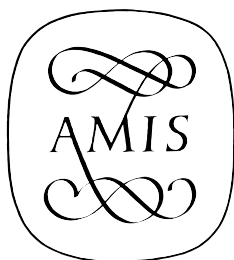


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book provides such technical assistance to readers who wish to learn about the evolution of craftsmanship in the art of violin making during the seventeenth, eighteenth, and early nineteenth centuries. Ratray discusses the instruments that he knows best, not to show off the prodigious talents of a group of violin makers, but rather to allow the reader to follow the thoughts of a connoisseur as he examines a group of instruments by makers whose ideas developed over generations. He has provided an invaluable aid to the scholar or dilettante of this field.

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Edwin M. Good. *Giraffes, Black Dragons, and Other Pianos: A Technological History from Cristofori to the Modern Concert Grand*. Second ed. Stanford: Stanford University Press, 2001. xxv, 369 pp.: 64 black-and-white illustrations, 21 line drawings. ISBN: 0-8047-3316-3. \$145.00 (cloth).

There has been an explosion of information dealing with early pianos since 1982, when Edwin M. Good first published his book on the history of the technology of the instrument. This second edition brings his work up to date. It is also a nicer-looking volume: the format is a little larger, the paper a better quality, and the type a bit more readable (although, inexplicably, the photos seem muddier). The bibliography has doubled in size, from eight to fifteen pages. References to recordings are now to CDs, rather than LPs. The material on Cristofori-action pianos has been removed from the original chapter two ("The Classic Piano"), expanded, and along with information on other pianos of the early eighteenth century, put in a new chapter two, entitled "The Earliest Pianos." The old chapter two has become chapter three, expanded to include new information on the grands and squares of the classical era; and since the instrument is still changing, the final chapter ("The Modern Piano") has also been augmented. Many emendations, additions, and changes were made in the intervening chapters, but there has been little substantive rewriting. Rather than a criticism, this comment should be taken as a compliment: the earlier version was so well done that most of this nicely-illustrated book needed little other than occasional factual revision.

A detailed re-review of the major portion of its contents would make little sense. Suffice it to say that *Giraffes* is a fascinating account of the

interplay between the piano as a music-making machine and the changing technology of its design, materials, and manufacture. In contrast to most writers on the instrument, Good does not believe that the modern instrument is the result of a Darwinian survival of the fittest, a linear evolution from the “primitive” constructions of Cristofori to the triumphant splendor of the nine-foot Steinway grand (which is, by the way, the *Black Dragon* of the book’s title). “But change is not synonymous with improvement or with progress. . . . That the piano has been improved in certain objective ways I do not doubt. . . . But I am unwilling to conclude that for certain musical purposes—such as playing music by Mozart, Beethoven, Schubert, Schumann, Chopin, perhaps even Brahms—the modern piano is in all respects better than older ones. It is different from them” writes Good (p. xxi). To which I respond: “Bravo.”

Another of the author’s prime tenets regards the slow acceptance of what are generally considered to be technological “advances” in piano construction. The double-escapement (repetition) action, for example, invented by Sébastien Erard and his nephew Pierre, was patented in 1833. Yet by the 1880s it had still not been adopted by many French makers; German and Austrian pianos still used Viennese actions, and English instruments were content with the venerable English action known to (but scarcely appreciated by) Beethoven. It was not until the late nineteenth century that today’s standard repetition action was universally adopted (although Viennese actions continued to be made until well into the twentieth century). A similar story is told about the acceptance of the cast-iron frame, invented for square pianos by Alpheus Babcock in Philadelphia in 1825, adopted for grand pianos by Jonas Chickering in Boston in 1840, but ignored—one might almost say rejected—by Continental builders for years. The slow acceptance of cross stringing provides yet another example of the inherent conservatism of piano manufacturers. The photos allow us to compare a Steinway grand of 1867 (p. 210) with double-escapement action, over dampers, cast-iron frame, and cross stringing, to a ca. 1894 Erard (p. 252) which, although it does have a double-escapement action, also has under dampers, six bolted-on tension bars, and straight stringing. Yet, Good would say, this is not an indication that the Erard was any less viable a musical instrument. Its values were different, and those differences were appreciated.

A thorough description of the work and influence of Bartolomeo Cristofori forms the core of the new chapter two. Cristofori’s amazingly

well thought-out action had far more influence than was believed twenty years ago: not only is it found in the work of his Florentine student Giovanni Ferrini, but also in the earliest pianos of Spain (Francisco Pérez Mirabal), Portugal (Henri van Casteel and Manuel and Joachim Jozé Antunes), and Germany (Gottfried Silbermann).¹ The fruitless efforts of Jean Marius and Christoph Gottlieb Schröter, both of whom developed designs for actions different from Cristofori's, but neither of whom ever produced a piano, are not forgotten. Attention is given to the *pantalon*, an enormous dulcimer played with mallets, invented around the turn of the eighteenth century by its greatest practitioner, Pantaleon Hebenstreit. Good calls him a "superstar" who gained his virtuoso status by "back-breaking practice" (p. 45). Hebenstreit, he notes, "could play both softly and loudly, and the undamped shimmer that he threw over series of arpeggios on his unwieldy monster cast audiences into spasms of ecstasy" (p. 45). He is probably not exaggerating: Hebenstreit, who named his instrument after himself in 1704 at the suggestion of Louis XIV, created a sensation wherever he appeared. In 1731 the otherwise obscure Leipzig builder Wahl Friedrich Fickern (or Ficker) invented his *Cymbal-Clavier*, a harpsichord-shaped keyed pantalon with a down-striking action. This and other shapes were built, but the most common was that of the square piano. Distinctions between that instrument and the keyed pantalon quickly became blurred, but (at least in theory) it was the instrument with bare wooden hammers and no dampers that bore Hebenstreit's name. Its action was rudimentary, designed to impart nothing more than a less-than-subtle blow to the strings. Mutation stops were provided if softer sounds were desired—an important distinction from the piano proper, where dynamics were controlled by the fingers. Such stops became an important feature of later German pianos, appearing as bassoon stops, moderators, buff stops, and the infamous Janissary stop.

The final chapter ("The Modern Piano") brings the history of the instrument up to date. The electronic piano based on sampling algorithms—the present-day "keyboard"—is dealt with at some length, even though Good at first refuses to admit it to membership in the club. Still, eventually, he has to concede, "if it has a keyboard like a piano, sounds like a piano, and is played like a piano, then in some sense, and with all the

1. And France. Surprisingly, Good neglects to mention the 1781 Cristofori-action piano by the Marseillais Louis Bas (Vermillion, Shrine to Music Museum).

modifying qualifiers in full play, it *is* a piano" (p. 296), and he even likens the keyboard to the early square in shape, size, and function. New piano companies that have arisen since the first edition, such as Falcone of Massachusetts, Fazioli of Italy, and Daewoo and Handok of Korea, are given their due, and the dizzying fortunes and setbacks of more established firms such as Steinway and Baldwin are examined. Good is particularly taken (as are others in the piano world) with the patented action of Darrell Fandrich of Seattle, Washington, which, for the first time, provides upright pianos with both the feel and the quick repetition of the grand's double escapement. This, he believes, could possibly "revolutionize the market for upright pianos" (p. 308).

While Good's knowledge of the piano appears to be encyclopedic, his grasp of some of the more esoteric elements of keyboard instruments is not nearly as secure. A reference to Irish clavichords (p. 55) is puzzling, since none are known from that region. Also puzzling is his statement that the English were devoted to the virginal in the eighteenth century (p. 63); surely he means the bentside spinet. He repeats the utterly false notion that on a fretted clavichord "one cannot play the adjacent notes rapidly in succession, and a trill between the two keys on the same strings is quite impossible" (p. 61). The remark that "spruce has been the material for soundboards since there have been makers of stringed keyboard instruments" (p. 14) needs some amplification, since fir, pine, cypress, and maple have all been used as soundboard woods, some of them extensively. His claim that the rim of the piano must be made of hard wood to better reflect back the vibrating energy of the soundboard (p. 4) is misleading. There are too many other variables involved in the complex issue of boundary conditions, a point implied by Good himself, who, in his next sentence, notes that the rims of Bösendorfer pianos are made of spruce, a much softer wood than those commonly used.² He notes that the presence of trichord stringing in the late eighteenth-century English grand is the reason its tone was stronger than the

2. Despite Good's claim that, compared to its other parts, little is known about the acoustics of the piano soundboard (p. 15), there is a large and ever-growing literature dealing with soundboard behavior. One thorough discussion of this topic is found in Klaus Wogram, "The Strings and the Soundboard," in *Five Lectures on the Acoustics of the Piano*, ed. by Anders Askenfelt (Stockholm: Royal Swedish Academy of Music, 1990), 83–98. With articles dealing with piano design factors, touch, the relationship between hammer and string, and modal analyses of soundboard motion, this volume belongs on the shelf of anyone interested in the acoustics of the piano.

double-strung German and Austrian pianos (p. 70); but the differences in the distance of the hammer throw, hammer weight, and leverage are at least as significant, and he fails to note the important effect the third string has on the sustaining quality of the sound—that singing tone that Beethoven loved.³ He refers to a 1795 K $\ddot{o}$ nnicke piano with a six-octave compass and six keyboards (p. 98), but that instrument has a *five*-octave range, and six *rows* of keys.⁴ There is some confusion in his discussion of historical temperaments (which he calls “tuning systems,” p. 98). Good mentions a “just” tuning (although he appears to be describing quarter-comma meantone temperament) as common for late eighteenth-century pianos, but it was the revolving or modified meantone temperaments that were in use then, permitting the use of all keys, with the simpler ones more consonant in sound.

Nevertheless, *Giraffes* is not about acoustics, clavichords, temperaments, and keyboards with thirty-one notes per octave, and it almost seems petty to cavil its minor flaws, as annoying as they are. This second edition makes it an even more valuable reference work, but it is also a book that can be read for sheer pleasure. We know the outcome of the story of the piano—but what a labyrinthian journey it was to get here!

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Phillipe Lescat and Jean Saint-Arroman, editors. *Clarinete: Méthodes et Traités, Dictionnaires* (Méthodes et Traités vol. 6, Série I, France 1600–1800). Courlay: J. M. Fuzeau, 2000. 303 pp. ISMN: M 2306-5802-7. €59.81 (cloth).

Publisher J. M. Fuzeau has embarked on a series of volumes presenting facsimiles of French method books and theoretical works, each volume being devoted to a particular instrument. The volumes in series I, edited

3. A classic article dealing with this effect is Gabriel Weinreich, “The Coupled Motion of Piano Strings,” in *Five Lectures*, 73–81.

4. This piano’s keyboard is discussed and pictured in Alfons Huber, “Der $\ddot{O}$ sterreichische Klavierbau im 18. Jahrhundert,” in *Das Klangwelt Mozarts* (Vienna: Kunsthistorisches Museum, 1991), 47–72, photographs on pp. 54 and 116. The keyboard is similar to that of Vito Trasuntino’s 1606 *Clavemusicum omnitonum* (Bologna, Museo Civico) with thirty-one notes to the octave.