

### ‡3 Unpublished Letters

#### A The Secret of Safford's Prank

To: *Harvard Magazine*

1983/1/11 [rev. 2/9]

From: DR, Class of 1959

**A1** I am rather surprised at the unskeptical nature of your article (1982 Sept-Oct pp.54-56) and the only letter published [in response] (1983 Jan-Feb pp.23 & 54) regarding "Lightning Calculator" T.Safford [Harvard Observatory astronomer]. Though Safford worked for many years among academicians, the article's centerpiece tale proving his rapid calculational abilities is a (posthumous) account by a bible salesman (Rev. H.Adams) of Safford's circuslike performance during an 18-digit-by-18-digit multiplication problem, said to have been completed in one minute:

$$365365365365365365^2 = 133491850208566925016658299941583225.$$

**A2** Performed normally (as Rev. Adams and the reader were led to believe was the case), such a computation requires  $18^2$  (that is, 324) smaller multiplications (not to mention a mass of additions), which in 60 sec allows less than 1/5 sec per! This is so patently fantastic in itself that it should not be necessary for me to illustrate that this specific "multiplication" is in fact no more complicated than balancing a chequebook [merely a simple 3-digit-staggered addition of an arithmetic pyramid of low integral multiples of  $365^2$  (133225)]:

$$\begin{array}{r}
 133225 \\
 266450 \\
 399675 \\
 532900 \\
 666125 \\
 799350 \\
 666125 \\
 532900 \\
 399675 \\
 266450 \\
 133225 \\
 \hline
 133491850208566925016658299941583225
 \end{array}$$

**A3** A few years ago, as an instructional part of an anti-mystic effort, I convinced a number of temporary victims (including a well-known Cambridge astronomy editor and the whole physics department of a large west coast university) that I was a genuine idiot-savant, by performing 8-digit-by-8-digit multiplications in roughly a minute — without Safford's giveaway repeated integers and without any props (hidden scratch-papers, radios, or calculators). However, I always made it clear afterwards that it was just an illusionist's trick. This is more than a matter of personal integrity. It is simply cruel to mislead people by convincing them that their normal attributes are far beneath what is in fact an unreal standard of superiority. Whether that standard is a comic's secretly rehearsed "ad-libs" or *Playboy's* silicones or a pseudo-lightning brain, the result is the same in the naïve observer: discouragement though a baseless self-impression of inferiority.

**A4** Retrospective DR remarks: The 7<sup>th</sup> digit in the Harvard Magazine rendition of the solution is misprinted (3 instead of 8). The same 18x18 Safford-Adams fable is also repeated in James Newman's *World of Mathematics* NYC 1956 p.466, where the next-to-last digit is printed as 5 instead of 2. And Petr Beckmann's *History of  $\pi$*  (NYC 1971 p.104) tells the same tale, including Newman's misprint. Which is just one more illustration of how much care is exercised by those whose casual hand-me-downs generally determine academic history. I have yet to see an account that correctly printed the solution, much less realized Safford's easy method of actual computation, provided above for the first time.

**A5** *Harvard Magazine's* failure to expose the undeniable truth behind a Harvard astronomer's most famous hoax is not much of a mystery when one realizes that, in 1983, *HM's* resident astronomical expert was the unavoidably ubiquitous O Gingerich (Harvard Observatory), then on the *Magazine's* Board of Directors. (OG finds it difficult to doubt anyone but doubters. He believes in Ptolemy, archaeoastronomy, and Jesus.) A 1983/2/23 letter from *HM* Copy Editor Gretchen Friesinger claimed that the DR letter was set in type, and "there's a good chance we'll publish it in May." Never happened. (It may not be irrelevant to note that DR's 1983/3/3 banishment from OG's enraged *Journal for the History of Astronomy* occurred between Friesinger's letter and May. See ¶6 fn 15.)

**A6** Unlike some Harvard astronomers, Safford was a highly capable mathematician. (See, e.g., his 1862/3/14 Royal Astron Soc papers on finding the mass of Neptune from Uranus' residuals and on the declinational proper motion of Sirius.) So why did even he feel the need to exaggerate his considerable computing abilities? Not long after the above letter, I got an inkling of the problem — while observing a young modern mental whiz's public exhibition of his skills: he executed a variety of swift genuine mental tricks, but then ended the show by faking an impressive computation, using a simple device. When I asked him about it after the performance, he readily admitted his little humbuggery. (We then had dinner and spent a pleasant evening amiably trading techniques & tales.) He explained that, unfortunately, audiences were more impressed with the easy fake trick than his real ones.

## B A Progressive Obituary

To: *Time* Magazine 1981/3/9  
From: DR

**B1** Howard Hanson was guilty of the crime of composing music for beauty not fashion. Thus, nearly half of his *Time* Milestones obituary (1981/3/9 p.74) is the statement, "Also a teacher and conductor, he fought tirelessly, if unsuccessfully, against progressive trends in American classical music." Whatever the romantic Hanson's private view of "progressive" music (an ad-man sort of term, masking personal taste in natural-law garb), he in fact conducted *and promoted via recordings* [by his Eastman Rochester Orchestra] the music of: Carter, Ginastera, Hovhaness, Ives, LaMontaine, Piston, Riegger, Sessions, and Thomson. Evidently, Hanson was less narrowed by his artistic preferences than some Progressive obit writers are.

**B2** The same day, I wrote to Donald Shetler (Inst Amer Music, Eastman School of Music, Rochester): "So soon after Barber's passing, I was saddened to hear of the death of Hanson.<sup>1</sup> His music was among the loveliest memories of my youth and will help keep that youth from quite passing away. . . ."

<sup>1</sup> This letter also commented: "*Time's* obituary was too brief . . . but, considering its slant, perhaps that's a blessing. . . . [*Time's* music column] actually placed its . . . [1975] obituary for Shostakovich second behind a bigwetkiss promotional piece for Phoebe Snow".

**B3** For introducing me long ago to the unabashedly romantic music of Hanson (& other moderns), I have always been thankful to my lifetime friend (& Harvard roommate), Ted Defandorf. Hanson's greatest contemporary popular success has been the use of his "Romantic Symphony" (1930) at the peaceful conclusion of the classy and scary (& feminist) scifi film, "Alien". On 1990/11/27, I suddenly wondered whether he had lived long enough to know the joy of realizing that "Alien" had brought his work (in such a heavenly setting) before the widest public he had ever achieved. I quickly learned that the answer was: Yes. The film appeared in 1979, two years before Hanson's 1981 death.

**B4** But my next question was: why had I cared enough to look up these dates with such fervor? After all, the happiness I was hoping Hanson had experienced was in the past, and he was now long dead. (To Orwell's "O'Brien", the past is a chimera, since it exists merely as infinitely manipulable collective memory.) But it mattered anyway.

**B5** True historians are defined by their not caring if the past is unreal. It is real to us.

## C PseudoPrediction

To: Joe Ashbrook, Editor *Sky & Telescope* 1967/7/3  
From: DR

**C1** Now that Pluto is approaching us, mightn't another check be in order sometime for possible satellites . . . ?

**C2** The foregoing, written 11<sup>y</sup> before the discovery of Charon (Pluto's satellite), looks prescient. And it could be made to look more so, by reference to a paper of DR & Max Hammerton (*Mon Not Royal Astron Soc* 162:261; 1973) where, at p.263, it is carefully noted that "Pluto has no *observed* satellite" (emph added). But the truth is unfortunately quite otherwise: between 1967 & 1973, DR had come to believe that there was no Plutonian satellite; so, the original 1973 ms lacked the word "observed" — an adjective that was wisely inserted before publication (probably either by Max or by David Dewhirst).

**C3** DR is telling this tale on himself because: [1] The foregoing exhibits excellent raw material for enabling the wise reader to discern typical opportunities which professional predictors make quite different use of. [2] Editors often inadvertently degrade a paper's accuracy. It is just, pleasant, and beneficially humbling<sup>2</sup> to recall an opposite experience.

## D The OverConfidence Artist as Hitman

**D1** Among the more striking aspects of the following grossly libellous letter are that: [a] it was written on University of Chicago stationery, and [b] so far as the public record shows, the University has no misgivings about the writer. Handwritten and signed by Univ of Chicago professor Noel T. Swerdlow, the letter was mailed to physicist Robert R. Newton (Johns Hopkins University Applied Physics Laboratory). Though repulsively malignant, the letter is in truth a precious document, in providing a firsthand inside-look at the sanity & equanimity that have characterized the Hist.sci crowd's reaction to RRN's skeptical writings on Ptolemy. Thus, despite the letter's highly offensive contents, RRN has agreed to its publication in *DIO*. (Similar slanders against dissenters on Ptolemy — DR included — have been circulated for decades by Hist.sci archons.) Barely less feral Swerdlow attacks (against physicist RRN and mathematician van der Waerden) have repeatedly been published by Hist.sci journals, and not a word of disapproval has ever appeared in these turf-protective, incestuous forums. (They and Swerdlow clearly deserve each other.) The Swerdlow letter follows:

<sup>2</sup> A little humility is needed for balance, since the authors are naturally more fond of recalling that this paper's proposed value for Pluto's mass (1/40th of the Earth+Moon mass) is now known to have been the most accurate ever published — during the 4 1/2 decades that passed after the planet's discovery (1930), until the Pluto controversy was resolved in 1976-1978 by direct evidence.

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Dear Mr.<sup>3</sup> Newton:

June 2, 1983

**D2** Thank you for your book on Ptolemy, which I have looked through and am now returning since there is probably someone else who would rather have it and make better use of it. As I have read your various Ptolemy pieces over the years, they have come to seem to me not just wrong-headed and careless, which they are, but positively crank. And the more you go on and on with your crusade, the more of a crank you appear, not merely to me, but to anyone who simply keeps count of the extraordinary number of books and articles you have written trying to prove your silly accusation of someone dead no less than 1800 years. You are really much of a kind with the people that used to carry on about Francis Bacon's writing Shakespeare, and that sort of thing, or to bring it up to date, the Velikovsky people.

**D3** The most remarkable thing about your work, to me at least, is that you manage to get it funded by the U.S.Navy on the preposterous grounds that it is "intimately connected with the precise measurement of time." This is the kind of flim-flam, indeed out-and-out lie, that would make P.T.Barnum blush. And you call Ptolemy a fraud? It is far more likely that you are a crank and a con-man, whose principal accomplishment has been extracting money from the government on false pretenses.

Very truly yours,  
Noel Swerdlow

**D4** Since RRN & DR had long been debating who the  $\Omega$  among Ptolemy's apologists was, RRN's 1983/6/10 reaction (when sending DR a copy of Swerdlow's letter) was simply: "This definitely promotes Gingerich to  $\Psi$ ." RRN later responded for *DIO* as follows:

To: *DIO* 1988/2/3  
From: R.Newton

**D5** Two astronomical phenomena have been used to furnish standards of time. One is the earth's spin on its axis, which furnishes the standard that we call solar time or universal time. The other is the orbital motion of the earth around the sun, which furnishes the standard called ephemeris time. The relation between solar and ephemeris times is of high importance for fundamental astronomy and in particular for the determination of time, which, in the United States, is the responsibility of the U.S.Naval Observatory.

<sup>3</sup> Though RRN has a Ph.D., Swerdlow's 1979 *American Scholar* (Phi Beta Kappa) attack referred throughout to "Mr.Newton", due to Swerdlow's inability to get even that simple fact straight. O Gingerich, who was on the *Amer Schol* board responsible for publishing this embarrassment (and for, as usual, preventing any printed reply), claims to have been simply appalled. This did not stop OG from publishing more of Swerdlow's frothings against RRN, in the 1981 *JHA*! (Examined at ¶5.) Though OG was the sole member of the *Amer Schol* board with the slightest interest in defending Ptolemy and attacking RRN, OG nonetheless claimed in a 1979/12/10 letter that he was not the *Amer Schol* party who invited Swerdlow to write the 1979 review. Same OG letter: "I am happy to say that the original pugnacious tone of the article was considerably ameliorated before publication." (A glance at what was printed suggests that the original must have been nearly on the order of the Swerdlow 1983 letter displayed here.) OG continues: "I strenuously objected to the condescending use of the expression 'Mr.Newton,' which was changed to 'Prof.Newton,' but when they found out he was not a professor they put it back to 'Mr.' at great expense in the typesetting." Insistence (for years) upon ranking a dissenter falsely — not to mention deceiving Phi Beta Kappa readers (regarding RRN's actual degree) — evidently meant more to Swerdlow than it would to a scholar of normal emotional composition.

**D6** If both kinds of time flowed uniformly, we could simply find the ratio of their rates, and then use whichever was convenient. The more convenient one for regulating our lives is clearly solar or universal time. It turns out that the two kinds of time do not flow uniformly with respect to each other, so that at least one kind of time is flowing non-uniformly. At present, we assume as a working hypothesis that ephemeris time flows uniformly, and we must then determine how solar time varies with [respect to] ephemeris time. A study of ancient and medieval astronomical observations is of great value in determining this variation.

**D7** DR will offer two comments: [a] When Swerdlow scoffs at RRN's criticizing someone who died 1800<sup>y</sup> ago, he appears to be implying<sup>4</sup> cowardice. This is slightly odd, coming from the chief attack animal of the Neugebauer Muffia, which has ducked face-to-face debate of the Ptolemy Controversy for over 20 years. [b] Before unsheathing its obligatory hatchet, the 1981 review which Swerdlow co-authored (on R.Newton's 1976 book)<sup>5</sup> states in its opening sentence: "For over a decade Robert R. Newton has engaged in the *laudable* project of analysing ancient and medieval astronomical observations in order to obtain improved determinations of the retardation of the Earth's rotation and of the Moon's secular acceleration." (N.Hamilton & N.Swerdlow *JHA* 12.1:59, emph added.) This sentence pretends to the reader that the authors approached the work with an amiable disposition but then became regrettably "*compelled* to point out" its inadequacies (p.60, emph added). However, the Swerdlow letter's actual belief (§D3) is that RRN's entire "*laudable*" work in this area is worthless & crank. The contrast here (between letter and review)<sup>6</sup> leaves us in little doubt as to why Swerdlow<sup>7</sup> confidently regards himself as an expert on confidence-men.

[Note added 2012. Swerdlow's attempt, to paint R.Newton as a crank for contending that Ptolemy faked & plagiarized, is as ironic as his ill-chosen initial example of supposed crankitude: disbelief that Shakespeare was a writer. Common factor: unalloyed-careerist Swerdlow always sides with relevant RichEstablishmentThink. (See *DIO* 4.3 ¶15 §A3 & *DIO* 20 ¶2 §B.) Sadly for his repulsively rendered verdict on R.Newton, the intervening 3 decades have seen an opinion-shift in the very hist.astr establishment Swerdlow counted upon for eternal-verity: except for such cementalities as himself & J.Evans, it is now universally understood that Ptolemy indeed faked & stole. As for the ongoing controversy over actor & loan-shark Wm.Shakespeare, the 19<sup>th</sup> century authors who laughed scholarly questioning of Shakespeare were such "cranks" as Twain, Hawthorne, James, & Whitman. More recent skeptics include Westminster Abbey, several US Supreme Court justices, crime-expert Colin Wilson, & hoax-detective DR. In light of our Ptolemaic lesson on the mortality of Eternal-Sacred-Moneycows, readers may share our foreseeing eventual general realization of C.Marlowe's authorship of the works now generally attributed to Shakespeare: see *DIO*'s "BardBeard" at <http://www.dioi.org/sha.htm>.]

<sup>4</sup> If the implication is rather that one cannot prove anything about someone dead 1800<sup>y</sup>, then why is Swerdlow pursuing ancient astronomy?

<sup>5</sup> R.Newton *Ancient Planetary Observations and the Validity of Ephemeris Time*, Johns Hopkins Univ Press, 1976.

<sup>6</sup> The review quoted is the same one (HamSwerdlow 1981) which is atomized by author R.Newton later in this *DIO* at ¶5. No wonder Swerdlow didn't send it to DR (see following fn).

<sup>7</sup> DR's last letter to Swerdlow (1981/4/5, just after DR had phoned NS on that date) well illustrates Ptolemy-skeptics' legendary viciousness, which presumably accounts for Muffia noncitation of DR: ". . . Thanks for filling me in on the background of the theory that Hipparchos-Ptolemy's year comes from multiplying the ['Babylonian'] month by 235/19. . . . It's inspiring to encounter such historical acumen in so fine a theorist and observer as Tobias Mayer. Despite our [NS's & DR's] large disagreements on the value of Robert Newton's and of Ptolemy's work, I'm glad we talked. (And I repeat [DR's telephone suggestion] that it would be nice to get all of us — [Robert] Newton, you, I, and some of the others interested in the [Ptolemy] controversy — together at an informal gathering to chat and learn from each other's viewpoints.) Looking forward to seeing the papers you're sending." Swerdlow's reply? No reply. (Similar to ¶6 §H5.) Unless one counts the 1983 letter to RRN (§D2-D3).