The real winner

Full marks to the participants in this ground-breaking forum—and to the *TJ* editors for setting the discussion up. Clearly, the constraints of a 'paper debate' marvellously focus the mind of the writers—and crystallise the issues for the readers.

In my view John Baumgardner exhibited a number of strengths.

First, in competently portraying an elegant theory that is compelling in its comprehensive explanatory power.

Second, in presenting the model clearly and answering technical objections.

I would encourage John not to be concerned too much at the expressed opposition. In fact, the 'negative tactics' he mentions are simply the expression of a contrary view that Michael Oard was requested to present. Without that there would be no debate. John can safely leave judgement in the hands of the readers.

The real winner is, of course, creation-based science. So let's hope we see more use made of this forum format.

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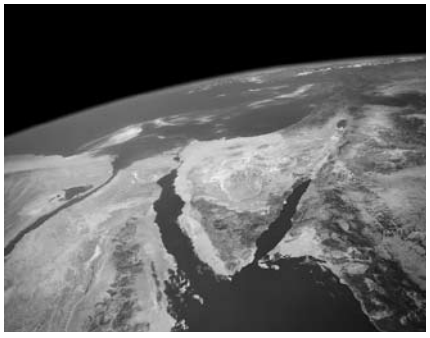

John Baumgardner replies:

Thankfully creationists today can apply the same types of analysis and computation tools that engineers use to engineer automobiles, aircraft, and highway interchanges to model the Earth and its past in a quantitative way. The fact that any model for the Flood is now subject to this type of scrutiny has raised the bar considerably on what qualifies as a viable model. Put another way, the days of qualitative storytelling are past. In this regard, Walter Brown's proposal for the underlying mechanics of the Flood cataclysm has several profound difficulties. One obvious problem that requires no computational tools to uncover is that, with the entire Earth initially covered with a 10-km-thick layer of continental crust, there is simply no place lacking such a layer toward which Brown's hydroplates can slide and accelerate. Such an evident deficiency is one most lay people should immediately be able to identify and understand.

A related difficulty is how Brown's pre-Flood layer of continental crust 10 km thick covering the entire Earth can be transformed into a layer approximately 30 km thick that corresponds to the present continents covering about 35% of the planet. What conceivable set of plate motions, beginning from Brown's initial conditions and distributions of fissures, could lead to the distribution of continental crust we presently observe? From what locations on the pre-Flood Earth in Brown's framework, for example, could the crust be derived to form North America? Or Eurasia? Brown offers no geometric explanation or set of plate motions for stacking or otherwise deforming his initial thin crustal layer to realize today's continents. Observational support from seismology for such a recent dramatic rearrangement in the structure of the continental basement rocks is absent. Actually, evidence seems compelling that hardly any change has occurred in the structure of the continental platforms since the onset of the Flood catastrophe.

There is further the issue of the driving forces needed to accomplish the required geological work. Brown's approach is to invoke his water layer between the initial crustal layer and the underlying mantle to decouple these two layers in a mechanical sense. He thereby gives the illusion the driving force issue is solved because, with the extremely weak coupling he has assumed, almost any level of force, in the absence of other types of resistance, could drive lateral motion of crustal blocks relative to the mantle below. But deforming his thin crustal layer in the dramatic manner described above involves extreme levels of resistance. Huge forces and a large energy source are undeniably needed. Such an energy source is absent from his framework.

This is but a brief sampling of his framework's serious, if not fatal, deficiencies. I understand that Brown, although aware of these problems for more than ten years, has been mostly unwilling to acknowledge them or engage in dialogue about them (in a peer-reviewed journal). My position is that those of us in this enterprise should be quick to acknowledge our difficulties and earnestly seek help from others in addressing them in a forthright manner.

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Michael Oard replies:

I thank all the letter writers for their compliments on the forum. It is a wonderful method to air differences of opinion on controversial topics within the spirit of multiple working hypotheses.

Gordon Hohensee asks my opinion of Walt Brown's hydroplate model. Although I like the first and third parts in his book, *In the Beginning*,[1] I believe his model, outlined in part II, has many general and specific problems. In gen-

eral, it is very qualitative and parts are seemingly far-fetched. For instance, Pacific Ocean trenches are believed to be formed by downward sinking due to an upraised mid-Atlantic Ridge about 16 km high. For this mechanism to be plausible, he needs to explain, among other arguments, that strains can be transmitted through the centre of the Earth. He also presents many charts in his book comparing his model to others. I find these charts artificial.

Specifically, I take issue with the demise of the Siberian mammoths early in the Flood—the evidence overwhelmingly points to a very late Ice Age extinction.[2] His ideas on the Ice Age need much work. A new chapter in his book made a case that the origin of comets and asteroids was by water jets shooting water and debris from the mid-ocean ridges into space. The post-Flood dam-breach hypothesis for the origin of the Grand Canyon lacks geological evidence,[3] while the origin of the canyon fits naturally into the channelized phase of the Recessive Stage of the Flood.

In regard to Ken Malley's suggested mechanism for plate tectonics, the decay of the magnetic field is likely only one source of heat and is probably small. Is cooling from magnetic field decay significant enough over 6000 years? How would this relate to catastrophic plate tectonics during the Flood?

Graham Fraser wonders why all pre-Flood ocean floor would be subducted, especially in the Pacific Ocean. I wonder that also, although in Baumgardner's favour there are a number of reports of continental crust in the western Pacific and isolated discoveries of 'old' rocks and 'Paleozoic' fossils on the ocean bottom.[4] I question Baumgardner's assumptions behind the deduction that all pre-Flood ocean floor disappeared down a subduction zone. I find the interpretation of Gen. 1:9–10 too vague to support the belief of one continent before the Flood. It is seas (plural) that are gathered into one place and not the land.

I most certainly agree with Robert Lawrence that there is no basis for precise correlations of fossils across different parts of the world. I would say that the problem is exacerbated when the index fossil system is microfossils or paleoflora. I constantly run into examples of fossil and dating manipulations in these dating schemes. Here is one I read not too long ago:

> 'Indeed, it is sometimes necessary to "side-step" traditional paleobotanical taxonomy, which is often hindered by political and regional biases (ensuring a highly specialized local but limited global view), as well as stratigraphic biases (with what is effectively the "same" fossil plant type being assigned to different genus and species depending upon its age).'[5]

Renaming the 'same' fossil from different 'age' strata also occurs with the widely used microfossil, foraminifera.[6] There are many more assumptions that go into such fossil dating schemes and correlations.

I would agree with Adrian Bates that Baumgardner's model is an elegant computer model, but I need to see more evidence that the model accurately represents the lower crust and mantle. I also need to see the justification of various assumptions to the model, such as the validity of plate tectonics, and more details worked out before I consider that the catastrophic plate tectonics model is indeed the mechanism of the Flood.

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Our galaxy is the centre: quasars and quantized redshifts

I was very interested in Russ Humphreys' paper 'Our galaxy is the centre of the universe, "quantized" redshifts show'.[1] He presented a clear case for the significance of quantized redshifts in galaxies. I wonder if he has an explanation or suggestions for a similar effect seen in quasars (QSOs).

Hoyle *et al.* in their book[2] present a table of QSOs, which are clearly associated with nearby active galaxies. When the associated galaxy's redshift is taken as the cosmological or expansion component (z_c) of the QSOs redshift (z_0), and subtracted off, a distinct series of preferred redshifts are seen in a power spectrum. Also, it is assumed that there is a Doppler (z_d) redshift due to line-of-sight motion of the ejected QSO from the parent galaxy. Both blueshifted and redshifted velocities (cz_d) are seen with magnitudes $\leq 0.1c$. From $(1+z_0) = (1+z_c)(1+z_d)(1+z_i)$ the intrinsic redshift (z_i) then may be calculated.

When applied to the tabulated 16 QSOs, the resulting intrinsic z_i = 0.30, 0.60, 0.96, 1.41 and 1.96. This is remarkable, and strongly indicates that the association of the QSOs and the parent galaxy is real. Even more remarkable is that these intrinsic redshifts are generated by the relation $(1+z_{n+1}) = 1.227(1+z_n)$,[3] where n is an integer index of quantization. It has been shown that this corresponds to a difference between peaks of $\Delta \ln(1+z) = 0.205$.

Clearly, for these objects, this is not the result of the Hubble law but