

Overview	Five Questions	A Historical Analogue	A Cartesian Dilemma	Some Closing Remarks
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<p>(Q1) Should “Intelligent Design” (ID) be taught in public school?</p> <p>(Q1.1) Should ID be included in our <i>science</i> curriculum?</p> <ul style="list-style-type: none"> This is meant to imply teaching (ID) <i>as a scientific theory</i>. <p>(Q1.2) Should ID be included in <i>some</i> part of our curriculum?</p> <ul style="list-style-type: none"> Note: the <i>should</i> in the (Q1) questions is intended to be an <i>all things considered should</i>, and not merely a <i>legal should</i>. I will briefly discuss the narrowly <i>legal</i> question at the end. <p>(Q2) What <i>is</i> ID? Is it scientific, theological, epistemological, <i>etc.</i>?</p> <ul style="list-style-type: none"> People often get into <i>demarcating</i> science/non-science here. I’ll try to avoid this [I’ll see Q2 through the lens of Q4 & Q5]. <p>(Q3) Are there biological phenomena that current evolutionary theory (ET) does a poor job of predicting &/∨ explaining?</p> <ul style="list-style-type: none"> In other words, are there “gaps” or “anomalies” for (ET)? <p>(Q4) Is there <i>some</i> evidence that <i>favors</i> (ID) <i>over</i> (ET)?</p> <ul style="list-style-type: none"> This requires <i>contrastive confirmation</i> of (ID) <i>vs</i> (ET). <p>(Q5) Given our <i>total</i> evidence, would it be (epistemically) rational for us to <i>reject</i> (ET) in favor of (ID) [<i>i.e.</i>, and to <i>accept</i> (ID)]?</p> <ul style="list-style-type: none"> Silly question? Dembski (sometimes) seems to think “YES”! 				
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<ul style="list-style-type: none"> Consider two competing theories of celestial mechanics: <ul style="list-style-type: none"> (T_1) Newton’s classical theory of celestial mechanics. (T_2) Einstein’s general-relativistic theory of celestial mechanics. In 1900, the following was widely scientifically accepted: <ul style="list-style-type: none"> (E) The perihelion of the orbit of Mercury advances at rate p. Relative to the background (auxiliary) assumptions (A) most widely accepted in 1900, Newton’s theory was unable to predict or explain E. T_1 & A predicts a <i>different value</i> ($\neq p$). This led to concern among scientists. But, it did <i>not</i> lead to <i>rejection</i> of T_1. Nor did it cause any revision of textbooks (or a move toward “intelligent design celestial mechanics”). In 1915, Einstein showed T_2 & A <i>does</i> predict and explain E. This led to a consensus that E <i>favors</i> T_2 <i>over</i> T_1 (given A). But, by itself, E didn’t inspire rejection of T_1 in favor of T_2. Over the next 15 years, all kinds of “gaps” or “anomalies” were discovered for Newton’s theory (and not for Einstein’s). By 1930, almost everyone had rejected T_1 in favor of T_2. 				
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<ol style="list-style-type: none"> E favors T_2 over T_1 (relative to A). At least, this implies that (given A) T_2 confers a greater probability on E than T_1 does. $\Pr(E T_2 \& A) > \Pr(E T_1 \& A)$, NOT $\Pr(T_2 E \& A) > \Pr(T_1 E \& A)$! T_1 is false, but (still) very accurate and explanatory. That is, Newton’s theory is still the theory of choice in various domains of application. [<i>e.g.</i>, NASA & high school classes!] T_2 is more accurate and explanatory than T_1, partly because T_2 explains <i>why</i> T_1 is as accurate as it is, since T_1 can be seen as a <i>limiting special case</i> of T_2 (low-speed/low-energy). It <i>was</i> (in 1930) rational to reject T_1 (in favor of T_2), since: <ol style="list-style-type: none"> There were <i>sufficiently many</i> “gaps” or “anomalies” that T_1 could not adequately predict &/∨ explain (for instance, E). (i) T_2 was more accurate and explanatory than T_1, (ii) T_2 explained why T_1 was as accurate as it had been, and (iii) T_2 did not (yet!) have a significant # of “gaps” or “anomalies.” T_2 is (still) the best theory we have, and so we now “accept” it. But, this “acceptance” is defeasible, and could turn into “rejection” if an even better theory T_3 were to come along. 				
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<ul style="list-style-type: none"> Let’s <i>grant</i> the (ID)-theorist (<i>arguendo</i>) that there exists a true E^* that (ET) cannot adequately explain and/or predict. So? Scientific epistemology is (traditionally) <i>contrastive</i>. We (also) need to know whether E^* <i>favors</i> (ID) <i>over</i> (ET). It may be that (ID) does an <i>even worse</i> job of predicting and/or explaining E^*. Maybe (ET) does <i>best</i> (regarding E^*) among all alternative biological theories currently in play. This is where question (Q2) becomes salient. We need to know <i>what (ID) says</i> about biological phenomena (<i>viz.</i>, E^*). At least <i>to this extent</i>, we need to know what (ID) <i>is</i> (is <i>not</i>). That is, we need to say <i>something</i> about what the “design plan” is, or about the purposes of the “intelligent designer”. Historically, proponents of creationism have been sensitive to this requirement. Paley recognizes the importance of being able to argue that $\Pr(E^* ID \& A^*) > \Pr(E^* ET \& A^*)$. If (ID) is to be an <i>alternative</i> to (ET) [as T_2 is to T_1], it can’t be consistent with (ET). So, (ID) <i>isn’t</i> theistic evolutionism. 				
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<ul style="list-style-type: none"> ● (ID) does seem to entail the existence of <i>some</i> intelligent designer, and one who operates in super-<i>evolutionary</i> ways. ● Is the designer super-<i>natural</i>? Does it matter? There has been a lot of wasted ink on “in principle untestability” here. ● Can we establish $\Pr(E^* ID \& A^*) > \Pr(E^* ET \& A^*)$, where the auxiliary assumptions A^* are acceptable (not blatantly unacceptable) to both sides of the (ID)/(ET) controversy? ● Descartes had some doubts about this (in the theistic case): The function of the various parts of plants and animals makes it appropriate to admire God as their efficient cause — to recognize and glorify the craftsman through examining his works; but we cannot guess from this what purpose God had in creating any given thing. ... in physics, where everything must be backed up by the strongest arguments, such conjectures are futile. We cannot pretend that some of God’s purposes are more out in the open than others; they all are equally hidden in the inscrutable abyss of his wisdom. ● This assumes the designer is <i>God</i>. But, (a) IDers <i>believe</i> that the designer <i>is</i> God, and (b) how would relaxing this <i>help</i>? 				
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<ul style="list-style-type: none"> ● Paley thought he could establish (<i>via</i> “design”) the <i>existence</i> of God, without making assumptions about God’s purposes. ● With God’s existence established, Paley thought he could <i>then</i> show things like $\Pr(E^* ID \& A^*) > \Pr(E^* ET \& A^*)$, where A^* <i>does</i> have implications about God’s purposes. ● I don’t find Paley’s arguments compelling. Any A^* that would serve Paley’s purposes would be called into question by biologists (and Descartes!) as <i>theological speculation</i>. ● It doesn’t much matter, since modern (ID)-ers <i>abandon</i> this approach. Dembski pushes an <i>epistemological</i> approach. ● Dembski argues that the requirement of establishing contrastive confirmation claims should <i>itself</i> be abandoned. ● On Dembski’s account, all one needs to look at (<i>ceteris paribus</i>) is $\Pr(E^* ET \& A')$. If that single likelihood is “low enough,” then (<i>ceteris paribus</i>) one should simply <i>reject</i> (ET). ● Rather than speculating about $\Pr(E^* ID \& A^*)$, Dembski’s “new confirmation theory” looks <i>only</i> at $\Pr(E^* ET \& A')$. 				
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<p>Horn #1. (Paley) Try to show $\Pr(E^* ID \& A^*) > \Pr(E^* ET \& A^*)$. This seems to push us toward <i>theology</i>. The Cartesian worry is that A^* will not be “backed up by the strongest arguments.”</p> <p>Horn #2. (Dembski) Abandon “$\Pr(E^* ID \& A^*) > \Pr(E^* ET \& A^*)$,” in favor of “$\Pr(E^* ET \& A')$ is sufficiently low.” This seems to push us toward <i>epistemology</i> (and some not-so-good PoS).</p> <ul style="list-style-type: none"> ● Some disanalogies between $T_1/T_2/A$ and $ET/ID/A^*/A'$: <ul style="list-style-type: none"> ● A was <i>epistemically neutral</i> with respect to T_1 vs T_2. ● It was <i>uncontroversial</i> that $\Pr(E T_2 \& A) > \Pr(E T_1 \& A)$. ● There were <i>many</i> “gaps” for T_1, and <i>none</i> for T_2 (by 1930). ● T_2 explained why T_1 was as successful as it was. ● In 1900, nobody would have endorsed an “intelligent design celestial mechanics” (or a change in the CM textbooks). In 1915, it would have been dumped in favor of T_2 anyway. ● Newton’s theory (T_1) is <i>still</i> taught in our public schools (<i>as if true</i>), and (T_2) is <i>not</i> — even though T_2 <i>superseded</i> T_1! ● Why should the ET/ID controversy be handled so differently than the T_1/T_2 controversy? Is this a tenable asymmetry? 				
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<ul style="list-style-type: none"> ● The example of Newton and Einstein shows that decisions about inclusion in public school science curricula transcend our demarcation and epistemological questions (Q2)–(Q5). ● Debates about what is or isn’t science or about the nature of the best current science will not settle questions like (Q1). ● I see little reason to include Dembski and Behe alongside Darwin in our current biological science curriculum. But, most of the current debates seem unhelpful on this score. ● Even the contemporary <i>legal</i> debates don’t require settling (Q2)–(Q5). The legal issues have to do with the <i>sociopolitical aims</i> of the people endorsing (ID), and <i>not</i> with (Q2)–(Q5). ● Judge Jones spends a lot of time on questions like (Q2)–(Q5) in his opinion (some not-so-god PoS in there too!). He must think this yields evidence about the ID-ers’ <i>aims</i>. Maybe... ● Anyhow, I’d rather see <i>more philosophy</i> in our curricula (<i>e.g.</i>, critical thinking and logic). This could allow for <i>useful</i> discussions about ET/ID, and other controversial issues. 				
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