TABLE 1. Referential Statistics, Hypothetical Textbook with 100 References

	Copyright Date (CD)	Mean (M_1)	Median (M_2)	Mode (M_3)	Vintage Index* (VI)	Differential† (CD − VI)	Up-to-dateness = 1,000 / Differential
Text 1‡	1978	1958.17	1977	1977	1970.7	6.3	158.7
Text 2‡	1978	1977	1977	1977	1977	1	1,000

* Vintage index (VI) = $\sqrt[3]{M_1 \times M_2 \times M_3}$.
† Differential = copyright date (CD) − vintage index (VI).
‡ Text 1 = text including ten classic references.
‡ Text 2 = text excluding ten classic references.

portance lie waiting for the perceptive searcher in texts dating back half a century or more. For example, the problem of vascular insufficiency of the spinal cord, a subject of great importance to anesthesiologists, must be researched at least to the decade of 1900–1910, and preferably back to Willis in 1664. Scholarship that attempts a creative synthesis of ancient and modern will score badly on Dr. Pittinger's scale, whereas a relatively shallow concentration on the ultra-modern will score well. Table 1 illustrates the dilemma using Dr. Pittinger's proposed convention. Consider an author in the year 1978 about to publish a book that contains 100 references. Let us suppose that 90 of these are red-hot and up-to-date from the preceding year, and that ten come from classic sources of the following dates: 1664, 1775, 1838, 1852, 1863, 1882, 1891, 1901, 1911 and 1940. Let us also suppose that Dr. Pittinger's scale has been adopted wholeheartedly by editors, deans, granting bodies, and other agents of destiny throughout the world. The author must now make a tough choice. He can opt for a scholarly presentation, include his ten classic references, and ruin his hard-sought, up-to-date score along with his reputation as a pathfinder, and of course he will fail in the grant race, for who would fund a loser with a miserable Pittinger score of 158.7 when it could be 1,000? Or he can deliberately cut out the fateful ten classic references, in the sure knowledge that his castrated brainchild will sing the pure unbroken song of youth, untainted by the genes of past generations. Granting bodies will bend their golden ears, enchanted by the sound, and sweet success will pour upon the author's head and upon his damned soul.

The problems of evaluating scholarship and up-to-dateness in textbooks is somewhat akin to those facing a dean's committee on appointments and promotions. An experienced committee is not fooled by the numerical size or the apparent currency of a candidate's bibliography. They look for quality. Were the articles published in core journals, and what was their impact? Up-to-dateness may be important, but in the long run it is the power of the work and its ability to produce change that counts. Dr. Pittinger has made an interesting start in the monstrously difficult task of evaluating textbook material, but in its present embryonic state his scheme seems doomed to become just another monster unless its sensory system can be developed to identify and measure more of the variables that make an impact in the complex business of creation and authorship.

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REFERENCE

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Anesthesiology
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Styletted Intravascular Catheters

To the Editor:—Styletted flexible plastic catheters for intravenous or intra-arterial placement have become an indispensable piece of equipment for the modern anesthesiologist. Although commonly in use today, few are aware of the history of the development of this device. During 1948 to 1950, David J. Massa, M.D.,* working alone, developed the first styletted plastic catheters for intravenous use. While a Fellow in Anesthesiology in what was then the Mayo Foundation, now the Mayo Postgraduate School of Medicine,

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Dave Massa bought his own supplies and, in his home basement, made by hand a series of prototypes, which were gradually improved to produce the styletted catheter essentially as it is today. Early in his work, colleagues provided more derision than encouragement, but Dave continued to provide better models for trial in the operating rooms until the demand for "Massa" needles, as they were known locally, began to grow. It not being ethical for a physician to patent an instrument, the Rochester Products Company of Rochester, Minnesota, was engaged to produce the needles for commercial use and they were marketed as the "Rochester" needles, although the head of the Department was inclined to want them to be given his name. This experience should lend encouragement to innovators with ideas who lack complicated and expensive laboratories. Advances just as important remain to be introduced in the future.

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Tracheal Constriction or Decreased Lung–Thorax Compliance from Opiates

To the Editor:—Using water-filled floppy cuffs on endotracheal tubes to measure changes in tracheal tone, Yasuda *et al.* concluded that morphine and fentanyl cause tracheal constriction, as evidenced by increased intracuff pressures.[1] Fentanyl and morphine may decrease chest-wall compliance ("tight chest" syndrome) by increasing thoracic and abdominal muscle rigidity[2,3] and may also decrease pulmonary compliance by bronchoconstriction.[4] Neuromuscular blocking agents will relieve muscle rigidity and improve chest-wall compliance. Crawley and Cross demonstrated that intracuff pressure reflects mean airway pressure.[5] If tidal volume is maintained as lung and chest-wall compliance decreases, airway pressure and mean intracuff pressure will increase. Yasuda *et al.* do not report changes in airway pressure or tidal volume. Their use of pancuronium may prevent the decreased compliance from muscle rigidity, but not that due to bronchoconstriction. Employing a pressure-cycled ventilator (Bird Mark 4, 8®) will, by definition, prevent an increase in airway pressure over the set pressure. However, altering the tidal volume to maintain Pa_{CO_2} values within certain boundaries will necessitate changing the pressure limits of the ventilator. One may thus question whether the increases in cuff pressure observed by Yasuda *et al.* were due to tracheal constriction, to decreases in lung or chest-wall compliance, or to a combination of all three.

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In reply:—In our study, tidal volume was held constant by using the mechanical stop on the Bird Mark 4® and by setting the pressure at more than 25 cm H_2O with the Mark 8®. Rigidity of the chest wall was avoided by the administration of pancuronium. In measuring tracheal tone, the small waves produced by the ventilator reflect pressure changes in the airway, whereas amplified waves would reflect the increase of airway pressure by decreased lung or chest-wall compliance. In our study, amplified waves were