



The Stearns Newsletter

The Stearns Collection of Musical Instruments at the University of Michigan

FALL 2003

SCHOOL OF MUSIC, THE UNIVERSITY OF MICHIGAN

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Greetings from the Director

In this issue of the newsletter, I would like to share with you two significant developments in Stearns activities. First, with Mr. Ted Lottman joining the Stearns Collection as an in-house designer, Stearns displays of musical instruments have achieved a higher level of sophistication. A professional and experienced designer, Mr. Lottman has already produced a display of Russian instruments that echoes with the current U-M celebration of St. Petersburg. He is now working on a display of Korean musical instruments that highlights gendered musical relationships. In addition, he is working with me to develop displays of musical instruments for the renovated Hill Auditorium which opens in the Winter of 2004. The grand exhibition of Stearns musical instruments will open in April 2004. To reveal the complex process of designing displays and its many obvious and not-so-obvious costs, I have invited Mr. Lottman to file a report. I am sure you will enjoy it, and find the description of his design process and methods interesting and informative. Second, as the digital archiving and cataloguing of the musical instruments progressed, a lot of new information has become available. To show you some of the new data, I have asked Mr. Christopher Dempsey, the Stearns graduate-student curator, and the computer wizard behind the Stearns website and other electronic records, to file a report on Stearns keyboard instruments. If you want to learn more about the instruments, and if you want to adopt any one of them, please contact me, Joseph Lam: 734-647-9471; jsclam@umich.edu.

Virginia Martin Howard Lectures, Fall 2003

With the blessing of its patron, Mrs. Virginia M. Howard who provided an endowment of funds to cover expenses, the Stearns Collection has expanded its lecture series with concerts. From now on, the collection will sponsor concerts and coordinated events of concerts and lectures. The first result was the concert (October 11) and lecture-demonstration (October 12) given by the Orchid Ensemble of Vancouver, Canada.



Lan Tung and Jonathan Bernard of the Orchid Ensemble.

The concert was attended by a sizeable audience, whose enthusiastic response to the performance confirmed the wisdom of sponsoring concerts of world musics. The lecture attracted an audience interested to learn about traditional Chinese music and musical instruments. At the end of the session, the lecturer-performers and the audience discussed various issues of traditional and contemporary musics.

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Keyboards of the Stearns

By Christopher Dempsey

The Stearns Collection of Musical Instruments has a number of keyboards, illustrating their growth as one of the most important type of Western musical instruments since the 17th century. This report introduces several samples in the collection; for a fuller description, visit our website at <http://www.music.umich.edu/resources/stearns/>.

One of the earliest keyboards in the collection is Stearns 1333, a harpsichord that features an inscription of “*Christoforus Rigunini, Firenze, A.D. 1602,*” and an



Manual of Stearns 1333.

instrument that not only tells of organological designs but also intrigues in the 19th century musical instrument market. Stearns 1333 is elaborately decorated. On the inside of the fallboard is an image of three monks, one playing a trumpet-like instrument, another a violin, and the last singing. An image of a music book is painted above a stand for the performer’s actual music, and the inside of the case has an image of a cherub playing a keyboard to accompany others’ dancing.

Nothing is known about the instrument maker, Rigunini, as Stearns 1333 is apparently the only instrument of his that has survived. The reference to Rigunini and the dating in the inscription may or may not be accurate; it may even be spurious. Historical records show that Frederick Stearns acquired Stearns 1333 and two other harpsichords around 1901 from Leopoldo Franciolini, an Italian antique musical instrument dealer who flourished from 1895-1910. Franciolini was a less than scrupulous businessman who had sold many forged or questionable instruments to unwary collectors. As a matter of fact, he was found guilty, in 1910, of commercial fraud. Franciolini, however, did sell original instruments, and thus not every instrument that he sold was a forgery.

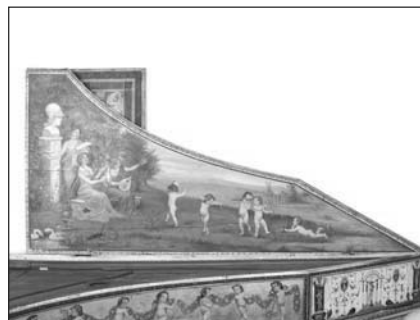
Franciolini modified authentic instruments, a fact that is attested by Stearns 1336, a three manual harpsichord with the inscription “*Bartolomeo Cristofori fece in Firenze anno 1702.*” A verified forgery—Franciolini made up the inscription, Stearns 1336 is, nevertheless, historically interesting. Cristofori was a famous harpsichord maker who worked in the Medici court, and whose greatest invention was an instrument described as an “*arpicimbalo che fà il piano e il forte*” – “arpicimbalo that plays piano and forte.” This was

the predecessor to the modern **p i a n o f o r t e**. Franciolini modified Stearns 1336, originally a single manual harpsichord, extensively. He not only added the



Triple manuals of Stearns 1336.

other two manuals and additional string choirs, but also extended the case. The modification was organologically extreme and a testimony of what Franciolini could do to make money. As recorded in his fifth catalogue of instruments, the asking



Artwork of Stearns 1336.

price for the triple manual harpsichord was 7000 liras; the asking price for single manual harpsichords was merely 200-500 liras.

Toward the end of the 18th century, the frontier of keyboard making in Europe was marked by clavichords and fortepianos. An example from the end of this innovative period is Stearns 1331, a clavichord, a truly beautiful and working instrument that vividly demonstrates musicians’ desire to control their production of musical tones. Unlike harpsichords the strings of which are plucked, a clavichord produces sounds by using a brass tangent to strike the strings; since the tangent remains in contact with the strings in the process, the performer maintains some control over

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the pitch of the sound produced, and can create the effects of portamento (the sliding of a pitch up or down) or vibrato. Stearns 1331 features a six-octave range



Stearns 1332.

from F to F and has black natural keys with white accidentals. There are 53 pairs of strings running parallel to the keyboard that terminate at the wrest-plank (a board that holds the tuning pins) on the right side.

Square pianos represent a later and different direction in the musicians' pursuit of musical sounds, a development that entailed many organological changes during the transition period between the 18th and 19th centuries, a time when the square pianos became the most commonly used keyboard instrument in European homes until the late 19th century, when they were eventually replaced by the upright pianos. Stearns 1340



Nameboard of Stearns 1340.

is a square piano made by the famous French maker *Erard Frères et Cie*. Constructed in 1808, the instrument resembles a clavichord in that the wrest-plank lies

to the right while hitchpins tie the other end of the strings to the back of the instrument. The piano employs a "single action" mechanism in which hammers that strike the strings are positioned vertically to the keys of the instrument.. As the hammers swing on leather hinges, sufficient force must be used to strike the keys that activate the hammers, a requirement that discourages soft pianissimo playing.

If Stearns 1340 represents 19th century French technology of piano making, Stearns 1339, an English square piano made by John Broadwood and Sons attests to the development across the channel. Though it was made only 2 years after the aforementioned

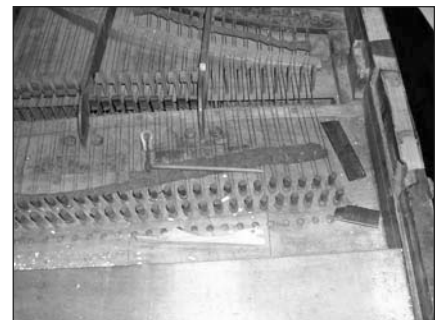
French piano, Stearns 1339 features a number of technological advances. They include, for example, the relocation of the wrest-plank from the right of the instrument to the back, thereby increasing dynamics and facilitating tuning, and the incorporation of a double action, or simple escapement mechanism. Here, the action of depressing a key raises a hopper, and causes it to strike the underhammer, which then forces the hammer to strike the string. Stearns 1339 features a range that spans five octaves and a fifth from F.



Stearns 1339.

Broadwood pianos were favorably received and many of them are still being preserved. Among the two Broadwood grand pianos that the Stearns Collection holds, Stearns 1484 (formerly Stearns 1344A) is older and has a more interesting history. An example of an early nineteenth century grand piano, Stearns 1484 is very similar to the piano that Thomas Broadwood, the younger son of John Broadwood, presented to Beethoven in 1817. As history has established, that piano became a favorite of Beethoven, and was subsequently owned by Franz Liszt. Manufactured around 1815, and featuring a six octave range of CC to c", Stearns 1484 was a triple strung piano— each of its notes had three sympathetically

tuned strings that connected to hitchpins along the end of the instrument. At some later date in the 19th century, Stearns 1484 was modified. An iron



Tuning pins on Stearns 1494. Part of iron frame at top.

frame was added to the instrument; stronger strings with much higher tension were double strung along the frame, and the range of the instrument was shifted to six octaves starting at FF. Evidence of the modification can still be seen today in the plugged holes along the hitchpin plank, an unused row of tuning pin

Creating an Exhibit

By Ted Lottman

Having just completed the design of the Korean Musical Instrument Exhibit for the Stearns Collection of Musical Instruments, and having accepted Professor Joseph Lam's invitation to write for the *Stearns Newsletter*, I would like to share with you this report about the display and the process in which I created and produced it.

The process began with my studying of countless images of frozen musical and cultural moments, photographs and illustrations that I had obtained from U-M libraries and private collections. To me, each picture tells a distinctive story, providing me with experiences and information that no money can buy. As I absorbed the information, I began to create the design, a presentation that not only shows an instrument but projects its musicality and cultural role. I cannot simply mount the *komungo* for the Korean Musical Instrument Exhibit. I have to find ways to project its distinctive tone, its history of being the chosen instrument of elite Korean men. And considering the natural and sacred materials with which the *komungo* is constructed, I decided that I had to stage the instrument in a traditional and respectful setting.

To create this setting, I have to manipulate the linear and three-dimensional space of the exhibit so that it provides subliminal cues to the viewers. To achieve this, the exhibit has to



Ted Lottman

transcend physical barriers that separate the displayed objects, the information it embodies, and the viewer. Unless the barriers are virtually transparent, interactive experience between the displayed objects and the viewers will not take place. In most cases, one of the most prominent physical barriers is a plane of glass, but in certain instances the barriers can include solid structural members of the case itself, and even furniture and fixtures placed adjacent to the display. For example, the case at the main entrance to the School of Music, where the Korean instruments will be displayed, has oak uprights that create severe sectioning of the viewing field. The challenge in this situation is to enlist these uprights to work as tools to effectively enhance the visual experience of the interior graphics and artifacts. Thus, I chose to present in the display large format graphics that define and span the visual parameters dictated by the case's structural members. As a result, the viewers' physical action of moving along the exhibit effectively defines new vistas for their experience of instruments. They will not feel that the case and its uprights are blocking their viewing of the display.

To render the visual imagery more crisp, I work on the lighting. A dimly lit display case has the unfortunate ability of altering an otherwise engaging presentation into a static, 'dusty', and overly academic show. I believe that natural sunlight brings out the most color correct and psychologically pleasing presentation of objects and graphic information. Therefore, whenever I have the opportunity to specify lighting effects I will choose a natural 'sunlight' fluorescent base lighting

augmented by pink and azure-blue filtered lighting sources as enhancers. This is what I have ordered for the display case of the Korean musical instruments.

To further enhance the display, I consider its surrounding environment. What kind of effect is the



Design model of Korean musical instruments display.

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Exhibit, continued from p. 4

exhibit going to have on existing, adjacent features? What sort of effect is desired? What kind of story needs to be told? And how is it to be supported? Is the exhibit to be a centerpiece or is it to complement an already existing atmosphere? Again, in the case of the entrance to the School of Music, the entrance is dark and has a tendency to close in and constrict a visitor. With the new lighting, the Korean musical instrument exhibit will significantly brighten and open up the entrance, an effect that is critical to the success of the display.

Having solved the external and overall design problems of the exhibit, I turned my attention to the details inside the case. Thus, I supported the *kayagum* on sturdy but yet unobtrusive mounts. Sitting next to it is the *channgo*, newly and correctly re-strung by a professional musician; the instruments must be presented as they are being used on stage.

To accurately coordinate all the details of the design, I made study sketches, an exercise that brought me closer to the inherent character of the instruments, their purpose and place in their society, and allowed me to present them in their best.

As a designer, my responsibilities to the Stearns Collection of Musical Instruments at the University of Michigan is to create a harmonious family of exhibits, not just vignettes of musical instruments and cultures. I liken my efforts to the creation of a harmonious world that holds distinctively separate and yet totally interconnected pieces of the human puzzle.

With the help of Dr. William Malm, a former director of the Stearns Collection and my mentor., and the current director, Professor Joseph Lam (who guides my steps so that I realize what the Stearns exhibits should be), I hope to contribute to reveal the true meaning and character of the Stearns Collection to UM students and Ann Arbor citizens. The opportunity to design for the Stearns Collection help me to pursue my grand ambition as a designer. In return, I would like to contribute to the collection's emergence as a highly visual and educational component of a most distinguished university.

Lectures, continued from p. 1

The Orchid Ensemble is an internationally known group of three musicians: Jonathan Bernard, percussionist, Mei Han, *zheng* player, and Lan Tung, *erhu* performer,



Mei Han of the Orchid Ensemble.

whose 2003 tour in Northern America is supported by the Canadian Council for the Arts. By programming their Stearns concert with traditional and contemporary compositions, the Orchid Ensemble showed a diversity of musical expressions. By performing “Yaribon,” a contemporary Canadian composition that is based on a Jewish ritual tune, and is played with Chinese and Western musical instruments, the Orchid Ensemble evidenced the creative and distinctive appeal of musical and cultural blending. It is that appeal, needless to say, that is propelling a worldwide emergence of intercultural musics.

On September 21, 2003, Professor Kelly Askew of the U-M Anthropology Department gave an informative and insightful lecture that was entitled “Stars of the Swahili Coast: Taarab Musical Clubs in Tanga, Tanzania.” With fascinating musical examples and illustrations, she described how music developed in the 1950s and 1960s, in the African metropolis.



Professor Kelly Askew.

Professor Askew's lecture concluded with a lively discussion on the ways politics, social movements, and musicians' creativity shaped the development of music styles and activities.

How Do I Get To The Stearns?

The Stearns Collection of Musical Instruments is located in the Margaret Dow Towsley wing at the south end of the Earl V. Moore Building of the School of Music on Baits Drive in the University of Michigan North Campus area. Enter through the doors nearest to the parking lot. The McIntosh Hall is just across the lobby and to the right of the entrance. The Stearns galleries are down the stairs at the end of the lobby to the right.

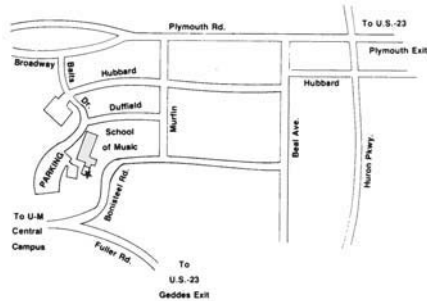
Admission: Free at all times.

Exhibit Hours: Monday through Friday
10:00 a.m. - 4:00 p.m.

Group Visits and Tours:

To arrange for group visits or guided tours, please call (734) 763-4389.

Parking: Metered parking is available south of the entrance doors.



Keyboards, continued from p. 3

holes along the wrest plank, and notes written behind the name board that indicate key placement for both the original and current configuration. There are more secrets to Stearns 1494, discovery of which awaits further and more detailed study.

As pianos became fixtures of Western musical life, and as piano players were not always available, piano roll players were developed. Stearns 1884, a Pianola from the Aeolian Company is a prime example of piano roll players that were popular from 1897 until World War I. As a machine that works in tandem with an ordinary piano, the Pianola is a complex design that employs piano rolls, multiple wooden fingers, bellows, and a metal rod for a foot pedal. To operate, the Pianola is wheeled up to an ordinary piano, so that the wooden fingers are aligned to corresponding keys; then as the pedal is pumped, it moves the bellows that spin the piano roll, which in turn activates the wooden fingers to press the individual piano keys. The result is a self-playing piano that had a sound quality far superior to the phonographs of the day. Stearns 1884 was donated to the collection in 1976 and restored in 1990. As restored, the instrument only has 65 fingers, leaving the extreme ranges on a typical piano unused. The popularity of the Pianola began to decline as piano rolls were incorporated into pianos themselves, thus eliminating the need for the cumbersome attachment. Yet memories of the Pianola lived on, and the word Pianola has become a generic term for music producing items that may or may not be associated with the original.



Stearns 1884.



Stearns 2035.

As electricity became available in the 20th century, it replaced foot power to operate organs and player pianos. Then, electricity led to technological innovations that used electricity to generate sounds directly. The results are of course electronic music and electronic musical instruments which often employ keyboards as the means to trigger specific tones. One early example of these electronic instruments is Stearns 2035, the first commercially produced Moog Synthesizer. Here, controlled voltage creates sounds that pass through various filters to acquire unique timbres. Since the 1950s, when electronic musical instruments first captured world wide interest, synthesizer technology has advanced significantly and become much more widespread. It is an

indispensable tool of contemporary music making, a fact that underscores the importance of Stearns 2035 as an early embodiment of a musical and organological development that is still being unfolded.

Learn more about the keyboard instruments of the Stearns Collection at our website <http://www.music.umich.edu/resources/stearns/>, where you can take a virtual tour while reading a more detailed account of these instruments.