

UNITED WISDOM

Animal consciousness: how to investigate another creature's experience

World and Consciousness

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Epigraph

> *A difference may be clearly perceived, and yet it may be impossible, at least I have found it so, to state in what the difference consists.*

Charles Darwin, *The Expression of the Emotions in Man and Animals*, Introduction; D. Appleton English edition, 1899. A complete sentence about the difficulty of describing an observed expression, rather than a claim that all knowledge of animals is inaccessible.

What this article is about

An animal stops at a door, changes direction, chooses a place or responds to a familiar signal. We see an action and almost immediately suggest an explanation: it was frightened, remembered something or became interested. Sometimes that explanation is reasonable; sometimes our confidence extends far beyond the observation. How can we investigate the experience of a creature that cannot describe it in human words? This article distinguishes behaviour, the conditions under which it occurs, and grounds for attributing subjective experience. Thomas Nagel's philosophical question, Darwin's caution about observation and an experiment by Andreas Nieder and colleagues help establish a sequence of checks. They provide no home test for consciousness or promise to read an animal's thoughts. They can help us read scientific reports more accurately, consider alternatives and treat uncertainty as neither proof of absence nor permission to invent any human state we please.

I. An action becomes visible before its meaning is known

Imagine an ordinary episode: a dog approaches a closed door, looks towards a person and returns to its mat. This gives us a sequence of accessible observations. Saying that the dog felt offended adds a story that the sequence does not yet contain. Expecting a walk, responding habitually to the absence of movement, attending to a sound, or some other explanation might fit. Having alternatives does not turn the animal into an empty mechanism. It means that this particular episode does not select between several accounts. For investigation, we can preserve the action first and name its proposed meaning separately.

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The distinction can seem minor until we compare records. A note saying that an animal approached the door three times after the same signal can be compared with another day. Saying that it behaved sadly requires us to explain what counted as sadness and why. The first description is incomplete too: it cannot convey the whole relationship with a living creature. Its purpose is narrower, allowing another observer to understand which event is being discussed. Affection and precise description can coexist. Accuracy does not require abandoning care or ignoring familiar patterns in an animal's behaviour.

In his Introduction, Darwin draws attention to the observer's own expectations. A powerful impression can lead us to notice the expression we anticipate before we can describe the movement. The useful question therefore concerns both the animal and the person beside it: what was observed before an emotion was named, and what became apparent after a suggestion? We can bring this historical caution into our own records without adopting all Darwin's physiological explanations. In particular, his discussion of inherited acquired habits is not being offered here as a contemporary biological theory.

Every account has a level of detail adequate to its purpose. A familiar signal may be enough to decide whether to open the door. Claiming that an animal experiences a particular state needs further grounds. Trouble begins when adequacy for one decision quietly becomes adequacy for another. We interact successfully with a dog and assume that we have already explained its inner experience. Yet successful interaction primarily indicates that our chosen response suited the situation. It does not establish that our explanation is complete, or that every part of the story we attached to that response has been confirmed.

II. Another creature's experience is different from our imagined transformation

In his 1974 essay, “What Is It Like to Be a Bat?”, Thomas Nagel distinguishes knowledge about an organism's workings from the character of experience for that organism. We can imagine wings, night flight and living in a shelter. Such imagining changes the circumstances of human experience; it does not turn us into a bat. The resulting difficulty cannot be removed by making a scene more vivid. Imaginative detail is not direct evidence of how another creature's experience works, especially when its way of finding its bearings differs from ours.

This difficulty does not imply that we can learn nothing about animals. Nagel allows general attributions of experience and partial understanding of another point of view. The limit concerns the claim to convey its character completely. That matters when reading science news: a claim about an indicator of perception may have strong support while the feeling from within remains inaccessible. Lacking a complete description and lacking any grounds are

different states of knowledge. Confusing them either discounts research or gives it a force that its authors have not themselves claimed for it.

Comparison with an animal should therefore begin with a question about which differences matter to it in this task, rather than what I would feel in its place. An object that seems the same to us may enter a different system of signals and actions. This is no licence to invent unknown abilities; the relevant features of the species and protocol need to be established. But the direction of inquiry changes. A situation's human intelligibility ceases to be the sole measure of its significance for the creature under observation, and an unfamiliar response does not automatically count as an absence of experience.

Imagination can still help in an everyday relationship. It encourages us to pause and consider a possibility we previously ignored. Its role here is to open a question, rather than close it with a ready answer. We might think that these surroundings could be unpleasant for the animal and decide to find out more. The vividness of that thought is not itself a check. This distinction preserves concern without claiming another creature's perspective as our own. Care gains a direction, and inquiry gains a question that still needs to connect with observations, conditions and possible explanations.

III. A useful task tests differences between explanations

Suppose an animal always performs one action after a light signal. The observation may establish a stable connection. It does not yet separate perception, a learned sequence and preparation for movement. To compare explanations, conditions must change so that the explanations predict different outcomes. This is the general purpose of a controlled task: it makes alternatives answerable to a particular observation. Calling something an experiment adds little by itself. If all our accounts explain every possible outcome equally well, no outcome helps us decide between them, however striking the animal's behaviour may appear.

In a paper published in *Science* in 2020, Nieder, Lysann Wagener and Paul Rinnert studied two crows performing a visual task. A faint stimulus was presented around the detection threshold; some trials contained no stimulus. Following a delay, a rule connected the report to an action. This sequence helped reduce confusion between reporting a stimulus and preparing a movement in advance. The team recorded neurons in the NCL region. They investigated the relation between presentation conditions, the later report and neural activity within a specified protocol, rather than obtaining a human description of an animal's sensation.

The central logic is understandable without becoming a specialist. If the same physical situation sometimes accompanies one report and sometimes another, researchers can ask whether a measured signal relates to the presentation or to the later report. Separating these circumstances more clearly makes the result more informative. The comparison conditions do

the work. A measurement does not become an indicator of consciousness merely because it comes from a brain. We need to understand which explanation it supports more strongly and which alternatives remain possible after the comparison has been made.

Observation at home does not reproduce this experiment. We lack the described equipment, controlled presentation and corresponding analysis. The paper supplies no instructions for checking a pet's consciousness with light signals. Its design does, however, teach us how to read a research claim: establish what varied, what stayed the same, which response served as an indicator, and why. That is more useful than memorising an impressive brain-region name. The name identifies where a signal was recorded. Evidential strength comes from the connection between that recording, the question and the comparison, rather than the complexity of the terminology.

IV. A neural indicator strengthens the argument while retaining a limit

In the study, later activity related more closely to the crow's subsequent report than to stimulus intensity alone. The analysis included failure to report a present stimulus and reports of a stimulus that was not presented. The authors called their finding an empirical marker of avian sensory consciousness. This is a substantive claim by a particular study. Replacing it with either complete certainty or complete ignorance erases the distinction between the result obtained and the wider question of the animal's experience. Neither slogan accurately preserves what the experiment adds to our understanding.

At this point we need discipline about scale. Recording many neurons does not mean studying an equal number of animals. Findings from two crows cannot, without additional justification, extend to every species, sensory task and state. Nor do they establish how the perception feels from within. When reading an account, check whether its subject has changed: a statement about particular trials and birds can unexpectedly become a statement about all animal life. That extension may be an interesting hypothesis, but it requires grounds of its own, beyond those used to support the initial finding.

Nagel's relation to this experiment concerns clarification of a boundary, rather than a prohibition on measurement. The philosophical question shows why predicting a report does not fully convey the quality of an experience. The experiment shows why this boundary does not cancel the possibility of comparing reports and signals. We can hold both thoughts together. We gain grounds for some claims about perception without having another creature's experience as our own. Different perspectives do not amount to a general verdict against scientific inquiry, and they do not disappear because one recording proves informative.

This distinction can guide discussion of a new paper. First reproduce its narrow claim, then identify the extension proposed by an account of it. Finding an indicator in a particular protocol differs from now knowing everything about bird consciousness. When no argument connects the two, the strengthening remains rhetorical. Checking that connection does not require taking a side in advance. It simply restores each statement's subject, conditions and degree of confidence. A reader can then assess the evidence being offered, instead of reacting only to the force of the conclusion attached to it.

V. Reporting a perception and perceiving may be different tasks

When someone says they noticed a light, we learn about perception through the act of reporting it. An animal's report can likewise take the form of a trained response. Researchers must ask what processes that response requires in addition to the proposed experience: retaining information, choosing an action and following a rule. A more complex task may involve more such components. That does not make the result pointless. It means that we should avoid assigning every difference to one desired process when the protocol also demands several other actions and forms of information processing.

Nieder and colleagues themselves note the debate over phenomenal consciousness and access for reporting. They propose combining protocols that require reports with protocols that do not, to distinguish the generation, maintenance and reporting of experience more clearly. The proposal's status matters: it identifies a further check rather than an already accomplished removal of every difficulty. A scientific paper can be especially valuable where its authors name an alternative that remains. This does not spoil the result. It indicates what additional work would be needed to support a stronger statement.

Imagine a reader seeing the phrase “consciousness signal” in a news report while skipping the response procedure. That reader does not know what was actually measured or how the animal reported an event. Another reader studies the protocol carefully but takes any report as an automatic guarantee of experience. Both lose a link in the reasoning. It helps to ask what function the report serves in the study and why the authors connect it with the state under investigation. The question leaves room to agree, qualify the conclusion, or acknowledge that further understanding is needed.

In a personal record, a similar mistake occurs when the absence of an expected response becomes the absence of an entire state. An animal did not perform a familiar gesture; that is a fact about its response. We may not know whether the necessary condition was available, whether the signal was clear, or whether the action suited this episode. We should not invent an explanation for every failure to protect a favoured hypothesis. Equally, one instance of silence cannot warrant the widest possible conclusion. A grounded record retains a negative result with its conditions and states separately what conclusions it allows.

VI. Similarity suggests questions; difference helps shape a test

It is easier to notice the experience of a creature whose face, movements and habits seem familiar. Yet familiarity does not itself define the boundary of possible experience. It also reflects the observer's capacities. Comparing a bird with a human makes this especially clear: human speech is absent, yet a visual task still permits an organised report and neural recording. A difference in species requires a different investigative approach. It warrants neither automatic equivalence with humans in every respect nor exclusion from the question simply because a familiar expression is missing.

Darwin connects similarities of expression in related species with common ancestry. Nieder and colleagues discuss several possible evolutionary explanations of their findings, including common inheritance and independent emergence of similar capacities. These are different levels of reasoning. An account of origins may suggest where to seek similarities, but one experiment does not select a single history of consciousness. A proposed common ancestor's date must therefore not become an established birthday of experience. The scenario remains conditional until grounds emerge that can distinguish it from competing explanations of how the relevant capacity arose.

Readers have a double responsibility here: avoid demanding human forms of response from another species, and avoid treating every difference as evidence of mysterious inner richness. In both cases, a convenient image speaks for the animal. A more useful question asks which property matters to the task and how it can be investigated within this creature's organisation. When such knowledge is missing, the answer can remain open. Openness means identifying what is unknown. It does not mean filling that space with arbitrary details that cannot be distinguished from our own imaginative contribution.

Similarity and difference thus work together. Similarity suggests a comparison; difference limits the transfer. We can discuss a familiar pet without turning it into a small human or reducing it to a collection of outward reactions. A stable choice, for instance, can help us formulate a question about preference. But preference need not carry an entire human story about taste, memory and value. Naming the property more precisely reduces the excess we transfer alongside it and clarifies the next substantive question. This is a way of learning more while assuming less about the animal's complete inner life.

VII. An independent check begins with permission to disagree

Darwin's Introduction includes a simple methodological episode: people were shown photographs of expressions without being told which emotion was intended. Some assessments agreed and others differed. What matters is not agreement alone, but removal of a suggestion that could have directed the gaze in advance. We can see a general checking principle here: another observer must have room to describe the event differently. When an image arrives with its intended conclusion attached, agreement becomes harder to separate from accepting that frame and therefore tells us less about the observed feature itself.

Independence works differently in the crow study: reports are compared at identical stimulus intensities, and the analysis sets data against particular alternatives. This is not the same technique or a repetition of Darwin's procedure. The shared mechanism is separating a desired explanation from a circumstance that could create an appearance of confirmation. In one case that circumstance is a caption; in the other it concerns the physical stimulus or preparation for reporting. A similar principle does not erase differences in technique, precision, subject matter and the conclusion that each procedure can support.

In everyday discussion, independence can start with a small change in language. Instead of directing someone's attention to an animal's supposed jealousy, invite a description without the label. If descriptions differ, there is no need to turn the exchange into a competition over affection. One person may have noticed a movement the other missed; they may also be using different words. Disagreement helps refine the record. Two matching opinions can still rely on the same familiar story, however. Agreement clarifies an account only insofar as the conditions and grounds behind the observers' descriptions are understood.

A genuine check requires allowing, in advance, an outcome that would change our view. If every response confirms experience and its absence confirms hidden experience, the explanation ceases to be testable. Demanding one universal sign creates another trap: the animal must perform exactly the task convenient for a human. Between these extremes lies comparison of specific alternatives. We ask what outcome might weaken this conclusion without turning the answer into a general judgment on the whole species. Confidence becomes movable without becoming arbitrary: it changes for a stated reason that another person can examine.

VIII. Uncertainty about a conclusion does not remove responsibility for action

Imagine an animal moving away from a noisy place while a person is unsure whether this reflects fear, irritation or another response. Allowing it to move away does not require first identifying the precise quality of its experience. That opportunity answers an observed action and leaves room for choice. This is the article author's practical reasoning, rather than a laboratory finding about care at home. It distinguishes a scientific claim about a state from a decision made without the widest claim. Sometimes it is enough to avoid imposing an additional disturbance without a reason.

Precaution does not turn into a diagnosis. If someone stops keeping an animal close to noise, that does not prove their earlier explanation correct. Conversely, lacking conclusive evidence does not make every method of checking reasonable. Provoking fright, removing familiar access or creating an unpleasant situation for an amateur test is a poor way to fill a knowledge gap. It adds interference without providing the required clarity. Observation at home has a limited purpose here: describe an existing interaction more accurately, rather than create a domestic experiment on sensory consciousness.

It helps to identify the decision that actually depends on the disputed conclusion. Discussing a philosophical problem may require separating concepts. Reading a study requires checking its protocol and the limits of generalisation. Everyday interaction may require noticing a response and choosing an action that permits further clarification. One yes-or-no answer about consciousness cannot settle all these tasks. A sweeping slogan can easily hide the actual situation. Returning to the decision reveals how much knowledge is needed now and what can remain uncertain without abandoning responsibility for the action we take.

Care for an animal should not depend on how eloquently a person can describe its feelings. A well-told story may accompany attentiveness, but it is not its only basis. Sometimes a modest, precise record is more useful than a confident emotional account: it helps identify a change and convey it to someone with relevant knowledge. Where health or care is in question, this article cannot replace the appropriate professional assessment. Its purpose is to improve the observation and the question, rather than provide a universal answer for every state an animal might be in.

IX. Build conclusions in steps that can be reconsidered

Investigating another creature's experience can be approached as a sequence of questions. What happened? Under which conditions? What explanations fit? Which comparison distinguishes those explanations? How does the result relate to experience? Where does legitimate transfer end? Each question has its own work to do. Skipping the first questions to answer the last leaves confidence resting largely on an impression. Stopping at a list of movements wastes the chance to investigate their significance. The sequence connects description with explanation while leaving room to check every transition between them.

Confidence need not be equal at every step. We may know precisely which stimulus was presented, establish a strong connection between a signal and a report, and speak more cautiously about the character of experience. That is not inconsistency. Different claims have different grounds. The key is to avoid transferring confidence from the strongest link to the entire chain. A dispute then stops looking like a choice between complete knowledge and complete ignorance. It becomes discussion of a particular transition, for which some grounds already exist and others are still required.

The three approaches meet at this point. Darwin reminds us of the observer's expectations; Nagel preserves the difference between perspectives; Nieder and colleagues show how to create a meaningful comparison within a limited task. They do not form a single theory or express the same message in different words. Comparing them gives us a more precise way of handling conclusions. Observation is not treated as direct mind-reading. Limits on perspective do not prohibit science. A scientific marker retains its significance alongside the questions that remain after it has been detected.

We can consequently keep two statements together: there are grounds for this conclusion, and it does not describe the entirety of another creature's experience. The first protects research from dismissal; the second protects the animal and the observer from an overly convenient story. Practical maturity involves refining both statements as information arrives. We do not gain possession of another point of view. We can choose better questions, attend more carefully to actions, and explain more honestly which account we accept, what supports it, and what might lead us to reconsider it.

What this means in practice

Choose an existing, calm episode of interaction with an animal. Do not provoke or alter anything for the sake of testing. Record the available sequence of actions: where the animal was, what immediately preceded a change, and which movement or choice followed. On a separate line, name the first explanation that came to mind. This preserves your impression without confusing it with what can be shown to someone else. If a detail is uncertain, say so. Filling it with a guess does not improve the observation, even when the result looks more precise.

Name one further explanation of the episode and a difference that would help choose between them. There is no need to devise an artificial test or expect one observation to settle consciousness. Notice ordinary circumstances that recur on their own: timing, access to a place or a familiar signal. When conditions differ, do not call the episodes identical simply because the final action looks similar. The aim is to understand which information your account is missing, rather than obtain the response you want from the animal.

When reading a science story, write down the authors' narrow claim and the headline's wider claim. Identify the subject, task and measurement for the first, then ask whether the move to the second is explained. In the crow example, a neural marker in a visual task, the qualitative character of experience and generalisation to other species are distinct. If the necessary conditions are absent from the story, a reasonable reading outcome is to consult the source or leave the question open. Missing detail requires neither instant certainty nor instant dismissal of the research.

Finally, identify an immediate action available without the disputed extension. You might allow the animal space, describe its response more carefully, or convey an observation to a professional concerning a specific care question. Afterwards, do not rewrite the original record as though its explanation had been confirmed. Add only the new observation and any change in confidence. This practice does not measure consciousness and has no claimed therapeutic effect. It helps keep facts, explanations and decisions distinct, so participation in another creature's life does not require pretending to know everything about it.

Key quotation

> *Our finding thus constitutes an empirical marker of avian sensory consciousness.*

Andreas Nieder, Lysann Wagener and Paul Rinnert, “A neural correlate of sensory consciousness in a corvid bird”, *Science* 369, 2020, p. 1628, Discussion. Complete sentence in the original English. The following sentences distinguish the marker from access to the

qualitative character of another creature's experience and discuss the relation between experience and reporting.

Connections between traditions

Source and precise location A	Source and precise location B	What the comparison clarifies	Limit of the comparison
Nagel, 1974, p. 436: subjective character	Nieder and colleagues, 2020, p. 1628: empirical marker	Evidence about a report can support a limited conclusion without conveying a sensation's quality.	A philosophical distinction is not a laboratory result.
Darwin, Introduction: imagination paragraph	Nagel, pp. 438–439: imagining oneself as a bat	Imagination opens a question while potentially adding unsupported content.	Observational error and different perspectives have different grounds.
Darwin, Chapter I: “Reflex actions”	Nieder and colleagues, p. 1626, Fig. 1A: delayed rule	Movement should be separated from what it warrants about perception.	Darwin's historical physiology is not inserted into the modern protocol.
Darwin, Introduction: photographs without explanation	Nieder and colleagues, pp. 1627–1628: identical-stimulus comparisons	A check reduces a circumstance that could create apparent confirmation.	These controls differ in procedure and precision.
Nagel, p. 442, note 8: partial understanding	Nieder and colleagues, p. 1629: report and no-report protocols	A boundary of knowledge sets a further substantive question.	Proposing the next experiment does not mean it has been performed.
Darwin, Introduction: common descent	Nieder and colleagues, p. 1629: evolutionary alternatives	Relatedness suggests comparisons without fixing a single history of consciousness.	Neither ancestry nor convergence is established here as a dated beginning of experience.

Primary sources

1. Thomas Nagel. *What Is It Like to Be a Bat?*, *The Philosophical Review* 83(4), 1974, pp. 435–450. Pages 436 and 438–442, including note 8, were read for this article; the unclear page 437 and remaining pages are not its grounding. The adopted arguments concern perspective, general attribution and partial understanding.

2. Andreas Nieder, Lysann Wagener and Paul Rinnert. *A neural correlate of sensory consciousness in a corvid bird*, *Science* 369(6511), 25 September 2020, pp. 1626–1629, DOI 10.1126/science.abb1447. The complete main report, including methods, results, discussion and Fig. 1–4 captions, was read; supplementary materials and raw data were not checked. The marker does not disclose experience's qualitative character or provide a universal animal test.

3. Charles Darwin. *The Expression of the Emotions in Man and Animals*, D. Appleton, New York, 1899, English text in Project Gutenberg 1227. Reading covered the Introduction from similarities of expression through observation methods, and Chapter I passages on three principles and reflexes. Methodological caution is adopted; historical physiology is not treated as contemporary biology. Russian quotations are United Wisdom translations of the English texts read.

Tags

consciousness, animals, experience, perception, observation, behaviour, explanation, evidence, checking, experiment, crows, birds, neurons, Nieder, Wagener, Rinnert, Nagel, Darwin, perspective, imagination, comparison, uncertainty, reporting, marker, attention, care, limits of knowledge, evolution, choice, responsibility

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