behavioral capabilities appear to be attained by both types of organization. Similarly, there is no rigorous evidence-based understanding of the division of labor between pallial (cortex) and nonpallial (basal ganglia) forebrain structures in mammals, despite widespread beliefs about this issue. Both the six-layered mammalian cortex and the nuclear pallial divisions of the avian brain are able to support vocal imitation and other complex cognitive behaviors once thought unique to humans.

Given that coordination occurs at the levels of neurons, circuits, and behavior within and among organisms across the whole animal kingdom, it is unlikely that coordination or oscillation as such is limited to particular neural architectures, such as a six-layered cortex. A cortex may turn out to be something to crow about for some as-yet-unidentified behavioral or computational traits, but it certainly does not work to work in isolation. Both broad and focused comparative studies on behavioral similarities and differences will be necessary to elucidate first principles underlying such phenomena.

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