The Journal of the Pianola Institute

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Contents

Editorial: Louis Cyr
Aims of the Pianola Institute: Rex Lawson
The Rachmaninov Legacy: Lionel Salter
Stravinsky and the Pianola (Part 1): Rex Lawson
Review of the Pianola Institute inaugural concert: Dan Wilson
The Duo-Art Pianola Rolls of the Enigma Variations:
Trevor Fenemore-Jones
On Writing for the Mechanical Piano: Ernst Toch
Book Reviews
Contents

Editorial: Louis Cyr 1
The Pianola and its Institute: Rex Lawson 4
The Rachmaninov Legacy: Lionel Salter 8
Stravinsky and the Pianola (Part 1): Rex Lawson 14
Review of the Pianola Institute inaugural concert: Dan Wilson 27
The Duo-Art Pianola rolls of the Enigma Variations: 29
   Trevor Fenemore-Jones
On Writing for the Mechanical Piano: Ernst Toch 36

Book Reviews 40
Restoring Pianolas and other Self-Playing Pianos;
   Denis Hall

Notes on Contributors 44

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The aims of the Institute
A small number of pianola owners and musicians have been concerned for some time at the unnatural break between the world of music rolls and the world of music. Few members of the musical public know much about player pianos, and the Institute aims to bring about a better understanding and appreciation of the instrument in a number of ways.

Plans have been made for a regular journal, public concerts, a lending library of rolls, a travelling exhibition, and in addition, a roll and information archive is to be established, with a small collection of player pianos for listening and study purposes.

The Pianola Institute will endeavour to preserve, research and document the pianola’s history, to improve the instrument’s present standing, and by the commissioning of new compositions, to ensure that it remains an important musical force for the future.

The Directors of the Institute are:
Hugo Cole, Louis Cyr, Keith Daniels, Mike Davies, Denis Hall, Rex Lawson, Donna McDonald, Jeremy Siepmann. Company Secretary: Claire L’Enfant.

It is possible to support the work of the Institute by joining the Friends of the Pianola Institute. Membership enquiries should be sent to Mike Davies, 9 Jillian Close, Chestnut Avenue, Hampton, Middlesex, England.

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Editorial

Never has a century of music making such as our own been so outstandingly characterized by the (re)discovery of musics past or remote. Keyboard instruments make no exception; quite the contrary. From the tracker organ, the clavichord, the cembalo, the pianoforte through the various makes of grand pianos, the trend has been the same as with nearly all other families of instruments. The louder, more standard-ized and more accessible our organs and pianos have become, all the more has our curiosity been aroused for the more refined, more intimate and distinctive sound profiles of their predecessors.

On the other hand, with travel distances shrivelling up, we have gained access to musics, instruments and ways of music-making not yet completely drowned by the overwhelming invasion of steady noise that infests our sound waves. Barriers are slowly but surely breaking down between classical, popular, jazz and folk (ethnic) idioms, between the north and the south, between ritual and aestheticism, between oral and written traditions. On the brink of total deafness, numbed and dazed by the endless stream of muzaks, decibels and walkmen, we have started listening again. Silences and rests are reappearing between notes and phrases of the music we breathe and produce more naturally.

Contemporary classical music has also sharpened our ears for differentiated instrumental ensembles as well as for new instruments and novel ways of producing sounds from the traditional ones, first and foremost the human voice. At the same time greater historical awareness has lifted Medieval, Renaissance and Baroque instruments and repertoires straight out of museum showcases and library archives, and placed them squarely on the concert stage as well as in the recording studio. Not that we can ever hope to play or listen to them with the unblemished techniques and ears of centuries past, or of civilizations present but remote from our own. It would seem, however, that our one-sided perception of progress and evolution in the world of music as a straight, irreversible and continuous line, has been given a rather healthy jolt. We have become intensely keen on salvaging and reconstructing instruments and musics of our own past. In some cases we have even outstripped the zeal and enthusiasm of remote ethnic groups and have apparently taken more to heart than they the rescue and survival of their own musics from the noisy intrusion of our standardized media products.

Nostalgia? Guilt feelings at, and belated compensation for, the ravages
of our domineering, world-wide diffusion policies? Escapism from the allegedly ugly sounds of contemporary works? Typical capitalistic possessiveness (and appropriation on disc, tape or air-waves) of all music history rather than one’s own re-creative music-making? No doubt all of these factors, and many more, underlie such a heretofore unheard of richness and diversity of music-making and listening. And, finally, one is staggered today by the seemingly limitless possibilities of synthesizing all sounds known and of inventing so many more, still unheard.

Small wonder, then, within such a global sound framework and despite all the refinements and acrobatics of sound recording, that interest has been rekindled in both the reproducing piano and the pianola. Only very recently, in fact, have piano recordings achieved the quality of reproduction that perforated rolls allowed for, directly from one’s own instrument, as far back as the early 1900s. Only the passion and painstaking labour of mechanical instrument collectors, their activities and publications of the last three decades have saved pianolas and reproducing pianos from complete demise and hence total oblivion. The audio-visual education input into the production, by the Aeolian company in the late twenties, of the AudioGraphic roll series simply staggers the imagination. As a parallel witness to the century’s style of piano playing, reproducing rolls, besides the early acoustical and electrical disc recordings, are of irreplaceable value, even if their deficiencies and technical shortcomings may not be overlooked.

Of course, the urgency and possibility of processing extant perforated rolls onto floppy discs (or onto any other form of digital software support), in order to re-transfer them onto more resilient and lasting paper, will escape no one’s attention. But, at a time when, against overpowering odds, one’s own music-making, improvising and (re-)creating are gaining ground, it is perhaps the (re-)birth of the art of pianola playing that provides the most tantalizing challenge to both performers and composers. The realisation of this has come about not through any theoretical reflection on articles, books and treatises past, but through actual public performances by a handful of musicians who also happen to be expert technicians of the instruments they play. Their enthusiasm is contagious; composers are warming up to the challenge, and their demands and expectations might even in return bring about technical innovations to the instruments themselves. One can only dream of making contemporary works accessible and ‘performable’ through this medium.

Whatever the future holds in store, as one of the many activities planned by the Pianola Institute, this journal aims at providing a forum, not only for the exchange of information, but also for short and long-term reflection concerning all such concrete practical developments. It will be
published annually to begin with, with possibly an occasional newsletter to bridge the gap between issues.

Its future is however, basically in the hands of its readership, from whom we solicit and welcome all manner of criticisms, suggestions, reflections and contributions.

Louis Cyr

Montreal

February 1987
The Pianola and its Institute

Rex Lawson

The pianola is a curious instrument; putting its conception in a nutshell, it was developed back in the 1890s in order that the untalented daughters of rich American businessmen should be able to play salon music at least to a mediocre standard of artistry, and to save their mothers and fathers from the social embarrassment of a silent piano. Expressed more seriously, it provided amateur pianists with an immediate and faultless digital technique, but was not originally intended as the subject of serious musical study, any more than is the compact disc player nowadays.

However, two unique features of the pianola soon became apparent, that were on occasion to elevate it from the level of a domestic enterprise and into the realms of a concert instrument. The first and most obvious of these was its facility to provide all the correct notes of a piece, without placing any great restrictions on individual interpretation. Since its music was not recorded, but transcribed directly from the printed score onto master rolls by hand, there were no inherent dynamic controls and no elements of rubato or phrasing. Thus the operator – pianolist is the approved term – was free to make as much of a piece as possible, and a few professional demonstrators and devoted amateurs began to elicit far more musical performances from roll than the pianola’s inventors had, in the writer’s opinion, foreseen.

The other feature that marked the instrument out from its musical contemporaries was the number and complexity of notes that it could play. In the early days, before 1908, most pianolas had only 65 notes at their disposal, sacrificing an octave at the extreme treble and bass in order to prevent mechanisms and rolls from becoming unwieldy. Nevertheless, four-hand arrangements could be perforated on roll without losing too much detail, and one or two brave souls, including the President of the American Guild of Organists, Homer Newton Bartlett, and even one Ferruccio Busoni, composed and arranged music especially for the instrument. Once a standard eighty-eight note system had been adopted by the industry, this interest in composition spread to many other musicians, including Stravinsky, Hindemith, Milhaud, Honegger and Percy Grainger, and reached well over seventy composers during the course of this century. The American, Conlon Nancarrow, is the main contemporary standard bearer, though there are also musicians at work in Britain, the Netherlands and Australia.

Concurrently with the history of the pianola came the invention and
development of the reproducing piano, first brought into the world in January 1905 by the firm of M. Welte & Söhne of Freiburg im Breisgau, Germany. Like the harpsichord and the piano, the pianola and reproducing piano spring from the same roots, but are similarly dissimilar in purpose. Both are powered by suction, both use paper music rolls, but from that point onwards there are many differences. Reproducing piano rolls are recorded from the playing of live musicians, and are thus intended to operate at a constant speed, rather like a gramophone record. Their suction power comes from an electric pump, and is regulated by complex mechanisms under the control of coded perforations on the roll itself. This is music to be listened to, not to be played, and it is in the passivity or activity of the proud owner that the differences between the two types of instrument are best reflected.

Of course, over a period of some ninety years, pianolas and reproducing pianos have often strayed into each others domain, so that the distinction between the two has not always been so clear. In the United States, the tradition of carefully playing the pianola had all but disappeared by the time of the First War, so that a new half-breed of music rolls became popular, using the tempo inflections recorded by a live pianist, but expecting that either the dynamics would be controlled by the pianolist or, more often than not, that the music would issue forth at an inexorably fixed level. Modern piano rolls are nearly always 'hand-played' in this way, since pianola-playing as a musical art is now unknown in most parts of the world.

A similar incursion in the other direction has occurred when composers have used reproducing pianos, usually with deliberately simple dynamic codes, as a vehicle for their compositions. Hindemith saw the Welte reproducing system as a buttress against the over-romantic interpretation of his works, while Conlon Nancarrow and his gentle mixture of jazz, counterpoint, wit and razzle are paradoxically served up on the Ampico, a system created for the smooth musical utterances of Rachmaninov, Rosenthal and Lhevinne. A musicologist's desire to classify is often thwarted!

Since the Second War, public awareness of these varied instruments has on the whole been poor. For thirty years or so, wheezy old uprights have been accepted as the norm, and serious musicians have kept them at arm's length, so that the world of music and the world of music rolls have gone their own ways, and still only meet on rare occasions. It is interesting that in recent times, Stravinsky, Rubinstein and Horowitz all saw fit to decry their former music roll recordings, a strange outbreak of old sages regretting their mis-spent youth. Yet all three were brilliant young men, and it seems hardly conceivable that they should have communally prostituted their musical ideals. How much more likely, since the war,
that the odd derelict pianola, the odd understated sneer from younger musicians, should have made them question their own memories of earlier times.

In thirty years there have been many disc recordings of reproducing pianos, and not all have been as faithful as they might, indeed some have been downright bad. Musicians have been quick to blame the reproducing piano in general for the faults of one reproducing piano in particular, and the same is true of the pianola. Most music critics, on reviewing the previous night’s piano recital, criticize the pianist, perhaps have some words to say about the piano used, if it is particularly good or bad, but do not usually lay down the law about pianos as a whole. General criticisms of this sort come in books, and are normally the result of years of experience. So have pity on the poor pianolist, who after one performance finds the press providing a résumé of the pianola’s qualities and limitations, and generally avoiding any reference to the particular instrument or player.

Considerations of this nature led over a period of some years to the idea of an organisation that might draw these disparate worlds together. There have been pianola and reproducing piano concerts in public halls for many years now, mostly in London, but also in other parts of Britain, and in the Netherlands, Australia and the USA. Societies for pianola owners flourish in various countries, usually providing an excellent forum for the exchange of ideas and the forming of friendships, but there is still a need for an outward looking body to encourage a general change of attitude towards the instrument.

For example, several universities and archives in Australia, England, France and the USA hold collections of piano rolls, piano roll catalogues, pianola manuscripts and many other similar artefacts. Usually these holdings are stored in library vaults and watched over by trained personnel, but with no great expertise in the history of the pianola. There is no blame to apportion here; the situation has simply come about because of the pianola’s general obscurity, and it will be alleviated if an international Institute can bring such collections into contact with one another.

There are many other noble aims that a young Pianola Institute, fresh into the world, can take to its youthful bosom. The issuing of disc recordings and cassettes, the publication of books, rolls and a regular journal, the presentation of concerts and academic conferences; all these are worthwhile projects for the future, together with the setting up of a permanent archive and study centre. Fledgling pianolists must learn to use their feet before they can fly, however, and for the present a regular journal is likely to be the Institute’s main activity, punctuated occasion-
ally by public concerts and lectures, of which the inaugural example is reviewed elsewhere in these pages.

If a committed internationalist may be allowed momentarily to nod, it seems pleasantly appropriate to him that the impetus for this new venture should have grown out of the British pianola tradition. Playing the pianola seriously was a heresy largely confined to these shores and their sundry dominions, and propagated by a certain class of English gentleman, artistic in outlook and with a liberal education, whose appreciation of classical music far surpassed the dexterity of its fingers. Arnold Bennett, Bernard Shaw, H.G. Wells – these typify the stratum of society that sought to make an art out of the apparent drudgery of pedalling and lever-pushing.

It is interesting to note that the Aeolian Company of New York, whose technical director, Edwin S. Votey, led the development of the pianola, founded its British subsidiary in 1899 as the Orchestrelle Company. From its earliest days, Aeolian had named its companies very directly after the main instruments it expected to sell. The Aeolian itself was a fairly simple roll-operated harmonium that the then Mechanical Orguinette Company had just begun to push when it renamed itself in 1882. The Orchestrelle, on the other hand, was a complex and delicately-voiced instrument, the ultimate in reed organs, intended as a medium for orchestral music in the homes of the very rich. Clearly Aeolian saw the British upper classes as a ready market for this expensive luxury, and it must have come as a surprise that the ‘OC’, as it was affectionately known, ended up doing far better business with the humble pianola.

British pianolists, having taken the instrument to heart, demanded good music for it, and as a result the Orchestrelle Company was soon turning out a far better and more comprehensive selection of serious music rolls than its American parent. Stravinsky’s *Etude pour Pianola* was commissioned in London and issued in 1921, by which time the Company already had in its catalogues, for example, *The Rite of Spring*, Schönberg’s Opus 11 Piano pieces, *Daphnis and Chloë* (complete), the Debussy Preludes, Elgar’s Violin Concerto, all of Humperdinck’s four-hand transcription of *Parsifal*, the Mozart Requiem, 36 of the 48 and all the Goldberg Variations, plus music by Byrd, Gibbons and even Arcadelt. Maybe these were not the best selling rolls, but they typify the interesting choices of repertoire that sparkle through the 1400 page roll catalogue of 1914 and its predecessors.

With the demise of the first era of the pianola during the 1930s, many instruments and rolls must have been destroyed all over the world. And yet one or two pianolists in Britain kept the candle sconces burning until well into the 1970s. It would be impracticable to list all British pianolists
here – they will in any case come to light through these pages in the fullness of time – but honourable mention should be made of two of them.

Reginald Reynolds was the chief pianolist and reproducing piano roll editor for the Aeolian Company in Britain, travelling all over the country to give concerts, and cooperating with dozens of international pianists in the recording and editing of some superb Duo-Art piano rolls. Besides these activities, he left writings and a Pianola Practice Roll that have inspired many on the road to pianolism, but it is especially gratifying that the youngest of his children, Yvonne Hinde-Smith, is a founder member of the Institute. In this very personal way his inspiration lives on for all of us.

In the second place, the memory is still strong of Bill Candy, who died in 1981, and who was during the 1920s piano roll critic for the *Musical Times*, under the pseudonym of William Delasaire. Bill was the pianola soloist in a performance of the Grieg Piano Concerto in London in 1930, and was a demonstrator for the German Hupfeld player-pianos sold in London by Messrs Blüthner & Co. It was an enlightenment to talk about music with this gentle man, and bitter sweet to hear of his ‘benign envy’ towards the plans for institutes and concerts which he knew he could only share at second hand. Bill presented all his rolls – some 700 – to posterity in the care of the writer, and once the Institute gets fully under way, they will become an important part of its founding collection.

But the Pianola’s voyage towards a musical Utopia has been influenced by many people and many nationalities over the years, and not simply by its most ardent adherents. After all, it was developed before all but the most venerable of us were born, and its tradition will undoubtedly survive for centuries to come. In the light of the undeservedly poor reputation it enjoyed during the postwar years, it needs a public body to watch over its progress, and to develop public awareness of its musical virtues. As it embarks on its ninety-first year, we hope it, and the world of music generally, will benefit from the foundation of the new Pianola Institute.
The Rachmaninov Legacy

Lionel Salter

It is deeply ironical that the only way for the musical world at large to hear and study piano-roll recordings has been by having them transferred to disc, a medium which they once challenged. Even so, assessment has often been clouded by obvious maladjustments or imperfections in the reproducing pianos employed, and/or in the re-recording process. However, the recent issue on seven well-engineered stereo LPs of recordings from Ampico piano rolls by Rachmaninov, Lhevinne and Rosenthal reproduced on a fine Estonia-Ampico instrument – thanks to the expert and devoted efforts of Norman Evans, who checked, adjusted, repaired or rebuilt every detail of its action – now makes it possible to form a clear opinion of these performances, and to compare them with those (where such exist) by the same artists given for the gramophone.

Sergei Rachmaninov 1873–1943

No great pianist made so many recordings in both systems as Rachmaninov; and since skilfully re-engineered transfers of all his 1919–29 Victor recordings are now available on RCA (AVM3 0260, 0261 and 0294), critical comparison can be made between these and his Ampico recordings (on Oiseau-Lyre 414–096, –099 and –122). Though he
performed a few pieces solely for Ampico – Chopin’s B flat minor Scherzo and F major Nocturne, the Rubinstein Barcarolle, his transcription of a Mussorgsky Polka and his own Élégie and Polichinelle from Op. 3 and the Op. 39 no. 4 Etude-Tableau – there are 28 pieces which exist in both systems; and except in one case it seems clear that the veracity of the roll perforations is above suspicion. (It is well known that Rachmaninov refused to allow the issue of any recording unless he was satisfied with it, and that once, after having listened taciturn and boot-faced to a playback, he astonished and delighted Ampico staff by turning round and declaring, ‘Gentlemen, I have just heard myself play.’) The sound quality of the transferred rolls is, naturally, greatly superior to that of the pre-electric discs, and even of those made in 1940 – only the three 1942 recordings stand out as entirely acceptable; but it has to be conceded that some of the earlier rolls failed to capture the quieter tonal nuances.

Rachmaninov compositions
This is immediately obvious in the C sharp minor Prelude whose once enormous popularity became, in Rachmaninov’s words, an albatross round his neck. Though the same tenutos, rubatos (e.g. the big rallentando in the bar before the Agitato, and the pulling out of the Agitato’s 4th bar) and minor variants from the text in dynamics (a decrescendo to bar 7 instead of mf, and a long diminuendo in the final line) are common to all four recorded versions, the roll reduces the ff-ppp contrast of the opening. At the Tempo I (invariably taken in strict time) the roll is a little faster, though the overall duration is slightly longer than on all but the 1919 disc. It would seem that after thirty years or more of playing these popular early solos of his, Rachmaninov had (understandably) become a little bored with them, for he made considerable departures from the printed texts of his Op. 3 and Op. 10 pieces. The Serenade, for example, is much decorated and embellished with extended chords, trills, filigree runs and octave transpositions: in 1922 he began it in improvisatory fashion, in the more forthright 1936 version (which has a climactic ending instead of the printed ppp) he began mf, not pp, and on the roll the start is more thoughtful, the tempo is slower, and dynamics are more subtle. There are changes too in the shape and rhythm of the thematic motif of the Barcarolle, whose excitable Presto section is much altered, and which ends not with a ppp chord but after a forte tremolo: here the roll starts more deliberately, and the articulation of the semiquavers in the Con moto is clearer.

The most radical differences between disc and roll versions of early Rachmaninov pieces are to be found in the Op. 3 Mélodie and Op. 10 Humoresque. The roll of the former diverges only slightly from the printed
text – all three notes of the triplets on the 2nd and 4th beats, an added chord or two, octaves in the recitative passage before the reprise; but by 1940, when the disc was made, the composer had completely rewritten the piece, with a different layout, more chromaticisms and added cadenzas. (This version is published by Foley of New York.) Though on the disc a great deal of rubato is employed, on the roll the A flat section is excessively pulled about, and accelerandos are too convulsive to be plausible. On the other hand, in the Humoresque it is the scrambled and convulsive rhythm on the disc which sounds suspect, while the roll is more controlled. Here again, while the roll follows the published text (more or less, except for the ppp semiquavers on the penultimate page and for the close), on the disc there are very extensive modifications both to the Andante and to the ending.

The popular G minor Prelude escapes any such revision, and in both versions shows the same freedom of rubato in the central section countermelody (and the same two buckshee final Gs); but what is interesting here is the much more deliberate pace adopted on the roll (which results in adding half a minute to a three and a half minute piece). The parallel versions of the A minor Etude-Tableau (Op. 39 no. 6) are very similar: there is generally greater clarity on the roll, which however has, on the second semitonal rise both at the beginning and at the close, a nasty pedalling smudge such as Rachmaninov is surely unlikely to have made. The Polka de V.R. (on a theme by the composer’s father) is a light-hearted jeu d’esprit which Rachmaninov must particularly have relished, since it is the only piece of his apart from the C sharp minor Prelude that he recorded three times for the gramophone: very delicately and playfully in 1919, with even more fantasy in 1921 (though the return to the Tempo I is taken very freely in all versions), faster and more boisterously (indeed, rather rushed in places) in 1928. After listening to that, the piano roll may at first seem a trifle sober and less spontaneous, but overall it is a brilliantly convincing performance, with a feather-light cadenza which is a joy to hear. The one remaining Rachmaninov composition, a transcription of his song Lilacs, is also notable for its delicate cadenza in the 1923 disc recording, which exudes a romantic warmth matched in the piano roll; the 1942 gramophone version is more full-blooded and passionate.

Rachmaninov transcriptions
Rachmaninov’s personality and individuality are perhaps most clearly evident in his many transcriptions. The freedom with which he treated the various composers he thus partnered has drawn censure from purist circles; but far from wishing to desecrate his models, Rachmaninov intended, by enriching them with new harmonies, counterpoints and
pianistic figurations, to shed fresh light on them and throw into relief their essence. It didn’t always work: the authentic spirit of the Minuet from Bizet’s *L’Arlésienne*, for example, is missed through its hurried speed (even faster on the roll, on which however one has to admire the crystalline lucidity of texture). The disc recording lacks the piece’s initial upbeat! Two more straightforward transcriptions, on the other hand, come off well: that of a Mussorgsky *Gopak* (faster and more exciting, but less precise, on the disc) and Rimsky’s *Flight of the Bumble-Bee*, taken at an identical speed in both systems, though the bee on the roll is fatter and heavier. Rachmaninov’s most elaborate transcriptions – free arrangements would be a more accurate term – are of his friend and colleague Kreisler’s two salon pieces, *Liebesleid* and *Liebesfreud*. The parallel recordings of the former (an engaging fantasy) are recognisably by the same player, though there is a difference of half a minute in the timing, accountable for not so much by any appreciably greater speed on the roll as by the improvisatory start of the disc. *Liebesfreud* is a masterpiece of the same class as Rosenthal’s dazzling *Carnaval de Vienne*. Rachmaninov revels in the theme, subjecting it to luxuriant chromaticisms and sly switches of key, and generally gambolling in the highest of spirits. The three recordings are worth comparing: the 1925 disc is the longest, at about 7 minutes; the roll (6 minutes) is basically the same but with a cut; the 1942 disc (4’55) has quite different final pages and is a lovely skittish performance. My own favourite, however, is the roll, spirited, sparkling and full of bravura.

**Schubert and Chopin**

The piano roll’s ability to reproduce fine tonal gradations is admirably exemplified in Rachmaninov’s airy transcription of *Wohin?* from Schubert’s *Schöne Müllerin*. He takes a little longer over the disc recording, which is recognisably the same interpretation. For another *Schöne Müllerin* piece, Liszt’s transcription of *Das Wandern*, I prefer the excellent 1925 disc version: the roll, though deliciously precise, is rather more careful-sounding and less light-hearted for a lad setting out on his travels. John Culshaw, a great Rachmaninov admirer, found it difficult to like his Schubert A flat Impromptu, taking refuge in calling it ‘individual’ and ‘deft’. Deft it certainly is, and the gramophone version is tonally limpid; but the roll sounds rushed (it is half a minute faster) and superficial, and the ‘pecking’ staccato applied to the chords after the initial runs is strangely unconvincing. The frequently encountered accusation that roll performances are nearly always untruthfully quicker (as against wax recordings, any modification of whose speed would have affected the pitch) finds no support in two Chopin Valses, the roll taking appreciably
longer in both cases. That in E flat, Op. 18 (whose final accelerando Rachmaninov interprets as a sudden presto) is not, in my opinion, one of his successes: the disc version is prim, and his addition of extra bass octaves and internal quasi-trumpet-calls suggest that he was trying very hard to inject interest into it; the very staid opening on the roll – anything but the marked Vivo – leads to a stolid reading (in which the spiky staccato employed in the D flat section is worth noting). But the F major Valse from Op. 34 is a delight: with its con affetto lingering over the move into D flat it is by no means ‘straightforward’, as is remarked on the Oiseau-Lyre sleeve. The delicatissimo playing on the 1920 disc is matched by the dancing, buoyant performance on the roll. Chopin’s song ‘The Maiden’s Wish’ appears in two distinct Liszt versions: that on a 1942 disc is sparkling; the longer one on the roll – with an introduction and small cadenzas – is notable for the subtlety of its tonal nuances.

**Early classics**

There is little representation of the early classics in the Rachmaninov legacy, and the Sarabande from Bach’s Fourth Partita suggests that he had not made up his mind about how to approach it. The disc version (1925) is extraordinary and, by today’s criteria, wildly anachronistic, proceeding as it does in strongly contrasted gusts of tone and with broad ritardandos: on the roll (where the repeat of the second half is not made, thus unbalancing the shape) the tone is more even and the interpretation less ‘subjective’. So much controversy still surrounds the subject of how to play Bach on the piano that some may find the latter entirely satisfying. A romantic approach is more understandable, and more acceptable, in Sgambati’s arrangement of the Dance of the Blessed Spirits from Gluck’s Orpheus; and in both systems Rachmaninov spins the long cantilena lovingly, espressivo e molto rubato. It isn’t the cool classicism of Gluck’s vision, but within its own terms it is full of finesse. There is not much to be claimed musically for Rubinstein’s arrangement of the Turkish March from Beethoven’s Ruins of Athens: Rachmaninov accents it very heavily on disc, but takes it faster and less weightily on the roll, which very effectively reproduces the decrescendo from the climax.

**Romantics**

Rachmaninov’s famous idiosyncracy of a ‘hiccup’ at the end of the second bar of Mendelssohn’s Spinning Song is found on all three of his recordings (those on disc being from 1920 and 1928). A sfurzando is indeed indicated on the octave E in the text, but Rachmaninov points this further with an Atempause (snatched breath) before allowing the phrase to ripple on. It is an odd effect, most defiantly executed on the roll and least obtrusively in
the 1928 version. His ending strikes one as decidedly coy: he holds up the final two chords and plays the last one *subito p*. It probably always brought the house down, but it sounds too calculated and self-conscious, and is not asked for by Mendelssohn. It is perhaps worth remembering that Rachmaninov had been taught the piano by Tchaikovsky’s friend Zverov and composition by Tchaikovsky’s favourite pupil Teneyev, so that his performances of two Tchaikovsky pieces, for all the changes he introduces into them, may have some authentic tradition behind them. The Op. 40 Valse, for example, is given new embellishments and a different ending: the same text is used for the two versions, which are very similar in effect: the vitality of the roll performance is captivating. The *Troika* from Op. 37 reveals greater divergences, quite apart from the 1928 disc having been recorded at an unusually sharp pitch. The first disc version (1920) is played very sentimentally, with a meditative start that could scarcely be called *Allegro*, even moderato; the later disc has greater gaiety in the central section, and it is observable that Rachmaninov alters the rhythm of the off-beat rising arpeggios; the roll (in which the arpeggios are restored to their proper incidence) adopts the most convincing speed (which makes the piece half a minute shorter than on the 1920 disc), has a bouncy middle section, and throughout shows the utmost finesse in control. The familiar Minuet by his near-contemporary Paderewski – it must be galling to his shade that his opera, symphony and piano concerto have been forgotten and that he is remembered only by this trivial piece – fares rather better in Rachmaninov’s 1927 gramophone version than on the roll. The former is played more gracefully than by the composer himself, and the quaver figurations are not rushed: in the latter Rachmaninov sounds more impatient with the piece (knocking half a minute off its duration) – though this could be construed as lending it more impetus – and, like Paderewski, accelerates into the quavers. In both versions he changes the trill to the major interval two bars after it is marked. To conclude with a *bonne bouche*, there is that delectable miniature by Henselt, *Si oiseau j’étais*, which in either version must bring a smile of pleasure to any hearer’s face: the crystalline clarity of the roll proves to be exactly that of the playing on the disc, though the former makes a bigger internal crescendo and is taken at a marginally steadier pace. Nothing could prove the genuineness of piano rolls more than the similarity between these two excellent recordings.
Stravinsky and the Pianola

Rex Lawson

Five years ago, in the autumn of 1982, I visited California with Denis Hall and my pianola, to give a lecture-recital during the Stravinsky Centennial Symposium organised by the University of California, San Diego. I later expanded the lecture for publication, and it appears in our Journal by kind permission of the University of California Press. Undoubtedly many of the questions I had to leave unanswered will find their solution amongst the Stravinsky Nachlass at the Paul Sacher-Stiftung in Basel. I hope to visit there shortly, and when all has been digested, it can form a postscript to this article in a future issue of the Pianola Journal.

The historical background

Ladies and gentlemen of the New World, I thank you on behalf of pianists everywhere for your kind invitation to San Diego. Amongst such a polyphony of musicologists, I confess to feeling somewhat abashed; I am no expert on Stravinsky’s life, or his character, or even on his harmony. My task is simply to persuade you that he had, so to speak, a great foot for music. But if you are to place his player-piano compositions in perspective, it is important that I first provide you with a brief historical survey of the instrument in its many guises, and also explain how the various systems which Stravinsky used may be controlled.¹

One hundred years ago on 5 June 1882, the day of Igor Stravinsky’s entry into the world, the Pianola had not yet been invented. There were, however, many roll-operated musical instruments already in the drawing rooms of American and European high society, though the subject of our symposium might be forgiven for a certain lack of interest in such matters in the early 1880s. These instruments, usually reed organs, were given voice by wind, and they were descended on the one hand from the pinned barrel organ and musical box, and on the other from the Jacquard loom, which used punch cards to mechanize complex weaving patterns in the textile industry. During the late 1890s much research work was carried out in the United States into pneumatic piano-playing devices, and the results of this activity became apparent in 1897, when the first Pianolas went on sale.

The Pianola was the Aeolian Company’s brand of piano-player, a device which fitted in front of the keyboard of an ordinary piano, and played it by means of a number of felt-covered wooden fingers, controlled by a Pianolist with the aid of a music roll. From around 1902 pianos were also manufactured with all the roll-playing action inside them, and with
the constituent parts of the name reversed, these were known as player-pianos, or in the case of the Aeolian Company, as Pianola Pianos.

Similar development took place in Europe, notably in Germany, where in January 1905 Edwin Welte began recording the actual playing of contemporary pianists for his newly invented reproducing piano, known generally as the Welte-Mignon, though this title really applies to one particular model, a keyboardless instrument designed to look like an elegant sideboard. But it was Great Britain, France and the United States which influenced Stravinsky’s player-piano activities, and this over a period of some fifteen years, so I propose to examine the technical and musical traditions of each in slightly greater detail.

For the first few years of the century both Britain and France were largely importers of American pneumatic instruments, not only from the Aeolian Company, but also from its many competitors. The Pianola thus vied with the Angelus, the Cecilian, the Simplex, the Triumph and the Rex, not to mention the Tonkunst and many others in attempting to capture the lion’s share of the European export market. Most of these early piano-players used 65-note rolls or similar, and it was not until a conference at Buffalo in 1908 that all the manufacturers agreed to a common standard for the new 88-note or full scale rolls.

By 1914, when Stravinsky visited Aeolian Hall in London, the Orchestrelle Company was well established as the major player-piano manufacturer in the country, with the Pianola and Pianola Piano acknowledged as the leading instruments on the market. Easthope Martin, the Worcestershire song composer, had been the company’s chief pianolist for several years, having pedalled the Grieg Piano Concerto in 1912 with the London Symphony Orchestra under Nikisch. Now, owing to ill-health, he was giving up his position in favour of Reginald Reynolds, lately employed as the expert Cecilian player by the Farrand Company.

Some of you may feel that it is an unwarranted luxury to invent a special title such as ‘pianolist’ for a humble player-piano operator. You may think that the roll does all the work, and that it is only necessary for the operator to pedal with great force and little understanding, rather like conducting to a gramophone record in front of a mirror. This is not the case, however. Although the pianolist is relieved of the necessity of pushing down the piano notes with his own fingers, he must nevertheless control the dynamic force of all of them with the pressure of his feet, he must acquire a subtle and fluent use of the tempo lever, and his left hand must carry out the functions of sustaining and una corda which his feet are too preoccupied to manage. Despite the publicity which reproducing piano systems such as the Duo-Art and Ampico receive nowadays, the majority of piano roll master copies were not recorded at all, but were
simply perforated by hand with a hammer and punch, after being marked up in pencil by reference to the original sheet music. Unthoughtful pedalling will produce unthoughtful music, devoid of light and shade, and without the slightest signs of life.

Since there is a great deal of misunderstanding surrounding the player-piano, it may be as well to re-emphasize this. Nearly all foot-operated player-pianos made before the Second World War were designed, at least in theory, to allow for good musical performances. Despite these worthy intentions, however, most performers lacked the musical understanding to make use of such an easily acquired digital technique. As a result the mistaken impression was created that the player-piano had its own unique sound, characterized by inexorable tempi and terrace dynamics with only one terrace.

Besides providing hand controls for tempo, sustaining and half-blow pedals, the Pianola used two patented systems called the Metrostyle and the Themodist. The first of these had its effect by means of a wavy red line printed on each roll, which was to be followed by a pointer attached to the tempo lever mechanism. In this way, a red line supervised by a composer or pianist could provide an authoritative guide to the phrasing of a particular piece of music. This, at any rate, was the theory. In practice, most Metrostyle lines from around 1911 in Britain were copied by operatives paid piece-work rates, and as a result their accuracy is somewhat suspect. But as long as these limitations are well understood and allowed for in the light of experience, Metrostyle lines can be a useful guide to a composer's intentions.

The Themodist was a device which allowed individual notes or chords to be brought out above the general loudness of the music. In the first place the pneumatic works of the Pianola were split into treble and bass between E and F above middle C. Two graduated accompaniment levers progressively reduced the suction provided by the feet to either or both halves of the piano, though in no way absolving the Pianolist from providing as subtle and varied an overall level as possible. In combination with this process of throttling back, tiny marginal perforations on the roll, rather like ditto marks, allowed full pedal suction to reach whichever half they controlled for a split second, thus causing individual notes to become prominent, according to the editing of the roll. It was thus available to the Pianolist to control both solo and accompaniment levels as desired.

It is worth noting that the London office of the Orchestrelle Company directed Aeolian operations throughout Europe, the British Empire and, curiously, South America, so that short of a trip to New York, Stravinsky's visit to Aeolian Hall was the closest he could come to the centre of worldwide pianolistic activity. And in some ways it was the centre, for in
the United States, the Aeolian Company’s reproducing piano, the Duo-Art, had already been launched in competition with the Welte-Mignon, so that recorded rolls were about to become predominant on that side of the Atlantic. Owing to the First War and the subsequent introduction of import duties, it was not until the early 1920s that the Duo-Art was ‘pushed’ in Britain, since local staff had to be trained to manufacture both instruments and rolls.

Thus the British tradition of expert pedalling remained strong, and in addition the choice of repertoire on rolls was noticeably adventurous, since the financial directives of H.B. Tremaine, who ran the Aeolian Company, were less harshly felt at 3000 miles distance.

In France on the other hand, although the Aeolian Company ran a thriving business from the Salle Aeolian in the Avenue de l’Opéra, it took only a short while for the firm of Pleyel to compete very strongly. Indeed it was Pleyel which may be said to have dominated the piano and player-piano business in Paris, owing to the great energy of Gustave Lyon, who controlled the firm. Many technical experiments were carried out, resulting notably in Wanda Landowska’s famous harpsichords, and in the double grand pianos which were used in the premiere of the final version of *Les Noces*. In the field of player-pianos, the firm manufactured the Pleyela and, from the mid-1920s, the Autopleyela, a somewhat simplified form of reproducing piano.

Like the Pianola, the Pleyela split its pneumatic mechanism into treble and bass between E and F above middle C, and equally its overall dynamic level was controlled by the feet. It also incorporated a device known as the ‘Chanteur’, equivalent to, but not quite as subtle as, the Themodist on the Pianola. There is no evidence to suggest that Stravinsky’s works found their way on to Autopleyela rolls, and therefore no great purpose to be served by a detailed description of the system.

Unfortunately, adequate pianists do not seem to have been very thick on the ground in Paris. Stravinsky abandoned the intermediate version of *Les Noces*, giving as his reason the difficulties of synchronization, and it was exactly the same problem which prevented George Antheil’s *Ballet Mécanique* from being performed with seventeen Pleyelas, as intended. The first private audition of this ballet is described in some detail by Bravig Imbs, a friend of the composer, who relates how a young girl employed by Pleyel manfully exerted her way through the three rolls involved and, assuming her to have been a lady, glowed very freely as a result of the experience. That a young person should have been employed in Paris in a position for which a trained musician in his 40s was required in London seems to me to reflect a difference in attitude towards the player-piano.
It is important to note that Jacques Brilouin, a leading French player-piano expert writing in *La Revue Musicale*, states that the aim of a good music roll should be to provide all the nuances of tempo from a recorded performance, leaving dynamic control to the operator. There is no suggestion made that the pianolist should do other in matters of tempo than set the roll at a constant speed. Although this use of the player-piano precludes its synchronization with any live performers, it is easy to perceive how it accords with Stravinsky’s desire to fix his own ideas of tempi in a permanent record.

Finally, in the United States by 1925, when Stravinsky paid his first visit there, the reproducing piano had reached its maturity. The Aeolian Company’s Duo-Art was in competition with the Ampico, the Welte-Mignon and Welte Licensee, the Angelus Arttio, the ArtEcho and various less successful makes. The foot-operated player-piano, although widespread, was definitely regarded as a poor alternative to these highly-publicized, glamorous recording systems. Of course, it may well be that in the early years of the century considerable expertise was to be found in the operation of foot-pedalled instruments, but after the First War the Aeolian Company’s advertising centred mainly around the Duo-Art Pianola Piano and the Aeolian Duo-Art Pipe Organ, to give the Company’s chief products their correct names.

Like other reproducing pianos, the Duo-Art needs no human intervention beyond the operation of a mains switch. Rolls run at a fixed speed, and all the original pianist’s variations of tempo are thus reproduced. At the Aeolian London studio rolls were recorded at a special Weber grand piano, having a series of contacts below each key, not all of which were used. The operational contacts were connected to a very fast perforating machine in another room, which created an instant record in the matter of tempo by punching at a frequency of 4000 holes per minute. A recording producer, Reginald Reynolds, sat beside the piano at a specially made console, his hands controlling two large knobs, rather like oversize amplifier volume controls, and he thus caused dynamic coding perforations to be punched on to the recorded roll at the same time as the pianist was playing. Clearly this was a far from accurate way of recording dynamics, but after repeated editing, and approval from the artist in question, many rolls achieved a remarkable fidelity.

The Duo-Art system of dynamic coding uses two sets of four perforations, located towards each side of the roll in the positions where perforations for the bottom four and top four notes of the piano are usually to be found, thus rendering these notes inoperative when the Duo-Art is in use. Each set of four holes combines its information according to the binary system, allowing sixteen different combinations in each case, and
these work upon two pneumatic regulators in order to provide graduated degrees of touch upon the piano. The coding at the left-hand side of the roll controls what is known as the ‘Accompaniment’ regulator, which in normal circumstances provides suction for the whole piano. But whenever a Themodist-type ditto mark perforation appears on either the left or right margin of the roll, then the appropriate half of the piano is transferred for a split-second to the ‘Theme’ regulator, always kept at least one degree louder than the ‘Accompaniment’, and controlled by the four coding perforations towards the right-hand edge of the roll. In this way, instantaneous accents and changes of level can be obtained.

In practice, Duo-Art rolls were edited until they sounded satisfactory, and not simply according to the theory of the system, so it is pointless to
place too much importance on the thirty-two degrees of touch the instrument is supposed to possess. Because of the way in which rolls were edited, performances on the Duo-Art can be a great deal more subtle than such a rigid theoretical description suggests.\textsuperscript{12}

These different avenues of development in the three countries involved with Stravinsky’s player-piano activities are reflected not only in contemporary writings about his work, but also in the way his own memories of the instruments lasted through the years. Having noted these differences in attitude, albeit briefly, we are now in a position to examine Stravinsky’s uses of the player-piano more closely.

**The Paris Years**

Stravinsky’s first appearance on roll came towards the end of 1914, when the Orchestrelle Company of London issued four rolls of the Opus 7 Piano Studies.\textsuperscript{13} From evidence on certain rolls, it seems likely that these were commissioned by Claude Johnson, a wealthy amateur musician who was later managing director of Rolls-Royce Motors, and then released to the general public afterwards.\textsuperscript{14} They are not recorded rolls, but it would be surprising if Stravinsky had not at least heard them when he visited Aeolian Hall in mid-1914 for a demonstration of the Company’s instruments.

About a year later a private set of rolls was cut by Esther Willis, a member of the famous British organ-building family. The commission came from Philip Heseltine, alias Peter Warlock, the English composer, and the titles included such early works as the *Scherzo Fantastique* and *Fireworks*. As far as I can tell, these rolls carried no ‘imprimatur’ – perhaps I should say ‘perforetur’ – from Stravinsky, but two of them, *Fireworks* and the ‘Chinese March’ from the *Nightingale*, were performed by Alvin Langdon Coburn, the photographer, at Aeolian Hall in 1916.\textsuperscript{15}

The visit Stravinsky had made to Aeolian Hall in 1914 had led to his consideration of the Pianola as a solo instrument, with all the facilities it offers to speed, spacing and spectacularly-sized chords. He had mentioned this to Edwin Evans, the British music critic, and in 1917 Evans enlarged on the idea and wrote round to a selection of European composers, asking for Pianola compositions. Thus the *Etude pour Pianola*, although conceived as a unique entity, was in fact issued as part of a series, along with works by Malipiero, Casella, Eugene Goossens, Herbert Howells and several others.\textsuperscript{16} It was not, however, the first work to be written for the Pianola. In the Orchestrelle Company’s 1914 catalogue there are several such compositions listed, although all by minor composers, in addition to many special arrangements of existing works, notably by Busoni, Scharwenka and Percy Grainger.
The music of the *Etude* is deliberately mechanical in sound, full of fragmented Spanish dance tunes, overlapping and competing with each other as Stravinsky sought to capture the atmosphere of the Madrid streets, which he had experienced at first hand during a visit in 1916. What Charles Ives’ *Fourth of July* is to the brass band, the *Etude pour Pianola* is to the café piano and barrel organ, and it makes a virtue of the chunky musical texture which the player-piano can sometimes produce. It is possible that the Metrostyle line on the roll was supervised by Stravinsky; many other rolls in the same series were marked in this way by their composers.\(^{17}\) Reginald Reynolds gave the first public performance of the *Etude*, on 13 October 1921 at Aeolian Hall, London.\(^{18}\)

At the same concert there was also a performance of one of the four rolls of the *Rite of Spring*, which had just been manufactured by Aeolian. This set was based on the four-hand arrangement,\(^{19}\) and it has the advantage, underlined by Percy Scholes in a book entitled *Crotchets*, that it saves the performers coming to blows over wrong notes.\(^{20}\) But by 1921 Stravinsky’s imagination had left the realm of mere four-hand versions, and in that year he moved into a working apartment in the Pleyel building in Paris, setting the scene for a musical collaboration which was to result in fifty rolls being made of his works, at least forty of them special arrangements.\(^{21}\)

In *Chroniques de ma Vie*, Stravinsky describes his labours with a mixture of affection and regret.

A cette époque commencèrent aussi mes occupations suivies avec la maison Pleyel qui m’avait proposé de faire la transcription de mes œuvres pour son piano mécanique surnommé ‘Pleyela’. L’intérêt que je portais à ce travail était double. Pour éviter dans l’avenir une déformation de mes œuvres par leurs interprètes, j’avais toujours cherché un moyen de poser des limites à une liberté redoutable, surtout répandue de nos jours et qui empêche le public de se faire une juste idée des intentions de l’auteur. Cette possibilité m’était offerte par les rouleaux du piano mécanique. Un peu plus tard les disques de gramophone devaient me la renouveler.

De cette façon je pouvais fixer pour l’avenir les rapports des mouvements (*tempi*) et établir les nuances telles que je les voulais. Certes, cela ne me garantissait rien, et pendant les dix ans qui se sont écoulés depuis, j’ai pu, hélas! constater maintes fois toute l’inefficacité de cette mesure au point de vue pratique. Pourtant, avec ces transcriptions, j’ai créé un document durable pouvant servir à ceux des exécutants qui tiennent à connaître mes intentions et à les suivre plutôt qu’à s’égarer dans des interprétations arbitraires de mon texte musical.

En second lieu, ce travail me donnait une satisfaction d’un autre ordre. Il ne consistait pas seulement en la simple réduction d’une œuvre orchestrale pour un piano à sept octaves. C’était tout un travail d’adaptation à un instrument qui, d’une part, possède des possibilités illimitées en fait de précision, de vitesse et de polyphonie, et, d’autre part, présente constamment de sérieux obstacles à l’établissement des rapports dynamiques. Ces occupations développaient et exerçaient mon imagination en me posant toujours de nouveaux problèmes d’ordre instrumental intiment liés avec ceux de l’acoustique, voire de l’harmonie et de la conduite des voix.\(^{22}\)
It will take more detailed research to discover exactly how Stravinsky worked at Pleyel. Mayakovsky describes how ‘he can hand his work directly in to the factory, trying the musical proof on the pianola.’ The implication of this is that Stravinsky’s product was in the form of manuscript, which was then transcribed on to master rolls by a Pleyel musician. We know, however, from Jacques Brilouin that Pleyel master rolls were of the same length as their normal issued copies, and that these masters could be directly played on to a piano without the need for producing multiple rolls. It is just possible, therefore, that Stravinsky drew his transcriptions on to a master, to have the laborious process of punching carried out by a technician. Whichever is the case, and the former seems more likely to me, it would be unwise to assume that Mayakovsky’s brief description, made in 1922, refers to the only process which Stravinsky carried out during his years at the Pleyel factory. For example, Pleyel certainly possessed a recording piano, which allowed concert pianists to make rolls of their own playing, and in such simple pieces as Les Cinq Doigts it would have been much more sensible for Stravinsky actually to record at such an instrument.

The master’s own description of one of his techniques occurs in Expositions and Developments:

I discovered the chief problem (of the Pleyela) to be in the restrictive application of the pedals caused by the division of the keyboard into two parts; it was like Cinerama, or a film shown half and half from two projectors. I solved this problem by employing two secretaries to sit one on either side of me as I stood facing the keyboard; I then dictated as I transcribed from right to left and to each in turn.

The full meaning of this statement is not immediately clear, but I can think of only one set of circumstances which accords with all the details of Stravinsky’s description. In the first place, the pedals he mentions are certainly not the sustaining and una corda, nor even the Pleyela pedals in a literal sense; rather the word is used as a non-technical substitute for the phrase ‘pneumatic mechanism’. In other words, Stravinsky had to work within the framework of an instrument in which the relative levels of bass and treble could be varied, but in which chords overlapping both halves of the piano could only be emphasized by means of the ‘Chanteur’ device. In both cases the lower of the two levels on the Pleyela, if not actually fixed, was nevertheless automatically regulated to remain in a loose dynamic relationship with the higher level, and it must have been this automatic control which caused him all the problems of dynamic balance.

The two secretaries cannot have been working for the benefit of the roll technician, who would certainly have found it a hindrance to have used two manuscripts to cut one roll. Similarly there would have been no point in the secretaries making up two half-master rolls when only one complete
one would play on the test Pleyela. The only possible explanation I can find is that Stravinsky not only worked at a fast speed, but also wanted to check and revise his dictation before it was sent to be transcribed on to roll. A dual manuscript would have saved him having to remember in every bar the division between treble and bass at E and F, and would thus have eased his task of balancing the two halves of the Pleyela.

So the likelihood is, although Stravinsky’s Pleyela rolls state that they are ‘adapté et joué par l’auteur’ or some variant of this, that in reality a variety of transcriptional processes was used. To a confirmed pneumatic addict such as myself, it seems easy to understand Stravinsky’s fascination for this type of technical and intellectual challenge. In a socialite Paris brimming with rich princesses, worthy musicians and adoring acolytes, it must on occasions have been a great relief to don a metaphorical boiler suit and join the musical mechanics.

The results of this factory work deserve to be better known. The titles are in the list which follows this talk, and they include the Firebird, Petrushka, the Rite of Spring, the Song of the Nightingale, the Wedding and Pulcinella. Even Piano-Rag-Music was specially arranged for the Pleyela, thus out-Rubinsteinign its dedicatee. It would take a separate article to discuss the problems involved in interpreting these rolls. Suffice it to say that they do need interpretation, in the case of dynamics according to the instructions on the roll and, more reliably, in the appropriate printed score. In the case of the tempo lever, it is only necessary to compensate for those factors in the player-piano which cause a performance to sound mechanical, as opposed to merely regular. Clearly much of Stravinsky’s arranging was done with a view to the music sounding precise, clear and consistent. What can make a performance sound mechanical is not excessive regularity, but regularity without dynamic interest, or illogical hiccups in that regularity, and these faults must be avoided.

In the second part of this article, which follows in the next issue of the Pianola Journal, the writer discusses Stravinsky’s activities with the Duo-Art reproducing piano, and a complete list of Stravinsky’s piano rolls is appended.

Notes

1 Since the musical examples formed such an important part of this paper, the writer has taken the liberty of revising it for publication rather more extensively than he would otherwise have done. One fourth-note is worth a thousand words, however, and it is to be hoped that Stravinsky’s player-piano music will at length become more
The earliest Welte-Mignon rolls carry recording dates on their labels.

It would be as well to define a couple of terms. The word ‘player-piano’ is usually taken to refer to all types of piano operated by music roll, whether foot-pedalled or not. As the paper roll moves round on the instrument, it passes over a brass or wooden tracker bar which is drilled with a number of tiny holes, one for each note. Suction is applied through these holes, and this holds the paper flush against the tracker bar as it rolls down. When a perforation in the roll uncovers one of the holes in the tracker bar, free air is allowed to pass down this hole to a small pneumatic valve, deep inside the mechanism. The valve in question being operated, it allows suction to pass to a pneumatic motor for the appropriate piano note. The motor is just like a small bellows in reverse; instead of the sides being squeezed in order to force air out, the air is actively sucked out, causing the motor sides to collapse together. The motion thus generated operates the piano, and the chain from perforated roll to audible music is complete.

Reproducing pianos are a particular type of player-piano which use specially recorded and coded rolls to reproduce the exact playing of well-known pianists. They too are usually powered pneumatically, with an electric pump supplying suction, and it is only necessary to operate a mains switch to set them happily on their way.

What is, alas, lacking is a neat term to define a foot-pedalled player-piano. I personally favour the use of the word ‘Pianola’, but I am aware that it is still a registered trade name of the Aeolian Company, although no longer being used by it to refer to the type of instrument to which it originally applied. However, the use in Europe of the word ‘gramophone’ to refer to all types of record player in no way diminishes the memory of the Gramophone Company as pioneers in that industry, and I would suggest that the Aeolian Company would do great service to the world and to itself by allowing the Pianola to develop into the generic term it has so long sought to become. In this paper the word is used with a capital letter to refer to the Aeolian Company’s specific product, and with a small letter in connection with a proposed pianola institute, whose activities would include all player-pianos, but would inevitably centre on the Pianola.

Regular perusers of the ‘Denkmäler Deutscher Tonkunst’ will be surprised to learn that this was indeed an American instrument, manufactured by the evidently erudite Mr William Tonk and Brother of New York City, who also unwittingly gave their name to the ubiquitous ‘honky-tonk’!

The Aeolian Company is very confusing in the matter of names. Its full title in America in the early part of this century was the Aeolian, Weber Piano and Pianola Company, since it manufactured Aeolians (roll-operated organs), Weber Pianos, and Pianolas. In Britain it was known as the Orchestrelle Company until around 1920, when it gradually took the name of Aeolian, and it made rolls through its wholly owned subsidiary, the Universal Music Company. This latter firm not only made rolls for its parent company, but also for nearly all its competitors, which accounts for the fact that many rolls were issued both as Aeolian Themodist, and also as Universal.


Information kindly provided by Theodore Stravinsky, who was present.
8 Lyon even caused at least one double Pleyela grand to be made, which played genuine two-piano music from monster size rolls!


12 Of course, given an editor on a bad day, and a pianist fed up with listening to playback of his or her rolls, performances can also be terrible. This dependence on editing standards applies to all reproducing piano systems, and is the main reason why Ampico rolls are of consistently high standard, since the editing processes of that firm were minutely painstaking.

13 I base what is admittedly a supposition on the fact that the Orchestrelle Company’s June 1914 catalogue lists rolls to within 100 of the serial numbers of the Piano Studies. In 1914, rolls were being issued in this series at a rate of about 35 per month, with reasonable regularity.

14 There is a set of rolls in the author’s possession, formerly the file copies of the Universal Music Company, bearing on its labels the heading ‘Specially Manufactured for Claude Johnson, Esq.’. I can conceive of no reason why Mr Johnson should need to have had these rolls specially made if they were already freely available, and to that extent I have come to the conclusion that it was he who instigated the manufacture of the Four Studies, as well as a good deal of music by Debussy, Ravel and others.

15 Information kindly provided by Miss Willis, and also gleaned from concert programmes in the writer’s possession.


17 Information from an Aeolian selected roll list, for use with a book by Percy SCHOLES, *The Appreciation of Music by Means of the Pianola and Duo-Art* (London, Oxford University Press, 1925). The list is found attached to the rear cover of only a few copies of this book.

18 During a talk given by Edwin Evans, and transcribed by him for the article referred to in note 16.

19 I say this having played the rolls many times, but not yet having specifically set out to analyse them.


21 51 rolls were originally advertised, but no evidence has been found that any copies of Ragtime ever existed.


24 Jacques BRILLOUIN, *op. cit*.

The Inaugural Concert

Dan Wilson

It's a pity the Pianola Institute's inaugural concert wasn't held just a few months later. During 1986, not long after the concert, held at the Queen Elizabeth Hall (for out-of-Londoners this is the No. 2 concert hall in the South Bank trio) on 4 December 1985, ITV showed a quite excellent biographical programme on Percy Grainger, with the title The Noble Savage. It had all the hallmarks of a project intended for the Grainger centenary in 1982 which had overrun and missed the bus. Oh never mind – put it out four years late and no-one'll notice. But the critics did: they liked it. And it mentioned Grainger's interest in player-pianos (which ran on into his Free Music experiments) and his warm friendship with Edvard Grieg.

In that context a real live here-and-now performance by Percy, 24 years after his death, of the Grieg Piano Concerto, in London, would have aroused the attention it properly deserved. In the event, it rained heavily all day (a sure-extinguish for impulse audiences) and the Institute's publicity tended to the quirky, which is reasonable enough for those who know all the imponderables about reproducing piano performances, but not displaying the gung-ho white-hot enthusiasm we should, perhaps, be encouraging in our audiences. The Grieg concerto is also perhaps too well-known: maybe it might have been a better idea for the Chicago Youth Symphony Orchestra, whose first overseas tour this was, to have brought with them a dead pianist with Chicago connections as was originally intended; Rudolph Ganz to play a Liszt concerto.

So what: it rained and rained, and the audience was small, and the CYSO did not deserve that, for they were excellent, kicking off with gusto with Elgar's overture Cockaigne. Having recently somewhat against my will witnessed performances by two British amateur orchestras, I was prepared to squirm yet again. But conductor Orchestral Smith made the CYSO retune before each movement, and with rigour of that order, squirming was not on the programme. Perhaps there is a youth orchestra motto, that if you aren't at least unmistakable for professionals, then it isn't worth doing at all. The PI could not have done much better for a launch vehicle if it had had to pay real money for one.

The Grieg concerto with Grainger on piano roll – the 1919 Duo-Art public issue doctored to remove the orchestral passages – has been done twice before in modern times, once here at the QEH when (I am told) the Duo-Art grand did not have the voice for it, and once (plus a lot of times in
a recording studio for RCA) in Sydney Opera House by the SSO with John Hopkins conducting. This third performance, employing Peter Davis’s just-completed Duo-Art conversion of a 1913 Orchestrelle Company 88-note push-up playing one of the South Bank Steinways, was less ragged than the Australian one, where the piano entries were delegated to the purpose-built push-up’s owner Denis Condon. Here in London the 1920s practice was revived of giving the conductor a bell-push to cue his soloist in half a second early; in fact a rather nice organic torpedo-shaped one. Orcenith Smith made a virtue out of this necessity by doing half his conducting with it, a kind of hint of the Dance of the Seven Flexes. The piano responded with appropriate alertness: this is obviously the right way to do it.

The performance struck me as dynamically convincing – our player experts have now relearnt the lesson painfully absorbed by the Aeolian Company all those years ago, which is that in concert halls, with concert grands, reproducing systems intended for even quite large salons must be shamelessly rigged to muster the necessary firepower. The Aeolian Company called it (after the perpetrator) Knightleyizing: here Grainger was excellently Lawsonized. I must not get led astray in the middle of a review of this sort, but I was intrigued to overhear Denis Hall remarking after one such exercise that even in those circumstances he did not think a salon performance transferrable to concert hall and that by now the Aeolian Company would have been recording concert hall versions specially for this purpose. Certainly on a high night a soloist can get away with a stylistic swagger that would be absurd with a thin and sober audience; it would need different coloured rolls to suit the audience’s intoxication count.

I did, however, think the London Percy much too hasty compared with his Sydney performance of which I have a video recording: sure enough, when compared with the private video shot for the CYSO, the first movement alone had 1 minute 15 seconds clipped off it. Artistic licence, or roll stretch? There’s a thesis in there somewhere.

After the interval we moved to twinned 65/88-note Pianola pedal push-ups at the Steinway and the QEH’s own Bösendorfer Imperial grand, with the CYSO spectating impassively behind. Despite the Imperial being operated with no lid it completely outperformed the Steinway wherever the two were used together. Richard Baker was the master of ceremonies (non-British readers will need telling that he is a former TV newsreader who has transferred very successfully to presentation of ‘ordinary citizen’ music broadcasts and ought – ought – to have proved a good crowd-puller) and led us through an exposition of pianola technique, with Denis Hall very unfairly having the Imperial to play
Balakirev’s piano solo arrangement of Glinka’s ‘The Lark’ – treated with appropriate grace and gentleness – and Arnold Bax’s pianola version of his orchestral Scherzo, about the most interesting feature of which is the rarity of the roll. Rex Lawson followed on the Steinway, playing Debussy’s *Clair de Lune* and his own cutting of David Stanhope’s pianola arrangement of the ‘Keel Row’. This utterly crazy and delightful piece improves at each hearing: it ends with so many notes playing that it is a slight surprise that neither the roll nor the piano come apart; private users would need to have the neighbours absent.

Then we had the second big treat of the evening, Saint-Saëns’s *Carnival of the Animals*, using the orchestra and both pianolas with Baker reading Ogden Nash’s witty introductions. Keeping pedalled piano rolls in time with a conductor is very much harder than it looks. Rex and Denis made it look easy. There is a trick to it, actually, which is to hasten forward at the end of each bar as if to anticipate the beat and then slow right down as the first note of the next bar approaches; in this way there is a tiny bit of time in hand to cater for any acceleration, and deceleration is just a matter of hesitating slightly. But even so there must have been a *lot* of rehearsal. Why use pianolas instead of pianists? The programme said trenchantly: ‘Why not?’

After that the CYSO had the floor to themselves with Strauss’s *Rosenkavalier Suite*, cleanly played with just a minuscule wobble by the cellos, followed by a handful of lollipop encores for which they plainly scarcely needed a conductor.

This was an ambitious programme carried off with consummate polish by everyone concerned. The audience may have been small, but one can honestly say that it was privileged.
The ‘Duo-Art’ Pianola Rolls of the Enigma Variations

Trevor C. Fenemore-Jones

Perhaps because of his own appetite for listening to music and his concern for the increased dissemination of the musical experience and knowledge, Elgar was always well disposed towards the reproduction of music by mechanical means. His particular enthusiasm for the gramophone is by now well known; his interest in the player-piano or ‘pianola’ is, however, virtually unchronicled. This pneumatically operated piano played by means of a music-roll was invented in 1897 and was in its heyday in the first three decades of the twentieth century. In his lecture entitled ‘English Executants’ given at Birmingham University on 29 November 1905 Elgar acknowledged the instrument as capable of good execution. By 1910 he actually had a pianola at Plas Gwyn; and by 1916 he was advocating it in an interview reported in The Music Student (August 1916, p. 346) in the following terms: ‘I am not sure that the pianola is not our best means of hearing piano works well performed today . . . properly used, the pianola can play with a very beautiful touch . . . ’ Exactly how far and how deep Elgar’s interest in the pianola went is not clear at present, but there is evidence that he was in touch with the Orchestrelle Company (an early manufacturer of pianolas and related reed-organ instruments) as early as 1904 and some recordings may have resulted. Certainly we know that on three consecutive days in April 1910 he visited the Orchestrelle Company’s premises to indicate correct tempi for rolls of the A flat Symphony and that Lady Elgar adjudged the performance ‘quite fine’. Further research is required to clarify the whole subject of Elgar and the pianola.

This article is intended to throw a little light on a particular pianola enterprise, the publication of the Aeolian Company’s Duo-Art rolls of the Variations in 1929. Writing it has been facilitated by the kindness of Mr Frank Holland of the Musical Museum, High Street, Brentford who has not only permitted me to refer to and hear the rolls but who has also allowed me to transcribe and quote from the text, the copyright being still held by the Aeolian Company’s successors. I am also very grateful to Dr Jerrold Northrop Moore for providing most useful references and to Miss Dorothy Manley for giving me valuable first-hand information about the recording of these rolls.

The middle and late 1920s were a key period in the history of the pianola. By then the quality of reproduction had reached a peak of
Elgar – Enigma Variations. First Roll

(photos by Lyndon Parker)
perfection. The electric motors, reels and pneumatic mechanism activating the piano hammers had been improved to an extent guaranteeing a high standard of accuracy; in addition, the Duo-Art or ‘reproducing’ pianolas recently brought in by the Aeolian Company included a system by which 16 gradations of touch, for both melodic line and accompaniment independently, could be automatically reproduced by means of signals cut into the roll being played. The result, even in the hands of an inexpert player, was uncannily fluent and lifelike and by this time many of the world’s greatest pianists had made rolls of excellent quality.

Nor was this all. Grandiose schemes were afoot for the promotion of music-study by means of the pianola. The pianola roll itself, being made of paper, was an ideal place to print explanatory notes, illustrations, music examples, diagrams and general descriptive material of relevance to the music which could be read at leisure or at the appropriate points in the music as the roll was being played. By this time the potential value of such notes for educational purposes was being realised. The rolls of the Variations formed part of an ‘AudioGraphic’ series which was to include both piano and orchestral masterpieces of ‘The World’s Music’ with copious notes. For this series the necessary steps had even been taken to widen the potential audience from one to many by providing facilities by which the material on the roll, transcribed for the purpose on to 4-inch film, could be projected on to a screen simultaneously with the performance of the music.

This and other series had the backing of independent committees for the promotion of music-appreciation both international and national and made up of the most eminent musical authorities – that for Great Britain, for instance, including Sir Landon Ronald, Sir Hugh P. Allen and Sir Henry Wood. Despite this support, however, it is not clear what demand there was for these rolls, for just about this time several competitors were coming strongly into the field against the pianola. The radio broadcasting of music had begun and was reaching a vastly-increasing audience by the later 1920s; by 1929 the ‘talkie’ cinematograph film was successfully using orchestral soundtrack and showing great potential for the future. Thirdly, and most important, the gramophone itself was making great and increasing strides following the advent of electrical recording in 1925. It seems unlikely, therefore, that sales of these rolls ever began to match in scale the lofty intentions of the organisers of this ambitious project. Nevertheless in 1929 the Aeolian Company issued the five Duo-Art rolls of the Enigma Variations (D885, D887, D889, D891, D893) comprising a performance of the work in the piano duet version, plus, of course, elaborate descriptive written material, itself of the greatest interest.

Before considering the text of the notes on the rolls in more detail I must
deal with some important questions about the performance here recorded. Who were the pianists and when was the recording made?

The rolls do not mention the names of the two pianists but the published catalogue of Aeolian Company rolls gives their names as Cuthbert Whitemore and Dorothy Manley. Whitemore, it transpires, was Professor of the Pianoforte at the Royal Academy of Music and Miss Manley was one of his gifted pupils. In November 1974 I was fortunate enough to be granted an interview by Miss Manley who told me that while she played the bottom part of the piano duet score, the top part was in fact played by Whitemore’s wife, Freda Whitemore. It was tempting to think that Elgar himself might have been present at the Aeolian Hall in Bond Street where the recording was made, but Miss Manley confirmed that this was not so, the only other person present being Whitemore himself who directed the performance in a vigorous fashion from the sidelines. Her view is that the performance was in the nature of a trial run, though in the event the Aeolian Company must have regarded the result as of the standard required for publication. Although it starts a little tentatively, it gains confidence as the work proceeds and builds to a thrilling account of the Finale. Miss Manley told me that a normal printed edition was used, and so this was almost certainly the very idiomatic edition for four hands by John Ebenezer West, published by Novello, but now unfortunately out of print.

I asked Miss Manley particularly about the date of the recording. We could not pin this down exactly, but it was between Easter 1926 and the summer of 1927, some little time before the sudden death of Cuthbert Whitemore in September 1927 at the early age of 49.

I now turn to the notes on the rolls.

For rolls of the Enigma Variations it was clearly appropriate not only that the music of each variation should be described with detailed indications of the orchestration but also that the subject of each variation should be referred to. In addition there was ample room for biographical material concerning the composer and other notables connected with the Variations, e.g. Jaeger and Richter. Several reproductions from the composer’s MS were also included as well as his general accounts of the work and how it originated. In the event much of the text was actually written by Elgar, so that though there is no evidence of the composer taking any active part in the actual recording of the music, he clearly cooperated wholeheartedly in the preparation of the accompanying notes and this is in itself a strong indication that he gave the whole project his blessing.

Considering the use which has been made of these notes over the years in so many books on Elgar, particularly when describing and commenting
on the Variations, it has always seemed odd to me that so little definite information has been made available in bibliographies as to the source and exact nature of the notes. This might partly be explained by copyright problems, though this is hardly likely to be the case. In 1946 Novello's published the booklet My Friends Pictured Within incorporating much but not all of the material without indicating the probable date of authorship. The date 1913 has sometimes been quoted, but this can be seen to be erroneous immediately one looks at the MS drafts for some of the material which are to be found in the Elgar Birthplace: the note relating to C.A.E., for instance, is written in the past tense so must date from after 7 April 1920, the date of her death. A further factor which must have confused the issue is the very rarity of the rolls themselves. When, then, were the notes written? Taking into account the fact that the rolls were recorded in 1926 or 1927 and published in 1929, one would expect the notes to date from shortly before publication, say 1927 or 1928. This is corroborated by Elgar's statement in the notes that 'nearly thirty years have elapsed since the composition of the music'. As the Variations were mainly composed in 1898 it is thus confirmed that the notes were written not in 1913, but a little before 1928. All in all, 1927 looks the most likely year.

By reason of the amount of information there given it is not surprising that when Basil Maine came to write his celebrated biography of the composer in the early 1930s he was provided by the Aeolian Company with a set of these rolls as useful reference material. No more is it surprising that he quoted from this material in his book, e.g. (Vol. II, page 101) the famous passage describing the playing of the Enigma Theme and the first few variations to his wife. On the roll this appears under the title 'The First Inspiration'. Maine also quotes (Vol. II, page 102), again without acknowledging the source, the passage starting with the words 'It was my wish that each Variation should illustrate some little characteristic of a friend . . .', though he does not quote verbatim Elgar's opening phrase: 'The Theme from which I evolved this set of Variations is my own'.

The notes published on the rolls start with the uncompromising statement that 'The annotations on these rolls have been written personally by me for the 'Duo-Art' and 'Pianola' and I hereby authorise their use with those instruments. (Signed) Edward Elgar.' (See Plate 3) But a closer look reveals that only certain parts of the text are actually initialled 'E.E.', these being mainly introductory paragraphs and the paragraphs which come at the head of each section of the music. The descriptive running commentaries on the music, on the other hand, bear no initials and internal evidence indicates that they were not written by Elgar. Yet they are vividly and expertly written with great
Variation XIV with running commentary

insight into the music. Who, then wrote these passages? My first guess was that the author was Dr Percy Scholes who was then joint editor of ‘The World’s Music’ series and who is known to have written a great deal of such material for the Aeolian Company. He, however, gave up this work about this time and another possible candidate is J. Aickman Forsyth, a friend of Elgar, who was secretary of at least one of the pianola-promoting committees mentioned above and who contributed other material in the notes both over his initials and anonymously.

Justice cannot be done in a short space to the skilful way in which the
running commentaries are fitted to the music, but plate 4 provides an example from Variation xiv (E.D.U.)

One fact which is made quite clear in the passages written by Elgar is that he only gave the name of the 'Variationee' if he or she had died. This explains why he did not give Lady Mary Lygon's name in the published text for Variation XIII although he wrote it in the MS draft.

One last example from the notes. Included in the text initialled by the composer is his description of the Enigma Theme, which reads:

The alternation of the two quavers and two crotchetts in the first bar and their reversal in the second bar will be noticed; references to this grouping are almost continuous (either melodically or in the accompanying figures – in Variation XIII, beginning at bar 11, for example). The drop of the seventh in the Theme (bars 3 and 4) should be observed. At bar 7 (G major) appears the rising and falling passage in thirds which is much used later, e.g. Variation III, bars 10-16. – E.E.

This is a seemingly elementary description, yet significantly it refers to an important moment in the work – bar 11, Variation XIII, where the pattern of quavers and crotchetts, and also the interval of the third, is reversed – appropriately enough for the remotest point in the music of the Variations.

What can be said in conclusion? The notes on the rolls are of great interest and it is particularly to be regretted that all the passages by Elgar are not published anywhere together as they originally stood. Perhaps a new edition of My Friends Pictured Within would be a suitable place to arrange this. The running commentaries are also of considerable interest; it is not easy to write such commentaries and these are excellent examples. The whole package of notes represents the equivalent of a modern LP sleeve note of a size and quality rarely if ever excelled.

Though we must accept that the medium of the pianola is now largely outdated, certainly as a vehicle for the reproduction of orchestral music, at the same time it should be remembered that Op. 36 appeared first as a piano work, the solo piano score having been published on 9 June 1899, ten days before the first orchestral performance. Without denying for a moment its fundamentally orchestral character, the work is also indelibly associated, in my mind at least, with Elgar at the piano, entertaining his friends. He, moreover, seemed to go out of his way to keep associations with the keyboard alive in connection with this particular work. These rolls constitute the only keyboard recording of the Variations known to me. It is therefore doubly regrettable that the total experience of the music and words on this set of rolls is now virtually lost to all but a privileged few.
Music for Mechanical Instruments

Ernst Toch

Translated by Louis Cyr

Until now, mechanical musical instruments have been used almost exclusively to reproduce music that was originally conceived and written for other instruments, including the human voice. Such music is recorded during performance – the live sound being instantaneously preserved – and the efforts of both inventors and improvers have been totally geared to perfecting mechanical reproduction in order to approach as closely as possible the original rendition produced by the persons directly involved.

The music to be dealt with here, however, is composed in such a way that it cannot possibly be performed by humans, but only by mechanical instruments. These are now assuming their place independently alongside the traditional means of music-making, so that the music coming into focus here is not just old music rendered by means of a mechanical instrument, but music ‘for a mechanical instrument’, in exactly the same way as music ‘for violin and piano’ or music ‘for orchestra’: like these, it derives from, and is composed in the spirit of the instrument, and it is geared to the nature of the latter and influenced by it, just as unquestionably as any other music. And further, any rendition other than the original one presupposes an arrangement, which may or may not sound successful, but which must nevertheless alter something intrinsic of the original.

To understand this better, one must first of all know the practical and technical characteristics that make the new instrument capable of its own unique brand of music. Let us consider, for example, a mechanical organ or a mechanical piano. To begin with, an apparently superficial but nevertheless quite important facet is the possibility of playing the notes of the entire keyboard together and without restriction; that is, without any consideration being given to the shape of the human hand. Until now such considerations, whether conscious and intentional, or latent and instinctive, could only lead to a specific type of composition within basically well-defined limits, although slightly differentiated with regard to the organ or the piano. Even the use of more than two hands on one keyboard (as in four or eight hand playing) could not overcome the basic restrictions; on the contrary, it multiplied them, so that the additional hands would not encroach upon or interfere with one another. Purely physical factors thus had a decisive influence on musical production and conception, as well as
on the nature of the original composition, even though they could never fix the latter once and for all. This is the reason for the impression one gets that much rather amateurish orchestral or operatic music was written ‘at the piano’.

Another feature, however, appears much more important. At a mechanical instrument the performer’s action is replaced by a disc or roll, on which the flow of the music is made visible as a series of lines, grooves, slots, etc. If one considers a sort of ‘photograph’ of a live solo performance, then significant irregularities of interpretation become apparent. Not only do the end results differ between one and the same piece played by various performers, but even the notes a single performer intends to play at a consistent tempo and with the same dynamics turn out to be quite uneven. And precisely in the deviations of such a rendition from the norm – from a geometrically constructed image of the same piece – lies the ‘personal touch’ in the playing of this or that performer; the more refined and sensitive the recording apparatus, the more it allows the recording stylus to capture the performer’s individuality, and all the more visible the deviations on the roll will be. If the rolls are not recorded from a performer’s playing, but simply punched mechanically, they will exhibit the image of perfect geometrical precision, and the audible effect will correspond exactly to the latter with a degree of precision that can never be obtained by human playing – an utterly dehumanised or depersonalised performance. Nothing can slip in that has not already been programmed into the notes regarding pitch, metre, rhythm, tempo and dynamics. There is no trace of any spontaneity, emotion or human impulse.

Where romantic subjectivism is the main characteristic of music – most of music literature belongs to this category – then such music stands to be deprived of its most vital qualities; it becomes, so to speak, lifeless. Only music that is by nature ‘mechanical’, i.e. completely objective, detached, emotionless, will not be affected in this way. With two other musicians, I recently visited the Welte-Mignon factory to listen to Mozart’s original composition for roll organ (Fantasie, KV 608 – in fact Mozart wrote three of them). As we listened, first to the mechanically perforated and then to the recorded version, the difference was so astounding – and, let it be said at once, in favour of the mechanically perforated roll – that we spontaneously burst out laughing at the first notes of the ‘recorded’ version. Although the latter had been recorded from the playing of an outstanding organist, the total powerlessness of a man struggling with the music, the side effects of human effort that cannot be avoided, were quickly apparent, especially compared to the splendid, freely floating, effortless and flawless presence of the mechanical roll.
Listening to people play the organ had always left me with the embarrassing impression of the ‘machine’ (there is really only one way of making music that is totally free of any struggle with a machine, namely singing, in which the musician literally grows with his instrument; next comes the string player, then the wind player who has keys to manipulate, and finally the keyboard player, who must operate a complete mechanism, often a very complicated one such as the organ); that impression, however, disappeared completely as I listened to the hand-punched organ roll on such a perfect instrument. And I suddenly realised that in this case, the insurmountable distance between performer and instrument, that lingers on in the painful impression of the machine, totally disappeared, along with the audible effects of any kind of struggle. In the same way that a singer makes music from within himself, thus it is with the hand-punched organ roll; it produces music of its own with no outside influence. For the first time, as I listened to the completely ‘machine-like’ organ playing, I was rid of the impression of the machine. For I was hearing something entirely consistent, unquestionably self-contained and precisely measured: mechanical music.

If I were to describe the essence of this form of music-making – not an easy task with words, and certainly an impossible one to accomplish exhaustively – I should like to speak of a certain ‘coolness’. To put it more clearly: I do not imply any lack of warmth, but rather the presence of a ‘non-warmth’, thus not the absence but the presence of a certain quality that is not contained in music or music-making with which we are already familiar. Hand in hand with this comes another essential quality, a crystal like clearness; one might even say, an unusual excess of clarity. Such crystalline clarity does not agree with subjective (I mean this in a positive way) sentimental music, or if it occasionally does, then it is only in specific cases where it is expressly intended and appropriate. In such a context, already existing music can in fact be played in a mechanical way. As a youngster I remember hearing on a certain electric orchestrition not only all sorts of light music (especially marches, including the Radetzky March), but also a series of Rossini overtures. I know now that the choice of the latter was no coincidence. The arrangement of certain existing works for mechanical instruments can be just as stimulating as the orchestration of some Beethoven piano sonatas or of other classical works that were not originally written for orchestra.

It seems almost redundant to have to state explicitly that this mechanical music should not push ‘the other’ aside. Nobody would want this and nobody should fear it. (I’ll leave it up to the aesthetes and the philosophers to decide to what extent this music corresponds to the spirit of the times – I am speaking as a musician.) It is simply opening up a new
or little tried area of musical expression. Just as I myself do not want to spend all my life in the waters of a river or a lake, simply because I am not a fish but a human being, I do nevertheless know and like the incomparable enjoyment of an occasional dip; so, in the same way, the ‘coolness’ of mechanical music should not dislodge the ‘warmth’ of interpreted music, but exist alongside it as something all its own, with its own special qualities. In an article about quarter-tone music, Alois Hába has written that it was not thought of as the destruction of half-tone (diatonic) music, but as an expansion of the realm of sound, much as the outlying areas of a city enlarge on the latter by expanding and building around it, without any intention of destroying it.

That is a valid image: so let us apply it to this new area of music. Anyone who does not have a feel for it need not bother about it; however, many other people, either by performing it or by listening to it, will find it stimulating in many ways.

Book Reviews


Denis Hall

Arthur Ord-Hume is a prolific writer of books about mechanical music in many of its forms. The books under review are, I understand, his tenth and eleventh essays in this field. When one is confronted with two large beautifully produced volumes costing a total of £65.00, one is, I feel, justified in expecting something rather special.

The smaller of the two books, Restoring Pianolas and other Self-Playing Pianos, is a practical D.I.Y. style of work and covers the field of the barrel piano, foot operated player pianos, the electrically driven reproducing pianos, and concludes with a short chapter on player reed organs. This is very largely a reprint of Mr Ord-Hume’s first book on the subject (Player Piano, Allen and Unwin, 1970, N.L.A.).

Player Piano generated much interest and enthusiasm (for which the
author takes credit in the Preface to *Pianola: the History of the Self-Playing Piano*, but was full of errors. Anyone who relied on that book to acquaint himself with the principles of, for example, the Duo-Art piano system would be either confused or else end up with a number of basic misconceptions about it. The new publication I have to report contains virtually all the old mistakes (and some new ones). In both books, for example, he refers to a theme perforation in each side of the music roll ‘bass and accompaniment’. He means ‘bass and treble’. Again he writes ‘When a theme perforation in the paper crosses the tracker-bar, whether it is on the treble or bass side of the roll, the other side of the pneumatic stack comes under the influence of the theme side of the expression mechanism’. He means the *same* side. In his diagram of the knife valve, he refers to a component as ‘Knife valve and Regulator pneumatic adjusting screw’. What he is referring to is the wire connecting rod between the moving part of the knife valve and the moving board of the regulator pneumatic; there is no adjusting screw at that point. He states that two differences between upright and grand Duo-Art pianos are that the grands have a ‘crash valve’ and a ‘modulator’. Only the American pianos have these; they were not fitted to those instruments designed and built in England. In the new book, on p. 90, he states that the Welte tracker bar has 99 openings; on pp. 100 and 101, he quotes the Welte Red, Licensee and Green systems as having 100, 98 and 98 holes respectively. When dealing with the adjustment of the speed of the roll drive motor in the chapter ‘Rebuilding the Player Piano’, he advocates correcting the speed by altering the tension of the spring on the governor, and dealing with uneven running by altering the position of the slide. These are normally dealt with the other way round. In the light of the experience and knowledge of the subject which has become available in recent years, such mistakes seem quite inexcusable.

To anyone looking for guidance in repairing and restoring player pianos, the first book in the field *Rebuilding the Player Piano*, Larry Givens (The Vestal Press, 1963) gives good sound basic advice, and a much more elaborate new book, *Player Piano Servicing and Rebuilding*, Arthur Reblitz (The Vestal Press 1985) will tell the enthusiast just about all he should know. Ord-Hume’s book adds nothing to our knowledge of the subject and in some areas is positively misleading.

The second volume, *Pianola: The History of the Self-Playing Piano*, contains much new material. It starts with a general chapter on ‘The Rise and Fall of the Automatic Piano’ from the barrel instruments of the sixteenth century to the virtual commercial demise of the reproducing piano just before the second world war, and then in separate chapters deals in greater detail with the barrel piano, the foot operated player-
piano, the reproducing piano and other roll playing instruments. There are also chapters on ‘Music for the Player Piano’ and even instructions on ‘How to Play the Player Piano’. The book sets out to be very comprehensive and contains a wealth of excellent photographs which illustrate most of the instruments to which Ord-Hume refers in the text.

His approach is very much a hotch-potch of the historical and the mechanical. This is acceptable in so far as it goes, but it is only half the story; the instruments are only the means to an end: that is to reproduce the music they were designed to play. He certainly touches on the musical aspect, but it is not difficult to see where his interests lie.

An early impression of this book is the uneven quality of the text. The narrative jumps from one topic to another; a statement is made in one part of the book only to be contradicted in another. ‘As early as 1904 the German firm of Welte built a reproducing piano known as the Keyless Welte . . .’ (p. 31): ‘The original Welte-Mignon action used remained practically the same from the keyless reproducing piano of 1901 . . .’ (p. 174). Is there more than one pen at work here, or has the author not properly assimilated the material and merely copied from various contradictory sources without verifying which is true? Some of his statements are not sufficiently specific for a text book of this kind. On p. 116 on the subject of accenting mechanisms, he writes ‘Then there was the 88-slot (marginal) which had one accent slot for each note on the tracker bar’. Does he, I wonder, refer to the Kastonome system (actually an 85 note device)? This certainly worked well but was too complicated and expensive to build for it to be a commercial success. Three lines down, he writes ‘. . . was used only on a limited scale but it was the first which achieved technical supremacy and wide application’. Was it used only on a limited scale, or did it have wide application? He must make up his mind. When it comes to describing the differences between the main types of reproducing piano, Ord-Hume is quite wrong in some fundamental points, and as a result the conclusions he draws from his misconceptions are equally muddled. For example, he writes (pp. 186–7):

While the Duo-Art makes use of pneumatic motors pulling against a return spring, thereby tending to be somewhat slow in response, the system scores in admitting very large changes in playing volume by relatively small movements of the accordian pneumatics.

In contrast, the Ampico action has a more delicately balanced pneumatic action with consequent improvement in response speed which allows it to respond at high speed to the loudness requirements of individual notes. In theory, then the Ampico action can produce a more faithful representation of the pianist – assuming that the pianist was that good to begin with! As for response speed, this is not a great limiting factor, since accordian and theme punchings can be adjusted to be far enough ahead of the notes which they are to affect to allow for delay.
He argues that the Ampico system can reproduce the pianist’s playing more accurately because of the higher response speed which it achieves; in the next sentence he says that response speed is not a great limiting factor. The whole question as to which system is the most accurate is highly subjective and is inextricably bound up with the quality of the roll editing. He is a bold man to express such opinions.

The development of the reproducing piano is of great interest to anyone concerned with the history of interpretation. From the introduction of the Welte-Mignon in 1905 for a period of 25 years all the great and many minor pianists made piano roll recordings. The legacy goes back to Carl Reinecke (born 1824), the earliest pianist to have recorded, and captures the playing of, among others, Debussy, Ravel, Carreno, Blumfield-Zeisler, Fauré, Reger and Mahler, none of whom made solo piano records for any other medium. It is largely a forgotten tale which needs thoroughly researching and documenting before it is too late; regrettably Ord-Hume has missed the opportunity.

In his 25 page chapter on ‘Music for the Player-Piano’, he devotes 13 to catalogue numbers, roll makes and prices. What about the vast and fascinating repertoire both classical and popular for the 65 and 88 note instruments? What of the enormous repertoire recorded for the reproducing piano – at a guess more than 10 000 classical titles alone? And the music of over 70 composers and arrangers specially cut for the player piano roll (including over 60 by Stravinsky alone) – this whole branch of the subject is dismissed in a single page. The section on reproducing pianos consists of a mere two page listing of artists who recorded for the various systems. Here he makes some extraordinary statements. It is not true, as Ord-Hume suggests, that Paderewski recorded only for Duo-Art and had his roll recordings re-edited for Welte. His Welte recordings date from the earliest times, some ten years before the Duo-Art system was perfected. Where he recorded the same titles for both Welte and Duo-Art, the performances are quite different. Nor do I think there is any evidence to support his contention that D’Albert, Backhaus, Lamond, Landowska or Saint-Saens recorded only for Hupfeld.

The art (this is the word used by the author and one with which I would not quarrel) of playing the player piano (pianola) is one practised by only a handful of people in the whole world. I must come to the conclusion that Ord-Hume is not one of them. The chapter on playing simply does not cover the basic principles of pianola playing in an adequate manner. A serious pianolist could not write such a flippant sentence as ‘Sit comfortably in front of the instrument, slightly further away from it than if you were going to do your actual Rubinstein act by manual playing’! Again, he refers to one of his pianos as a ‘very smooth runner’ and
describes how he pedals with one foot and uses the other to operate the sustaining and soft pedals between the player treadles. Any pianolist needs both feet to control the operation of even the most perfectly operating pianola properly. There have been several books written about playing the pianola (e.g. *How to use a Player Piano*, Harry Ellingham (Grant Richards, 1922 N.L.A.) or *The Art of the Player Piano*, Sydney Grew (Kegan Paul, Trench, Trubner and Co., 1922) which is listed in his bibliography) which make a much better stab at covering the subject than Ord-Hume. None that I have read really grasps the nettle as to the use of the tempo lever. This is an important aspect which might have been tackled here.

The history of the self-playing piano is an enormous, if specialised, subject but the serious errors and omissions of these books mean that we still await the definitive work.

Contributors

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REX LAWSON is a concert pianist who has been involved in research and music-making with these instruments since 1971. He has travelled with his pianola to the USA, Canada and many European countries, transporting it by plane, ship, car and even, in 1986, by gondola in Venice. He has made a special study of music written for the pianola, by the eighty or so composers who have been interested in its possibilities during the course of this century.

LIONEL SALTER is a writer and broadcaster on music, who was formerly the Deputy Controller of Music for the BBC. He has introduced concerts of reproducing piano music at London’s South Bank, and he recently wrote and presented a series of broadcasts entitled ‘The Piano Roll’ on the BBC World Service.
DAN WILSON is a keen and experienced pianist, and a longstanding member of the Player-Piano Group. He has been instrumental in the development of the art of pianola playing to its present day standard, not least by the enthusiasm he has shown for converting new musicians to the cause of the instrument.

TREVOR FENEMORE-JONES is the Vice-Chairman of the Elgar Society. His article was originally published in the Society’s journal, and the research was carried out with the kind cooperation of the British Piano Museum and its Director, Frank Holland. We are grateful to the Elgar Society for the opportunity of reprinting it here.

The late ERNST TOCH was a composer of the avant-garde when this article was originally published in *Musikblätter des Anbruch*, Vol. VIII, 8–9, Oct/Nov 1926, p. 348. Together with Paul Hindemith and various other less well-known composers, he experimented with writing music directly for roll-operated pianos and organs manufactured by the Welte company in Freiburg, southern Germany. The results of these labours received their premieres at the music festivals held in Donaueschingen from 1927 to 1929. 1987 is the centenary of Ernst Toch’s birth.

DENIS HALL has for many years been involved in the restoration and preparation of reproducing pianos for concerts and recordings, including the Rachmaninov Ampico discs referred to elsewhere by Lionel Salter. In recent years he has turned his attention increasingly to the Pianola, giving many public recitals in and around London.