it “not yet known.” A received comment is not necessarily used. Separately record which state a reply concerns and when the action changed. This is a reading map, rather than proof of every change’s cause.

Ask which deviation is reduced and what else might change. Do not call reinforcement bad without discussing purpose, or correction useful without observing the result. Check whether claimed robustness concerns the conditions actually considered. Adjust no equipment through this article and establish no test on people without their agreement. A diagram offers questions, not technical permission.

End with one limited statement: what was traced, which transition remains unestablished, and which next step was voluntarily chosen. Refusal remains acceptable; personal motives need no guessing. The exercise promises neither therapeutic effectiveness, ideal control, nor future success. Its result is a clearer question that can be reconsidered while preserving what is known and honestly naming what is not.

Key quotation

> *This is the condition of stability of the motion.*

James Clerk Maxwell, On Governors, 1868, Jenkin’s governor section, after equation 14. A complete sentence whose “this” refers to the preceding condition for that mechanical model, rather than a universal rule of life.

Connections between traditions

Two grounds and locators	Substantive connection	Boundary
Maxwell, opening and moderators / governors; Ashby, 4/11	Distinguish a circular effect from a single message.	A pathway’s presence establishes no usefulness.
Maxwell, four disturbances and increased governing power; Ashby, end of 4/11	Stronger action requires analysis of the whole dynamics.	No mechanical condition for personality or every community.
Maxwell, normal velocity and working limits; Carlson and Doyle, robustness definition, page 2539	Identify the preserved property and variation class.	No protection from everything or single purpose for everyone.
Maxwell, condition 14 and oscillations; Ashby, 5/1–5/6	Distinguish equilibrium from a response to displacement.	Model reading, not independent device adjustment.
Ashby, 4/10 and 4/12; Carlson and Doyle, specific connections and barriers, pages 2539, 2545	A list of parts does not replace effect structure.	A drawn arrow establishes no cause.
Maxwell, Jenkin friction limitation; Carlson and Doyle, HOT fragility, page 2542	Preserve operating conditions beside successful results.	No guaranteed future success or automatic failure prediction.

Primary sources

1. James Clerk Maxwell, On Governors. Proceedings of the Royal Society of London 16, 270–283, 1868; English original, identified transcription of No. 100. Selected opening, moderators / governors distinction, and complete selected Jenkin section with equations 1–16 read; additionally the selected transition towards general theory. Neither the whole paper nor independent reproduction of its calculation claimed. Small disturbances and working limits retained. Key sentence after condition 14 checked; Russian translation is our own.

2. W. Ross Ashby, An Introduction to Cybernetics. Chapman & Hall: first published in 1956, actual second-impression title of 1957; Principia Cybernetica electronic preparation of 1999. Complete selected 4/9–4/12, printed pages 52–58, and 5/1–5/6 through the beginning of page 78 read, with title and selected preface. No whole-book claim; exercises read without claiming all solved. A formal connection model, not a contemporary empirical trial or treatment. Epigraph: complete sentence in 4/11; Russian translation is our own.

3. J. M. Carlson, John Doyle, Complexity and robustness. PNAS 99, Suppl. 1, 2538–2545, 19 February 2002; DOI 10.1073/pnas.012582499, English original. Definition, examples, Table 1, selected lattice models and optimisation, selected resource-model comparison, and complete Discussion read. Gaps in intermediate derivations are not represented as complete-paper reading; models and original data were not independently reproduced. Strong general HOT claims belong to the authors, with limits and the more speculative forest-fire inference retained; historical descriptions are not present reliability statistics.

Tags

United Wisdom, feedback, causation, sequence, dynamic system, governor, Maxwell, Ashby, Carlson, Doyle, cybernetics, mechanics, stability, disturbance, oscillation, gain, working limits, connection structure, purpose, indicator, time, information, agreement, responsibility, model, interpretation, complex whole, careful reading, joint work

About the authors

Andrey Zarinsh is the author and founder of United Wisdom. He explores inner transformation, the unity of traditions, intercultural dialogue, and contemporary spiritual discipline. Instagram: @andrey.zarinsh.

Maria Evilkut is a co-author of United Wisdom. Alongside her research, she seeks to test these ideas in practice and observe how principles of unity and mutual understanding work in real life between people and cultures. Instagram: @ilkutki.