

excuse for health psychology to fill in the gap with its adolescent enthusiasm and "womb-to-tomb" claims that are something akin to "mother's wisdom."

It would be naive to expect that such a book as this will turn the tide in the practice of health psychology, a niche market that the psychology industry (and the American Psychological Association) consider still to be lucrative and worthy of promotion. Counter-arguments and "demonstration projects" will be used to refute Myslobodsky's data and reasoning. How seriously this book is taken will depend ultimately on whether or not the limits that science puts on endless error are respected.

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Notes

¹ Fitzpatrick, M. (2000). *The Tyranny of Health: Doctors and the Regulation of Lifestyle*. London: Routledge.

² In extreme cases, this has even meant that medical authority has been challenged. For instance, a British nurse, Barbara Clark, threatened to take her physician and the local health authority to the European court if the authority refused to pay for her to have treatment with trastuzumab, an unapproved breast cancer drug at the cost of £20,000 a year.

³ For clarification of this term and its implication, see: Dineen, T. (1996; revised 1998,2001). *Manufacturing Victims: What the Psychology Industry is Doing to People*. Montreal: Robert Davies Publ. (Also Commonwealth Edition, 1999 [Constable].)

⁴ Szasz, T. (1999). *Fatal Freedom: The Ethics and Politics of Suicide*. Westport, CT: Praeger.

⁵ Schofield, W. (1964). *Psychotherapy, The Purchase of Friendship*. Englewood Cliffs, NJ: Spectrum Books, Prentice-Hall. p. 27.

⁶ APA Division of Health Psychology. Available at: <http://www.health-psych.org/mission.htm>. Accessed 13 October 2005.

⁷ Sowell, T. (1995). *The Vision of the Anointed: Self-Congratulation as a Basis for Social Policy*. New York: BasicBooks. Preface.

Pyramid Quest: Secrets of the Great Pyramid and the Dawn of Civilization by Robert M. Schoch and Robert Aquinas McNally. Jeremy P. Tarcher/Penguin, 2005. 368 pp. \$28.95 (hardcover). ISBN 1-58542-405-6.¹

Over the last decade, paleontologist Robert Schoch has become a specialist on pyramids. Whereas his 2003 book *Voyages of the Pyramid Builders* (also

with writer Robert McNally) looked at these structures' global history and distribution (see my 2003 review in *Journal of Scientific Exploration*), in the present volume he concentrates on Egypt's Great Pyramid, conventionally said to have been built in the mid-third millennium B.C. by the pharaoh Khufu (Cheops) to serve as his tomb. Drawing upon various thinkers, both mainline and unconventional—including, importantly, some largely forgotten nineteenth-century ones—as well as on his own conceptions and fieldwork, Schoch raises serious questions about this conventional notion. He supplements his narrative text with extensive appendices that provide details on many aspects of the pyramid and ideas concerning it, so that the volume becomes a veritable Great Pyramid handbook. Among other topics he discusses, Schoch briefly evaluates ideas concerning how the structure's huge blocks were lifted (he rejects the artificial-stone-casting theory and favors the simple levering-and-chocking method).

The precision of the Great Pyramid's external and internal orientation, dimensions, and geometry surpass what would be required for a mere tomb and suggest a more cosmic role. Building on work by Robert Bauval and Adrian Gilbert, Schoch observes that the three main Giza pyramids are laid out in the pattern of Orion's (Osiris's) Belt, and that the major Egyptian pyramids taken together form a star map of Orion, with the Nile in the position of the Milky Way. Shafts inside the Great Pyramid align with stars with Orion connections. These layouts reflect the stellar positions of circa 10,450 and circa 2450 B.C. The latter time conforms to conventional dating of the Great Pyramid, but Schoch (following his sources) feels that the structure probably memorializes the earlier lineup.

Following Norman Lockyer, Schoch gives persuasive evidence that the ancient Egyptians not only were able to make architectural alignments with constellations' rising and setting points but also understood the precession of the equinoxes and compensated for it.

The Great Pyramid is as close to the thirtieth parallel of latitude as could be ascertained astronomically, and is precisely oriented to the cardinal directions. Rather than being absolutely plane, its faces angle slightly inward from their edges, converging on a centerline. Consequently, at equinoctial sunrises and sunsets, half of the northern face and half of the southern face are illuminated and the other halves shadowed. A masonry platform extends to the north of the structure, allowing use of the pyramid as a giant gnomon; movements of the apex of its shadow would allow tallying the days of the winter months and the length of the year.

The dimensions of the Great Pyramid imply that the builders not only knew of Earth's sphericity but also knew its circumference, with an error of no more than a degree. Livio Catullo Stecchini saw the structure as an incredibly accurate microcosm of the Northern Hemisphere, projected on its four planoid surfaces at a scale of 1:43,200 (= the number of seconds in 12 hours), with the apex representing the pole, the perimeter a north-south great circle with a 2π ratio to the height and designed to equal .5 minute of latitude at the equator. The height reflects taking Earth's oblateness into account.

Following René Schwaller de Lubicz and Stecchini, Schoch accepts and

explains that the Great Pyramid exhibits knowledge not only of mathematical pi (π) but also of phi (ϕ), the "golden section," and thus reflects knowledge that has conventionally been thought not to have been discovered until much later in history—as in the case of knowledge and measurement of a spheroidal Earth. (Note that in a 2004 book, *Architecture and Mathematics in Ancient Egypt*, Corinna Rossi rejects these opinions. This is not a review of her book—which, in any case, is too technical for me to evaluate—but it may be mentioned that she sees near approaches to pi, etc., as reflecting coincidence and/or "psychological tendencies toward particular proportions." In the case of the pyramids, "slopes were expressed through ratios of one cubit to a fraction of a cubit expressed in palms and fingers [1 cubit = 7 palms = 28 fingers].")

Another author, Kate Spence (2000), has attributed the pyramid's exact orientation to its builders' use of a plumb line aligned with the stars Mizar (zeta-Ursae Minoris) and Kochab (beta-Ursae Minoris), which would have passed almost exactly through the celestial north pole. This would date the structure at 2478 B.C., somewhat earlier than the 2554 B.C. that is the approximate beginning date of Khufu's reign. Regarding the other pyramids, she reported that the younger they are the more they are off alignment to true north, owing to the precession of the equinoxes. She concluded that at least these structures do not conform to the notion of a much older Egyptian civilization.

According to Schoch, the astronomical, geodesic, and mathematical knowledge represented by the Great Pyramid may have its roots in much greater antiquity. At Nabta Playa in southwestern Egypt is a megalithic stone circle dating to about 4500 B.C. Physicist Thomas G. Brophy concluded that three stones within the circle represent Orion's Belt at the summer solstice between 6400 and 4900 B.C. and three others Orion's head and shoulders at 16,400 B.C., implying knowledge of Orion's precession. Brophy determined that the Giza pyramids' disposition matched Orion's Belt at the celestial meridian at the spring equinox of 9420 B.C. and that there are other Orion alignments at these dates. In 13,101 B.C., said Brophy, the galactic center rose over the Khufu Valley Temple and the Sphinx as seen from Giza's Great and Menkaure pyramids, respectively. At 2370 B.C., the great Pyramid's star shafts aligned with the galactic center and the stars Thuban (Alpha Draconis, the then-polestar), Sirius (Isis's star), and Kochab (Beta Ursa Minor).

All this leads to the theory that Giza was a pre-pyramid astronomical site like that of Nabta Playa, going back to at least 11,000 B.C., and that the Great Pyramid and other structures were built atop, and as extensions of, much earlier sacred sites. Schoch sees the likely sequence for the Great Pyramid as follows:

- I. The modified bedrock mound that underlies the pyramid, as well as the latter's platform, the Khafre Pyramid's causeway, and certain other monuments, date to between 7000 and 5000 B.C., the era of original construction of the Sphinx (the evidence for whose earlier-than-conventional dating Schoch recapitulates).

2. In the mid-fourth millennium B.C., the Descending Passage was cut into the sacred mound, oriented toward the then-polestar Alpha Draconis. The lower courses of the pyramid may have been laid at this time, to create a platform for celestial observations.
3. During the Old Kingdom, in the mid-third millennium B.C., the lower part of the pyramid, including the Queen's Chamber and the Grand Gallery, were erected, yielding "an astonishingly elaborate astronomical observatory" (p. 206). Star shafts emanated from the Queen's Chamber, including one toward Sirius (Isis's star) and one toward the head or body of Ursa Minor.
4. It was probably during the Fourth Dynasty that the pyramid was completed, the new construction including the King's Chamber and the Relieving Chambers. Both this phase and the previous one may have been executed during the reign of Pharaoh Khufu (26th century B.C.), to whom the structure is conventionally attributed.
5. At some point, and for unascertained reasons, great granite plugs were introduced into the Grand Gallery, cutting off the upper rooms of the pyramid.
6. Later, the Well was cut, which re-established the connection between the lower and the upper passages and chambers.

Schoch open-mindedly (but not over-credulously) reviews not only scientific theories but also a host of Christian, Masonic, Rosicrucian, Theosophist, space-alien, New Age, and other notions about the Great Pyramid. Although he finds all of the latter wanting, he does give them credit for rejecting the idea that the structure was just a pharaoh's tomb, and for recognizing that something sacred, even mystical was involved in its creation and functions. But he urges that—contrary to these concepts, each of which reflects the concerns and perceptions of its times—we try to perceive the Pyramid from the point of view of the ancient Egyptians. He discusses work at Princeton that has detected less randomness, from randomness-generating machines, at sacred sites—including the pyramid—than elsewhere, as well as the mystical experiences that various people have reported following stays in the interior of the Great Pyramid. He speculates that in addition to its astronomical functions, the building was a venue for vision quests. Thus, the Great Pyramid as a whole, concludes Schoch, represents both a restatement of the cosmos (as begun in the pre-pyramid mound) and a sacred space for ritual and initiation.

Pyramid Quest is well written and presented, with appropriate illustrations. The authors and publishers are to be commended for including reference citations in this work—as urged in *Journal of Scientific Exploration's* review (Jett, 2003) of *Voyages of the Pyramid Builders*, which lacked such citations.

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Note

¹ A slightly amplified version of this review also appears in 2006 in *Pre-Columbiana: A Journal of Long-Distance Contacts*.

References

- Jett, S. C. (2003). Review of *Voyages of the Pyramid Builders: The True Origins of the Pyramids from Lost Egypt to Ancient America* by Robert Schoch. *Journal of Scientific Exploration*, 17, 544–549. (Revised version published 2003/2004 in *Pre-Columbiana: A Journal of Long-Distance Contacts*, 3(1–3), 45–49.)
- Rossi, C. (2004). *Architecture and Mathematics in Ancient Egypt*. New York/Cambridge: Cambridge University Press.
- Schoch, R. M., with McNally, R. A. (2003). *Voyages of the Pyramid Builders: The True Origins of the Pyramids from Lost Egypt to Ancient America*. New York: Jeremy P. Tarcher/Putnam.
- Spence, K. (2000). Ancient Egyptian Chronology and the Astronomical Orientation of Pyramids. *Nature*, 92(5), 406–409.

FURTHER BOOKS OF NOTE

Crimes Against Logic, by Jamie Whyte, New York, NY: McGraw–Hill, 2004. 176 pp. \$12.95 (paper). ISBN 0071446435.

The sub-title says it all: "Exposing the Bogus Arguments of Politicians, Priests, Journalists, and Other Serial Offenders". A classic skeptic's delight, this book exposes the inconsistencies in many common human behaviors, from the right to one's opinion, to the right to life, the right to health (even at infinite cost), selfish motives, the rationale for Christianity, the assertions in the second paragraph of The Declaration of Independence, mutant statistics, and many more. There is also a dump on the overuse of quotation marks as insults and the paradox of the all-powerful god—all this with the sharp wit expected of a past lecturer of philosophy at Cambridge University.

From p. 44: "Anyone who thinks that her favorite weird ideas—about reincarnation, astral travel, or whatever—are intellectual bedfellows with quantum physics ought to read some of the latter. She will find the experience disillusioning."

Alas, Whyte also shares the classic skeptic's errors on cold fusion (Bauer, 2001) and homeopathy (Kauffman, 2003). He was unaware that many homeopathic dilutions do contain some molecules of active ingredient, and that placebo-controlled trials on homeopathy with positive results have been published. Moreover, water was found to have a memory of once containing lithium chloride before extreme dilution by observation of differences in photoluminescence (Milgram, 2003).

A mixed bag with hit-or-miss accuracy, but witty and entertaining when someone else's ox is being gored.

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References

- Bauer, H. H. (2001). Review of *Excess Heat: Why Cold Fusion Research Prevailed* by Charles G. (2000). *Journal of Scientific Exploration*, 15, 147–152.