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Privileged Planet (Book Review)

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Book Review

The Privileged Planet, by Guillermo Gonzalez and Jay W. Richards. Washington DC: Regnery Publishing, 2004. 444 pages, hardcover. $27.95. ISBN 0895260654. Reviewed by John Zwart, Professor of Physics, Dordt College. August *2005*.

World view matters. Reviews of and responses to *The Privileged Planet,* by Iowa State University astronomer Guillermo Gonzalez and Discovery Institute vice president and senior fellow Jay W. Richards, make this point abundantly clear. Gonzalez and Richards argue against the so-called Copernican Principle (popularized by the late Carl Sagan), which states that there is nothing special about the Earth—that it is an average planet orbiting a typical star. The authors take exception to this hypothesis, arguing that the Earth is a rare planet. They cite an impressive amount of evidence to suggest not only that the universe is fine tuned to make human life possible but also that the properties of the Earth itself, and its location in the solar system and the Milky Way galaxy, make "our planet strangely well suited for viewing and analyzing the universe" (x). In other words, the Earth is designed both for human life and scientific discovery. This fine tuning makes an Earth-type planet elsewhere quite unlikely.

With such an argument, this book has generated, to no one's surprise, a number of polarized reviews. For those of us who view the creation with what John Calvin referred to as the spectacles of scripture, this book provides an enjoyable guided tour of the universe and where our Earth resides in it. However, for those committed to a world view of naturalism, the arguments and discussion are not so compelling. The reasons for controversy will be discussed below, after a closer look at the contents of the book.

The Privileged Planet consists of three main sections. Section One ("Our Local Environment") considers planet Earth, the solar system, and Earth's location in it. Section Two ("The Broader Universe") looks at the stars, the galaxy, and the universe from the vantage point of Earth. And Section Three ("Implications") considers what follows from the information considered in the first two sections.

To get a feeling for the type of argumentation used in this book, we'll take a closer look at some of the discussion from section one. Chapter one ("Wonderful Eclipses") begins with co-author Gonzalez discussing his viewing of a 1995 total eclipse of the sun. As he points out, such eclipses do not happen elsewhere in the solar system. Our Moon appears from Earth to have a disk size very close to that of the Sun. This size allows partial, total, and annular eclipses to be visible from Earth. These, in turn, allowed studies of the Sun's corona, provided a way of testing one of Einstein's predictions in general relativity, and allowed measurements of properties of the Sun's atmosphere. In addition to providing good eclipses, the Moon's size and distance from the Earth help stabilize the Earth's rotation axis tilt, making the Earth more habitable than it would be otherwise. All of this discussion (and much more) is well documented in the chapter endnotes, using sources acceptable to the scientific community.

If the book is so well documented, why is there such controversy over it? A number of members of the scientific community see intelligent-design-type arguments as a minor variation of creationism and, thus, as a way of sneaking religion into science teaching in schools. To some folk, intelligent-design arguments need to he stamped out as non-scientific. As an example of such a reaction, consider what happened when a film based on the book was scheduled to be shown (in an invitation for only private viewing) at the Smithsonian's Museum of Natural History. Following their usual procedure, members of the museum's special-events staff reviewed the film and found that it did not violate the museum's guidelines against religious, political, or commercial events. A $16,000 donation was provided, and invitations to the film were sent out, listing the Smithsonian as co-sponsoring the showing (again, according to museum guidelines). A furor then erupted, leading to editorials in the *New York Times* and *Washington Post* chastising the Smithsonian for allowing the film to be shown. Scientific societies, such as the American Institute of Physics, wrote protest letters to the Smithsonian. The museum director, who reviewed the film, said that while "the science is sound," the film "leads to conclusions that are philosophical, not scientific" ("Evolution Wars Show No Sign of Abating," *Physics Today,* August 2005). While still allowing the film to be shown, the Smithsonian returned most of the donation and dropped its co-sponsorship. However, it is very difficult not to include philosophical thoughts in a scientific discussion. As co-author Gonzalez wrote in a response to some of the attacks on the book, "the Smithsonian was right to sponsor a retrospective on Sagan and the series (*Cosmos*) because unfettered debate is the lifeblood of science" (http://www.freerepublic.comlfocus/f-news/l435005/posts last accessed 15 August 2005). This statement is in spite of *Cosmos* opening with the statement, "The cosmos is all that is, or ever was, or ever will be." Non-philosophical? World view matters.

What is ironic about some of the responses (as in the title of the *Physics Today* article noted above) is that the book is seen as anti-biological evolution. Biological evolution is

not specifically addressed in the book, aside from the argument that the physical aspects of Earth make it hospitable to life as we know it. The book's arguments would not be appreciated by young-Earth creationists since the authors readily accept old ages for the Earth and the universe.

In spite of the controversy, this book does provide a good read. It is well written, and the science is sound. There are a few minor errors, such as the statement that von Fraunhofer first described the dark gaps in the solar spectrum (12). Von Fraunhofer did describe the dark gaps and use those descriptions in his study of optical materials, but Wollaston had noted them some 15 years earlier. In an endnote, there is the statement that stable elements have roughly equal numbers of protons and neutrons in the nucleus (352). This is true of the lighter elements, but heavier stable elements have quite a few more neutrons than protons (e.g. the most common stable isotope of mercury has 80 protons and 122 neutrons). None of these minor errors affect the argumentation in the book, however.

For believers, this book will open up Psalm 19's "The heavens declare the glory of God" in impressive ways. Non-specialists that enjoy science will learn a lot from this book. Those of us that are trained in one of the sciences will learn new things and see connections between areas that we were previously unaware of. Non-believers with an open mind will find much food for thought, especially in the final section, where objections to the arguments of the book are specifically addressed. However, non-believers that maintain a naturalistic philosophical frame of mind will probably not be persuaded. Part of the reason that they will not be persuaded is the nature of the discussion: at times it is more a plausibility argument than a causality argument. For example, consider the statement, "a free floating planet in interstellar space...doesn't provide the opportunity to discover these universal laws. Even geniuses like Kepler and Newton needed a planetary playpen to discover the laws of motion and gravity and to realize that they apply throughout the cosmos" (104). While it is true that Kepler and Newton studied the planets, and Newton used the motion of the Moon to develop his force laws and universal law of gravitation, it isn't necessarily the case that these laws could not have been determined by other means. One is also left with the nagging suspicion that there may be things about the cosmos that we do not yet know and that we could find more easily if we were placed elsewhere in the universe. In any case, I can readily recommend this thought-provoking book.