

## READING AND DISCUSSION GUIDE FOR

# *Purpose & Desire*

## What Makes Something “Alive” and Why Modern Darwinism Has Failed to Explain It

by

J. Scott Turner

### PREFACE

1. J. Scott Turner writes, “I have come to believe that there is something presently wrong with how we scientists think about life, its existence, its origins, and its evolution. . . . What’s worse is that being forced to make the choice actually stands in the way of our having a fully coherent theory of life, in all its aspects, most notably its evolution. In other words, this bias is now hindering

scientific progress” (p. xi). How does Turner’s claim here strike you? Do you resonate with it at all? Why or why not?

2. Turner describes a “Faustian bargain” that biology made in the twentieth century (p. xii). According to him, what was that bargain, and what was its impact?
3. When you come to the topics of evolution, design, origin of the universe, etc., where do you land? What do you hope to get out of reading this book?

## CHAPTER 1: THE PONY UNDER THE TREE

1. “Cool reason seems only to lead us into a muddle, leaving the seemingly rational view . . . exposed as more prejudice than truth. To stick with the rational view is in fact to fall back on an article of faith—that even inconclusive reason is better than the emphatic intuition” (p. 6). Before reading this book, had you ever equated the words “prejudice” and “faith” with the rational (or scientific) way of making sense of reality? Why or why not?
2. Why does Turner suggest that we, in fact, don’t have a “coherent theory of evolution” (p. 6)? What does he believe is at stake here?

## CHAPTER 2: BIOLOGY'S SECOND LAW

1. How does Turner define homeostasis? Why does he call his definition of it “subversive” (p. 14)?
2. “‘Why’ questions can be deeply unsettling, for within them lurks subtlety and beauty, and perilous truth” (p. 14). What is it about “subtlety and beauty, and perilous truth” that unsettles us, especially those of us who use the rational (or scientific) way of making sense of reality?

## CHAPTER 3: MANY LITTLE LIVES

1. What is “vitalism,” and why, according to Turner, does it have such a negative reputation in the scientific community today (p. 25)?
2. Turner writes about physician and scientist Théophile de Bordeu, who suggested a metaphor for how we can understand life as “an assemblage of ‘many little lives,’ of organisms as collections of semiautonomous units that, through a process of negotiation and mutual accommodation, produced the coherent organism” (p. 31). Is the metaphor helpful? Why or why not? Is this how you think about “life” from a scientific point of view? Or how you think about “life” from an intuitive point of view, for that matter?

## CHAPTER 4: A CLOCKWORK HOMEOSTASIS

1. Turner writes that some people “think the world is all mechanism,” while others claim that a “broader organizing principle makes it all what it is” (p. 43). Which of these two approaches more closely resembles your own? How did you come to take that approach?
2. For Turner, a difference exists between “the physiologist’s conception of adaptation” and “modern Darwinism’s conception of adaptation” (p. 71). How would you describe this difference? Why does Turner believe that the former can be useful to the latter?

## CHAPTER 5: A MAD DREAM

1. Before reading this chapter, had you ever heard of the “French Evolution” (p. 75)? Who were Lamarck and Cuvier, and why are they significant to Turner’s argument?
2. Turner claims, “Today, we conflate evolutionism with Darwinism rather than Lamarckism or Cuvierism” (p. 97). How did this conflation happen? What is at stake here?

## CHAPTER 6: THE BARRIER THAT WASN'T

1. What is “Weismann’s barrier” (p. 119)? Why wasn’t it so “impenetrable” after all (p. 119)?
2. Turner describes a wedge within modern biology: “the wedge between soft and hard inheritance, between physiological and evolutionary adaptation, between living body and the crystalline purity of gametes, between vital life and its clockwork imitation” (pp. 123–124). According to Turner, why is this wedge such a problem?

## CHAPTER 7: THE REVERSE PINOCCHIO

1. Why does Turner use the story of Pinocchio in this chapter? What is he trying to say here?
2. “Modern Darwinism has worked itself into a . . . closed universe, where all seems right and logical. Yet modern Darwinism is not where it is because its tenets have been objectively proved; the history of evolutionary genetics is a tangled one, with many competing narratives that reconcile adaptation and heredity” (p. 152). Is this how you were taught to view modern Darwinism? If not, how?

## CHAPTER 8: A MULTIPLICITY OF MEMORY

1. According to Turner, what is the distinction between “hereditary memories themselves” and “tokens of hereditary memory” (p. 156)? Why does it matter?
2. “From where we stand now, we can at least begin to see a landscape where those essential attributes of life—purposefulness, striving, desire, intentionality, intelligence—can once again reenchant our understanding of life and of everything about it, including its evolution” (p. 185). What do you make of Turner’s argument so far in this book? How is it challenging your view of Darwinism?

## CHAPTER 9: ONE IS THE FRIENDLIEST NUMBER

1. Turner asks, “What are organisms? What are individuals?” (p. 190). How would you answer these questions? How are these two things related? How are they different?
2. “How did life come to be? The Darwinian idea has no good answer for this. Neither does anyone else, by the way, but that should not stop us from asking whether, in light of our new way of thinking about evolution, driven by purpose and desire, at least a plausible explanation is possible” (p. 223). How does this “new way of thinking about evolution” strike you? How might it

help formulate an answer to the perennial question about the origin of life?

## CHAPTER 10: THE HAND OF WHATEVER

1. “What the hand-of-the-scientist-god paradox really tells us, of course, is that the origin of life remains an unsolved mystery. Perhaps it is unsolved because it is unsolvable—it is certainly not solvable by direct evidence or observation” (p. 227). How do you personally make sense of the origin of life, in light of minimal evidence?
2. What is one new idea that you learned from this chapter about the different theories concerning the origin of life?

## CHAPTER 11: PLATO STREET

1. “We may think Darwin purged Plato from evolution, but it seems the old coot keeps sneaking in through the back door” (p. 281). What is Turner trying to say here about the relationship between science and philosophy?
2. Turner claims that, at root, evolution is “a phenomenon of cognition, of intentionality, of purpose, of desire—of *homeostasis*” (p. 289). Are you convinced? Why or why not?

EPILOGUE:  
EVOLUTION, PURPOSE, AND DESIRE

1. On p. 297, Turner comments on a scene from the film *The Fault in Our Stars*, that “we scientists presume to be the custodians of a superior way of thinking about the universe and everything in it. Yet if that scene is any indication of the broader culture’s opinion of our presumptions, we have lost the argument.” Do you agree with him? Why or why not? Has his book changed your mind on this?

FINAL QUESTION

1. How has this book challenged your own understanding of the nature of evolution and Darwinism—specifically, modern Darwinism? What, if anything, has changed in your mind?