
Is Public School Science Instruction About Design an Unconstitutional Establishment of Religion?

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Meta-analysis

- Time to step back and consider the fundamental questions
 - Historical and intellectual framework
 - Strip away distracting details, personal motives, conspiracy theories, etc.
 - Ask some basic questions about Establishment Clause
 - The *Lemon* test is probably not long for this world
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Why are we arguing about Darwinism?

- Step back in time
 - Argument in ancient Greece among the good pagans
 - Then fast-forward to the birth of modern science
 - Four causes of Aristotle (efficient, material, formal, and final) reduced to two (efficient and material)
 - Ascendency of *mechanism* (efficient and material causes only)
 - Explosive growth and success of mathematical descriptions of natural regularities (“laws of nature”)
 - Galileo, Descartes (failures too), **Newton**
 - Science (*scientia*, wisdom) recast as (1) explanation by mechanism (2) according to extrinsic “laws of nature”
 - Biology resisted *purely* mechanical, law-based explanation
 - Awaiting its Newton
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The (temporary?) triumph of Darwinism

- Darwin's genius: a *fully mechanistic* (almost) theory of origins
 - Insight came from pseudo-science of Malthus
 - "Law" of natural selection a quasi-Newtonian postulate
 - Allows teleology to be reduced to an absolute minimum (proto-telos): each individual's struggle for existence
 - Modern version: "selfish gene"
 - Still teleological: Whitehead quote
 - Result: all the manifest plan, purpose, design in living things *an illusion* resulting from the interaction of two [three] causes: [proto-telos,] "law," and *chance*
 - Important to note: proto-telos is irreducible; so telos, final cause (purpose, plan, design) already in Darwinian biology
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Why we continue to argue about Darwinism

- Unlike all (most) other modern scientific theories, Darwinism *explains away* a powerful intuition of design
 - Compare physics, chemistry: law-based science (includes chance bounded by mathematical rules) = no arguments about “design”
 - In biology, *chance* plays a fundamental causative role, and examples of anti-teleological triumphalism can be multiplied endlessly
 - If evolutionary theory was based on formal (Kass), mathematical (Kauffman), and/or teleological principles (e.g., Conway Morris) we would not be here today
 - Problem for Darwinism/mechanism: the evidence for formal and final causes just won't go away—indeed, things are getting worse
 - Systems biology (complexity, holism, emergentism, etc.) = formal cause
 - Intelligent design = final cause
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Design and the demarcation problem

- General problem: all demarcation efforts—attempts to give “science” precise boundaries—have failed
 - Science doesn’t work at all without many things that are “unscientific”
 - Reliability of sense experience; adequacy of language, logic; prin. of non-contradiction; prin. of identity; uniformitarian assumptions; etc., etc.
 - Design is not a “scientific theory” in the narrow sense, but an initial *inference* from empirical evidence that then becomes part of a meta-theory, helping to generate testable theories and hypotheses
 - Much like Darwinism itself!—*cf.* Popper
 - Properly understood, intelligent design does not violate methodological naturalism (itself an ad hoc, “unscientific” principle)
 - Design *does* violate methodological *mechanism*, but that’s different
 - Question is: what principles or causes are *in nature*?
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Science & Tech High School: TE1

- Honors course in cosmology
 - Two month unit on cosmic fine-tuning and the “anthropic principle”
 - Teacher presents evidence for 30+ physical constants that must be precisely what they are (+/- essentially 0)
 - Or else: universe doesn’t expand properly, stars don’t clump, planets don’t form, carbon doesn’t form, etc. etc. etc.
 - Three explanations possible (all found in scientific literature):
 - Sheer blind luck – teacher can inform students
 - Multiverse hypothesis (cosmic Darwinism) – teacher can inform students
 - Design – *unconstitutional establishment of religion to discuss*
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Athens school board: TE2

- Chairman: an agnostic who has long admired British analytic philosopher Antony Flew
- After Flew's "conversion" (based on fine-tuning and OOL problem), reads Aristotle's *Physics* for first time
- Begins to wonder if there is intelligence *in* nature; at base of (or behind) natural world must be an intelligent cause
- Decides Dover controversy will dramatically increase interest, performance, critical thinking skills of students
- Implements evolution curriculum as follows:
 - Standard neo-Darwinism presented as dominant view; critiqued
 - Structuralism/self-organization (sso), teleological evolution theories presented, critiqued
 - Intelligent design theory presented, critiqued
 - Aristotelian biology (updated w telo evo) presented, critiqued

Central question

- Everyone agrees that living things and their organs *appear to be designed for a purpose*
 - Telos: they exist “for the sake of” something
 - Question: is that appearance *real*?
 - Answers
 - **No** (standard Darwinism)
 - **Yes** (Aristotle, ID, some versions of sso, teleo evo)
 - Can’t say, beyond method (metaphysically modest Darwinism, some versions of self-organization, teleological evo)
 - Maybe (some versions sso, teleo evo)
 - Which answers may be given and explained without violating the Establishment Clause???
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But is it “religion”?

- Design is not “creationism” (hopefully clear by now)
 - “Creationism” takes as a *premise* or starting point some kind of divine revelation, tries to match with scientific info
 - Structure of design argument is *from* empirical evidence *to* an inference or tentative conclusion of intelligent causation
 - Aristotle reaches first cause at *end* of the *Physics*
 - As we’ve seen, highly symmetric with anti-design (Darwinism)
 - Assume, however, that a court finds that design arguments imply some kind of transcendent and/or supernatural cause
 - Does that make teaching design unconstitutional?
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But is it “religion”?...

- NO! Establishment clause is all about sectarian religion (and derivatives thereof, including “LCD” elements of faith)
 - Examples
 - Design is all about *public* arguments based on *public* reasons leading to a *conclusion* with metaphysical implications/content
 - Aristotle’s and Flew’s First Cause, the “god of the philosophers”
 - What does one do with such a god? Worship it? Not clear!
 - Current consensus/majority view in scientific community is not incorporated into the First Amendment
 - Design could be empirically or scientifically wrong, but cannot be *per se* an “establishment” of religion—there is no “religion” (in constitutionally relevant sense) to be *established*!
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