



## **PART 3**

**Read the text below and answer questions 27–40.**

### **THE MIRROR TEST AND THE QUESTION OF SELF-AWARENESS**

**A**

In 1970, the psychologist Gordon Gallup Jr. proposed what would become one of the most cited procedures in cognitive ethology: the mirror mark test. An animal is unobtrusively marked with a visible spot on a part of the body that cannot be inspected directly, and is then given access to a mirror. If it uses the mirror to guide its own movements toward the mark—touching, rubbing, or otherwise investigating that location—researchers have often interpreted this as evidence of self-recognition. The test gained cultural prominence because it appeared to translate an elusive philosophical issue into an operational criterion. Yet its epistemological utility depends on what, precisely, is being inferred. A mark-directed response might indicate that the mirror image is treated as “me”, but it might also reflect a more limited competence: the ability to use a reflective surface as a tool for body inspection. From the outset, therefore, the mirror test has functioned not as a final verdict but as a provocation, forcing scientists to specify what kind of “self” they are claiming to detect.

**B**

Supporters of the method argue that success requires a distinctive cognitive achievement: the mapping of visual information from a mirror onto one’s own body schema. In primates, especially chimpanzees and orangutans, repeated mark-directed behaviour has been reported under carefully controlled conditions, and similar interpretations have been offered for certain dolphins and elephants. However, even within these taxa, performance varies across individuals, ages, and laboratories, suggesting that mirror competence is neither automatic nor uniform. A failure, moreover, does not necessarily entail an absence of self-related cognition; it may indicate that the animal does not attend to the mark, does not find the mirror salient, or does not express interest in that particular kind of bodily irregularity. In other words, the test samples a narrow behavioural pathway to a conclusion about selfhood, and the pathway can be blocked for reasons unrelated to the presence or absence of a self-concept.

**C**

The strongest methodological criticism concerns anthropocentric bias. The classical mirror test is intensely visual and assumes that a conspicuous mark is an intrinsically motivating stimulus. Yet for many animals, vision is secondary to other sensory modalities. Canids, for example, construct social worlds through olfaction; for them, self-related



information may be more richly encoded in odour than in appearance. This has motivated proposals for an “olfactory mirror”, in which animals are presented with altered scent samples—variations of their own odour or mixtures that contain a novel component—and researchers examine whether investigation patterns change in ways consistent with self-recognition. Such approaches do not merely substitute smell for sight; they challenge the idea that self-awareness must be expressed through the same perceptual channels that humans privilege. They also foreground proprioception and multisensory integration: an animal’s sense of “self” may be distributed across bodily cues rather than concentrated in visual reflection.

#### D

A second family of objections targets motivation and context. Even a cognitively capable animal may not be sufficiently motivated to respond to a superficial mark, especially if the mark is neither painful nor socially meaningful. Conversely, mirrors can be threatening: some social species treat the reflection as a rival, and timid individuals may avoid mirrors altogether. Small changes in procedure—mirror placement, exposure time, prior habituation, or the type of mark—can therefore shift outcomes substantially. From an experimental standpoint, this is troubling: a measure that is highly sensitive to context risks conflating cognition with temperament, stress reactivity, or the animal’s prior experiences with reflective surfaces. Welfare variables also matter. If a captive environment elevates stress, measured indirectly through cortisol levels and behavioural agitation, the animal’s engagement with a mirror may reflect coping strategies rather than curiosity about the self.

#### E

These critiques lead to a deeper conceptual dispute about what “passing” means. Some researchers treat mirror self-recognition as evidence for a self-concept, implying that the animal represents itself as an individual distinct from others. Others argue that the inference is overstated: success may demonstrate only instrumental problem-solving with a mirror. Under this narrower interpretation, the animal learns that movements in one domain correspond to changes in another, and it exploits that regularity to inspect its body. This competence is impressive, but it is not obviously equivalent to the rich, reflective inner life humans associate with self-awareness. The debate therefore reflects a broader tension in comparative psychology: whether complex behaviour should be explained through minimal mechanisms until further evidence compels richer claims, or whether certain behavioural signatures legitimately license stronger interpretations.

#### F

Cross-species results complicate the argument further, especially when apparent success



appears outside expected taxonomic boundaries. Reports of mark-directed behaviour in some birds, such as magpies, have been invoked as evidence of convergent evolution: similar cognitive outcomes arising from different neural architectures. Yet replication has been difficult, and small methodological differences can reverse the effect. This instability illustrates the danger of stretching a single paradigm into a universal hierarchy of minds. If success depends on subtle procedural details, then passing may reflect compatibility between a species' perceptual priorities and the test's design rather than an underlying psychological essence. The mirror test, in this light, becomes an index of how well a laboratory task aligns with a species' natural capacities, not a final map of consciousness.

G

For these reasons, many researchers now treat self-awareness as a cluster of capacities rather than an all-or-nothing trait. They examine metacognition (monitoring what one knows), perspective-taking, self-other discrimination, and the ability to distinguish one's own actions from external events. Different species may exhibit different combinations, challenging the assumption that selfhood has a single evolutionary pathway. Ethical implications follow, but cautiously. If evidence suggests richer self-related capacities in some animals than previously assumed, then captivity, invasive experimentation, and wildlife management raise more demanding moral questions. However, ethical decisions cannot rest on a single test whose meaning is contested. The most defensible position synthesises multiple lines of evidence and remains sensitive to species differences in perception, motivation, and social ecology.

### Questions 27–31

Complete the summary below. Choose **NO MORE THAN TWO WORDS** from the text for each answer.

#### Interpreting the mirror test

In the mirror mark procedure, an animal is given a visible **27** ..... on a body part it cannot view directly. Using the mirror to guide inspection of the mark may be interpreted as **28** ..... Critics argue the classical test contains **29** ..... because it relies heavily on vision. Results may confuse cognition with an animal's **30** ....., reactions to stress, or earlier experience with mirrors. Researchers also study **31** ....., which involves monitoring what one knows.

### Questions 32–36

Which paragraph contains the following information? Choose the correct letter, **A–G**. **NB** You may use any letter more than once.



**32** The claim that mirror-test failure may arise from lack of interest or salience rather than an absence of self-related cognition.

**33** A proposal to shift the assessment of self-recognition to a non-visual sensory modality.

**34** The suggestion that ethical judgements require converging evidence rather than reliance on one contested measure.

**35** A debate over whether complex behaviour should initially be explained through minimal mechanisms until further evidence supports richer interpretations.

**36** A warning that mirror placement, exposure time, prior habituation, or the type of mark can substantially shift outcomes.

### Questions 37–40

Choose **TRUE** if the statement agrees with the information given in the text, choose **FALSE** if the statement contradicts the information, or choose **NOT GIVEN** if there is no information on this.

**37** The passage states that “olfactory mirror” testing has already replaced visual mirror testing as the dominant standard method worldwide.

**38** The passage suggests that mirror placement and exposure time can influence whether an animal shows mark-directed behaviour.

**39** Stress in captivity may influence how an animal engages with a mirror.

**40** The passage claims that passing the mirror test is sufficient to prove a rich inner experience equivalent to human self-awareness.

### Answer Key

27. spot

28. self-recognition

29. anthropocentric bias

30. temperament

31. metacognition

32. B

33. C

34. G



35. E

36. D

37. NOT GIVEN

38. TRUE

39. TRUE

40. FALSE