The panda thumbs its nose at the dysteleological arguments of the atheist Stephen Jay Gould

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The panda's 'odd' forelimb arrangement has an enlarged wristbone 'digit' commonly called the panda's 'thumb'. Evolutionists have argued that this arrangement is bad design, and so the panda would not have been created but must have evovled. However, their argument is based on five premises, four of which are shown to be false. One false premise is sufficient to destroy an argument. The evidence of design and therefore for a designer is incontrovertible, so the evolutionist is 'without excuse'.

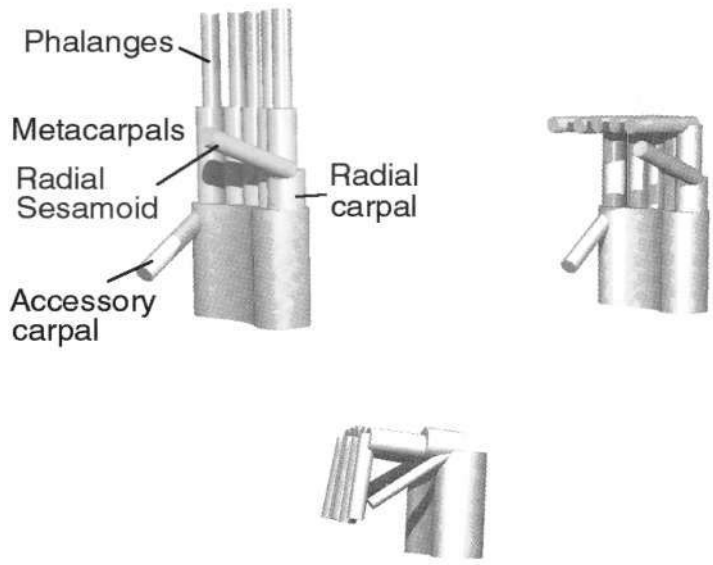
When confronted with the obvious evidence of intelligent design, evolutionists usually try to deny the existence of a Designer by calling attention to supposed flaws in living things, that is, *dysteleology*. Such arguments are vacuous, and merely try to change the subject. It is as if the evolutionist had found a watch on the beach and tried to deny the existence of a watchmaker by changing the subject from its beach-related origins to one wherein he asserts that the watch has flaws or limitations in its construction 'that no watchmaker would ever produce'.

Apart from presuming knowledge of what a watchmaker would or would not do, it confuses the whole issue. The point is why there *is* a watch on the beach in the first place! Evidence indicates that wind, water, sun, and sand are incapable of explaining the existence of the watch. Whether or not it is 'well-designed' (whatever that is supposed to mean, and according to someone's opinion) is quite irrelevant. Clearly then, the 'poor design' of the watch is nothing more than a red herring designed to divert attention from the inability of beach-related processes to account for the existence of the watch on the beach.

The panda has an odd forelimb arrangement which it uses to handle and eat bamboo.[1-3] It has the normal five digits, none of which are opposable to each other. In addition, it also possesses a unique enlargement of two wrist bones which, in effect, gives it seven 'fingers'. These two 'digits' come into play whenever the panda uses them to grasp the bamboo in a pincer-like movement of the 'digits'. Owing to the superficial resemblance of one of the enlarged-wrist-bone 'digits' to the human thumb, this appendage has commonly been called the panda's 'thumb'.

Harvard's Stephen Jay Gould, who is one of the world's foremost evolutionists (and a self-confessed atheistic Marxist), has resorted to dysteleological argumentation. Writing a magazine article[1] that has subsequently been reprinted in a book,[2] he cited Darwin's opinions on orchids, and then moved on to pandas and their 'thumbs'. The premises of Gould's argument can be summarized by quoting him, and adding numbers [in brackets] in order to expeditiously refer to his premises. He asserts the following:[4]

> '[1] *If God had designed a beautiful machine to reflect his wisdom and power, surely he would not have used a collection of parts generally fashioned for other purposes.* [2] *Orchids were not made by an ideal engineer;* [3] *they are jury-rigged* [4] *from a limited set of available components.* [Conclusion] *Thus, they must have evolved from ordinary flowers.'*



Schematic drawings of the grasping mechanism of the giant panda in various stages of flexion (from Endo et al.).[2]

Gould then applies the same premises to the panda's 'thumb':[5]

'The panda's thumb provides an elegant zoological counterpart to Darwin's orchids. [4] *An engineer's best solution is debarred by history.* [1] *The panda's true thumb is committed to another role,* [4] *too specialized for a different function to become an opposable, manipulating digit.* [4] *So the panda must use parts on hand and settle for an enlarged wrist bone and a somewhat* [5] *clumsy, but workable solution.* [2] *The sesamoid thumb wins no prize in an engineer's derby.'*

Gould's premises can be reworded and schematized as follows:

[1] A Creator God should not design structures that are composed of close morphological analogues of structures found in other organisms. In other words, a Divinely-designed orchid pollination system should be constructed completely different from the general arrangement of flower parts, and the panda's thumb should be completely different from the skeletal structure of a tetrapod appendage.

[2] Human engineers do not modify pre-existing structures when designing new structures. Therefore, no sensible human engineer would construct something like the orchid's pollination system or the panda's thumb.

[3] The structures in question are jury-rigged.

[4] Evolution is limited in what it can do to a structure: It can tinker with pre-existing structures but is generally constrained from originating *de novo* living structures.

[5] The structures are functional but inelegant.

[Conclusion] Therefore, the structures in question could not have been created but must have evolved.

Let us now dissect all of these premises. Premise [1] is completely untestable. There is no way of knowing, apart from revelation (which we do not have about this issue), the specifics of what God would or would not do when creating something. Nor is it clear why He 'should', according to Gould's opinion, constantly create de novo structures in things that He makes. ReMine,[6] who has analyzed this question in detail, reminds us that re-using the same essential designs is a matter of simplicity.

In contrast to the first premise, premise [2], can be tested, and can be shown to be totally false. Human engineers do in fact modify 'homologous' pre-existing structures all the time (or at least create the appearance of having done so). Homologous structures are those which occupy the same 'location', in an otherwise-comparable structure, in the form of a different component. Thus, the steel wedge of the axe is homologous to the steel plug of the heavy hammer. The flat surfaces of the sausage-holding tong are homologous to the cutting wedges of the scissors. The wheels of the roller skate are homologous to the blades of the ice skate.

In tracing human history, we would probably find that at least one engineering solution had served as an inspiration for the invention of its 'homologue'. Perhaps, for instance, someone had suggested that the scissors' sharp edges be dulled in order for the 'new scissors' (later called tongs) to be able to hold hot food objects instead of cutting them.

Now, let us take this reasoning further. If we were to impose evolutionistic preconceptions onto man-made tools, we could say, for example, that the wedges of the scissors are homologues to the flat surfaces of the tongs, and the former therefore underwent evolutionary modification and formed the latter. This is analogous to Gould's thinking, wherein the panda's thumb had arisen from relatively small modifications of the basic ursine pattern of

The Giant Panda, Ailuropoda melanoleuca, *found in the forest areas of west-central China and subsisting mainly on bamboo. Once classified with the lesser panda in the raccoon family, it is now usually classified as a bear, family Ursidae.*

forelimb muscles and bones.[7]

Let us step back and examine what this type of thinking rests upon. It is plain to see that Gould's argument begs the question. To say that the panda's thumb is a modified sesamoid bone already *presupposes* that the panda evolved from an ursine ancestor having a 'normally small' sesamoid wrist bone. Hence the circle of reasoning closes whenever Gould uses the *assumed* evolutionary ancestry of the panda's thumb as evidence against creation and for evolution.

With premise [2] debunked, its subsidiary premise immediately undergoes the same fate. It is most certainly not beneath engineers' dignity, intelligence, or creativity to construct structures that contain homologues of each other. Furthermore, the related premises are just so many gratuitous assertions. Thus, whether or not the structures would win in an engineer's derby is, of course, moot. Whether or not they are inelegant [5] is subjective — nothing more than a matter of opinion. What if, following Gould's thinking, someone were to say that tongs constitute such an inelegant modification of scissors that no intelligent designer would make something like *that*\

Let us now examine the argument about jury-rigged structures [3]. What exactly is meant when someone says that something is jury-rigged? To most people, the term connotes one or both of the following: a) something co-opted from another, normal function (for example, the use of a plastic card — which of course normally serves as a license to obtain credit — in order to tighten a loose screw when one lacks a screwdriver); b) something performing a much-inferior function when contrasted with the device which was designed to perform the function in question (for instance, the plastic credit card is much inferior to the screwdriver in applying a torque to the screw, and hence tightening it properly).

To determine if something is jury-rigged, then, we must first *know* the correct functions of the objects involved. Thus, we know about credit-card 'screwdrivers' being jury-rigged *only* because we *already know* that plastic cards are normally used for securing credit, and we likewise *already know* that metallic screwdrivers are designed for turning screws. To assert that the panda's thumb is a jury-rigged solution would be valid if and only if we *already knew* that the relevant skeletal elements were 'meant' for some other function and if and only if we *already knew* what a 'properly-designed' panda's forelimb should look like.

Clearly, Gould's argument presupposes knowledge that he does not have. To the extent that he 'knows' that the skeletal elements were 'meant' for other purposes, Gould is again begging the question by assuming an ursine evolutionary origin for the panda. And when it comes to the question of what a non-jury-rigged panda's thumb should look like, Gould cites the fully-opposable human thumb.[5] But his argument breaks down as soon as we contrast the respective usages of the two kinds of thumbs. Pandas do not paint, type, write, or do countless other things which humans do with their hands.

Thus they do not need an opposable thumb, so it is in no sense jury-rigging for them to have a thumb much inferior (in some, but not all respects) to that of humans. Furthermore, notably unlike the use of credit cards to tighten screws, the panda's thumb is more than adequate for the role of handling bamboo. A recent study by a team of Japanese investigators makes this fact vividly obvious:

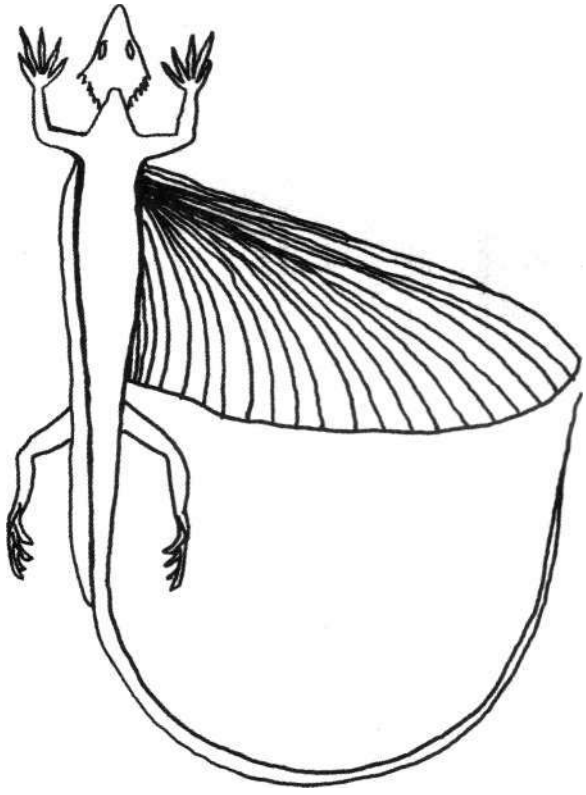
> *'The three-dimensional images we obtained indicate that the radial sesamoid bone cannot move independently of its articulated bones, as has been suggested, but rather acts as part of a functional unit of manipulation. The radial sesamoid bone and the accessory carpal bone form a doublepincer-like apparatus ... enabling the panda to manipulate objects with* ***great dexterity*** *.... We have shown that the hand of the giant panda has a* ***much more refined grasping mechanism*** *than has been suggested in previous morphological models.* '[3] [Emphasis added]

Were the Creator to have endowed the panda with a human-like thumb, this would be an instance of over-design. It would be akin to using a precision laser-cutter for opening tin cans when an ordinary can-opener can do the job adequately.

Clearly, then, the premise about the jury-rigged panda's thumb [3] fails on both counts. Not only does it lack independent proof of a co-opted usage of skeletal elements, but it also spectacularly fails in the implication of jury-rigged devices being ones that are marginal in function.

What about the argument that evolution can only 'tinker' with pre-existing skeletal elements (in the case of the panda's thumb, with ursine forelimb skeletal elements) only to a very limited extent [4]? At first the argument sounds superficially plausible. After all, essentially the same pentadactyl plan exists in human hands, the panda's 'hands', the flippers of whales, and in the wings of most volant vertebrates. But the argument collapses once we examine the entire range of vertebrate skeletal arrangements.

A recently-discovered extinct gliding reptile, *Coelosauravus jaekeli*,[8] possessed 'wings' (gliding apparatus) which were not the usual modification of tetrapod forelimbs as seen in birds, bats, etc. Nor were the wings modifications of ribs or other thoracic elements in any way. They were not duplicate copies of forelimbs. Instead, the wings were completely *de novo* structures composed of thin hollow rods of bone covered with flesh, emanating from the reptile's rib cage. And although *Coelosauravus* is claimed to be 'the oldest known flying reptile'[8] (by evolutionary 'dating' methods), it had these fully formed structures, while the fossil record, as usual,



Recently discovered extinct Coelosauravus jaekeli *had completely* de novo *'wing' structures with thin hollow rods of bone covered with flesh emanating from the reptile's rib cage.*

lacks any ancestral transitional forms.

These structures falsify the premise about evolution being ostensibly limited to relatively slight modifications of previously-existing structures. They also nullify Gould's argument that the panda's thumb ostensibly 'had to' evolve in the manner that it did because of its supposed specialized ursine ancestry. If not, they at least force the evolutionist to use his 'limited evolution' argument in a manner that is not self-consistent with the world of nature.

If even *one* premise of an argument is false, the argument is unsound, that is, the conclusion is not proven.[9] With the complete failure of the first *four* premises of Gould's argument, it is obvious that the conclusion — that the structures had to evolve and were not specially created — is not proven. There are no grounds whatsoever for contending that the panda's thumb is some sort of non-designed contraption. Instead, it has its own precise function,[3] which can only point to God the Creator.

In the beginning of this article, I had pointed out that dysteleological arguments are nothing more than smokescreens designed to hide the failures of naturalistic explanations by changing the subject. In like manner, it should be noted that Stephen Jay Gould spends little time providing solid evidence of how the panda, the panda's presumed ancestors, the ancestors of the ancestors, and the first life were all supposed to have evolved. And no wonder.

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