

Harpsichord & *fortepiano*

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Varied Dispositions

Richard Troeger

Registration is far from the most important issue in harpsichord playing, but it provides a few puzzles of continuing interest. I thought to bring together here, in something like an informal chat, some of the exhibits regularly displayed concerning the subject, and to indicate certain contrasts (while forming little in the way of conclusions), and then describe what I have known for a long time as a particularly useful disposition of stops.¹

The documentation we have concerning specific employment of registers in the historical period is very limited. Well-known cases include the Sonata in D Minor, Wq.69 (1747) by C. P. E. Bach, which specifies a great many combinations, from *plein jeu* to solo stops and everything in between, including the solo lower-manual 8', two 8' stops together, and a buffed 8' plus 4'.²

A more general but pragmatic summary of register usage appears in the well-known letter of 23 August 1712 in which Thomas Day advises Edward Hanford regarding a harpsichord disposed 2x8', 4':

*There are three Sets of Strings, which may be played on either all together, or every one by itself ... all three are only a thoroughbass to a Consort: for Lessons, any two sets of the three are more proper.*³

To digress a moment: Day's advice on *plein-jeu* continuo playing (also mentioned by Saint-Lambert, 1707), straightforward and certainly 'of the period', runs contrary to much modern practice. Continuo today is often kept modestly in the background; the extant realizations of some (probably unusual) accompaniments are far too heavy in texture and/or active or ornate to suit the taste of many a soloist or ensemble. I have heard of a Bach Festival whose directors considered a single 8' to be too loud. (Whereas, to extend the contrasts a little further, Bach is said to have wanted harmonically full accompaniments and himself often added, when accompanying, an extra obbligato line on the keyboard.)

A literal reading of French directions for *pièces croisées* and other special effects has been taken as indicating that the usual practice in France was to play (solo as well as accompaniment) with the 8'8'4' *plein jeu* 'on' as a normal thing, and the upper manual 8' used for contrast and delicate solos.⁴ (Thus, to specify solo 4', one is told

to retire the lower 8' and uncouple the keyboards.) If *plein jeu* was the usual setting, why was François Couperin so concerned about changing fingers to elicit a delicate legato? Were all such passages played on the upper-manual 8'? The phraseology in question (there are few examples) may simply have been the idiom, or was phrased thus to make the procedure absolutely clear to amateur players. In any event, the idea of *plein jeu* as normal makes a notable contrast with the more eclectic comments just quoted from Day, made in the same period but in another country. English and French taste have been known to differ; but I suggest that the French directions are not necessarily so specific in their implications as Day's more straightforward phraseology. C. P. E. Bach's diverse registrations are even more varied than Day's suggestion, which makes no mention of solo stops.

Thus far we see a continuum from (possibly) a norm of *plein jeu* in France to paired stops in England to all possibilities (from colour and solo stops to *plein jeu*) in Germany. As suggested, the French issue is at least questionable and Day was not offering a considered treatise on performance. In Wq.69 we jump to a single, specific instance of highly varied registration. Are these differences illusory? How common was the diversity in Wq.69? I admit that I find it difficult to imagine disputes on the subject in the 18th century or before. What was 'normal'? To what degree were there norms in various times and places?

Harpsichords were built with many dispositions, sometimes for specific purposes, perhaps sometimes for a diversity of functions. When accompanying Italian opera on an instrument with one keyboard, two stops and no provision for shifting the registers (as was sometimes the case), one knows where one is: all contrasts depend upon the texture of the realization. How colourful were the performances of the period, on the more complex instruments?

What of specifically colourful registers? It is comparatively rare to hear today a solo 4', lute (nasal) register, or buff stop. Did French 18th-century practice include more use of the solo 4' than was specified for a handful of special-effects compositions?

The ‘lute’ register seems to have been common on 17th-century English harpsichords, and of course became standard in the 18th century on English, Flemish, and at least the more elaborate German harpsichords. Yet how many modern players use such instruments? I well recall, at a demonstration of museum instruments, an English harpsichord of c.1750 being laughed at when the lute stop was heard, by itself and in unusual combinations requested by the listeners—not an ordinary audience but a covey of harpsichord aficionados attending a nearby convention, who obviously considered French doubles as the norm. (Such conservative reactions are often ascribed to revival-period ‘abuse’ of harpsichord colour, but the stops just mentioned were all common currency in earlier times.)

The buff (harp) stop was ubiquitous on Flemish, French, English and German instruments of the 18th century and sometimes earlier (it was a standard in 17th-century Flanders). Yet it is rarely heard today and seems to be regarded as a gimmick, departing from the pure path of subtly inflected 8’ registers. Yet, if these devices were not used, the makers would not have taken the trouble to provide them—a point appreciated by anyone who has done fine woodworking, especially without power tools. It is a commonplace to point out that unseen parts of an instrument (as with furniture generally, then and now) were often left in rougher state than the rest. The same point applies to what was heard and what was not. That is to say, if something did not matter it would not be included on an instrument.

Choices

The perhaps over-conscientious player wants to make valid choices when choices are available. What to do with the larger instruments? The most pragmatic readers will say, ‘Play!’. And they are probably right, and I would guess quite authentically in line with 18th-century practice. But suppose a British 18th-century player, accustomed to the doglegged 8’ on his Kirckman double, acquired a copy of the *Goldberg Variations*? Would he, as I recall the late John Barnes once suggesting, voice the lute (nasal) register to stand as the independent upper-manual 8’? The ‘French’ disposition of upper 8’, lower 8’, 4’, and coupler (also known in 18th-century Germany, of course) is the most flexible arrangement for a double, yet obviously this approach was not universal. Through most of the 18th century, Flemish dispositions (starting at least with early *ravalements* of certain Couchet harpsichords) often allowed two 8’ choirs to sound from the upper manual, a unison formed by the doglegged upper 8’ joined with the lute stop plucking

the lower-manual 8’ strings. Thus, varied combinations were not confined to the lower keyboard. The notorious catch is that one could not instantly shift from one such combination to the other, owing to damper interference on the shared lower 8’.⁵ The original state of the 1721 Hieronymus Albrecht Hass harpsichord now in Gothenburg (converted into a piano at some point) also offered a combination of stops on the upper manual, having independent 4’ choirs on both manuals.⁶ How frequently instruments provided a doubled 4’ choir we cannot know, but like the Flemish doubles just cited, we find more varied resources on the upper keyboard than a single stop. The French disposition, employed almost universally in modern two-manual harpsichords, is often regarded today, however indirectly, as an evolutionary goal, in the way equal temperament once was. Two keyboards on a harpsichord were perhaps, in some climates, perceived as offering differing access to the instrument’s resources, rather than as particularly coordinated otherwise. The pragmatic view suggests that instruments were constructed for the musical needs of a given time and place rather than because of a blind instinct blundering gradually toward later developments.

Pragmatism certainly dictates that when acquiring a harpsichord, most ambitious players want two keyboards so that the summation of harpsichord playing known as the *Goldberg Variations* will be within reach. But in the very fact that it is a summation, it is atypical. Most of the duet movements truly require an independent 8’ on each keyboard. Such writing is fairly rare in the literature, as are the special effects occasionally provided in France. Yet what recitalist wants to eliminate either the Goldbergs or *Le Tic-Toc-Choc* from his or her repertoire? That old chimaera of the revival era, the general-purpose harpsichord, still lurks as a practical matter today. One sees how Hubbard and Dowd, for example, arrived at the 18th-century French double (extended to g³, with the resonance space widened further for the sake of one or even two transpositions of A395/415/440). The real (and non-pragmatic) solution is of course to own (or borrow) and maintain (presumably in real quill) some half-dozen or more representative instruments and deploy them (by means of a large, horse-drawn cart?) according to the requirements of the programmes agreed to by concert presenters.

There is of course no real answer; but with the exception of the occasional 16’ stop now returning from its post-revival banishment, it is comparatively rare to see the more adventurous (or sometimes the once normal) dispositions in use. There has long been a healthy tendency to emphasize the more typical resources of harpsichords (as also with modestly sized ensembles and

choruses); probably the most usual dispositions found today are singles with two 8' stops or the French-based double. How often do we hear an actual, short-octave Flemish model with single 8' and 4' stops on a single keyboard? The stand-in for that is usually a later-style double. But even in addition to the French harpsichord and the variously doglegged arrangements, there were more elaborate dispositions in the 18th century.

Perhaps the supreme example as far as sheer variety is concerned is the 'harpsichord of many voices' belonging to Scarlatti's pupil Queen Maria Barbara. Not long ago, this instrument emerged from vague account to specifics (perhaps horrifying to today's purist), thanks to the researches of Michael Latcham.⁷ The Queen's ten (plus four supplemental) pedals (*buttoni*) and the extreme diversity of its divided registers (very far from presenting 'aspects of a single voice', as William Dowd described his own take on harpsichord design) suggest not even Landowska's registrations, but the far more glittering and arbitrary effects of the next generation, heard from players such as Fernando Valenti, George Malcolm, and sometimes the pedal-addicted would-be purist Ralph Kirkpatrick.⁸ To my own knowledge thus far, the practical response to Latcham's discovery appears to be a notable example of ignoring historical evidence when it runs against current opinion and/or supports a revival-era aesthetic. (Let me make clear that I harbour little nostalgia for most aspects of the revival period.) Of course, we have no prototype; but neither is there an extant *Lautenwerck* and many attempts at that instrument have been constructed. If one or another Scarlatti enthusiast has commissioned a reconstruction of the Queen's special instrument, it would be interesting to hear the doubtless very colourful results.

Modern tendencies

Every epoch forms its own aesthetic; but in terms of what-harpsichord-to-use-for-what-repertoire our era is perhaps more particular (in practice if not ideals) than was the case in the past. Paging through Hubbard's book, which was hugely influential in forming today's aesthetic, it is surprising to see how many instrument types are rejected: Flemish and English virginals and spinets, 17th-century French harpsichords, German harpsichords of both northern and southern types. And in a summary rejection of stop choices, both Hubbard and Dowd discounted the 16' stop in both word and, usually, practice. On at least one occasion I heard Dowd call it 'useless, only adding a lot of mud'. Toward the conclusion of an otherwise brilliant article tracing the work of Michael Mietke, the concluding realization that the

(now famous) Mietke harpsichord that Bach purchased for Cöthen in 1719 might have had a 16' was termed by the author, Sheridan Germann, as 'disturbing'.⁹ It seems that the instrument, costing (with transport) 130 Thaler and described as 'large', was priced well above Mietke's usual 60-80 Thaler range but well below the cost of elaborate decoration. Despite her reservations, Germann very honestly voiced the possibility that Bach might have used a 16' model after all. The point remains speculative, although the circumstances are convincing and Bach is known to have favoured fully-disposed organs and such innovations as the *Lautenwerck*. According to Rafael Puyana (not necessarily an objective source), Hubbard dismissed the three-manual 1740 Hass as 'the work of a madman'.¹⁰ One can imagine his dismissal of such inventions as the combined harpsichord/fortepiano. And, doubtless, many of us can sympathize. Were such instruments technological stunts, or of real musical significance? There is every likelihood that 18th-century musicians, to whom the concept of 'authenticity' was unknown, sometimes enjoyed simply making a big splash. Did 'good taste' include splashes?

Were there purists and mavericks—and were they perceived as such—in the Baroque and Classical eras? Quirinus Van Blankenburg, describing his four-stop instrument of 1708, said that no music required its varied registrations, so one had to improvise in a style appropriate to them.¹¹ A little further along in musical history, C. P. E. Bach welcomed harpsichord pedals, as had Thomas Mace long before, but not until the later 18th century did pedals and knee-levers become common. Were they in fact part of Purcell's or C. P. E. Bach's personal aesthetics? Did Mozart feel unfulfilled on anything but a (financially unobtainable) combination harpsichord/fortepiano with a pedal piano beneath? (The latter was, of course, something he did manage to acquire.) Should C. P. E. Bach have gone to work for the Queen of Spain? On the other hand, did Scarlatti (whose later sonatas often exceed the keyboard compass of his patroness' new toy) feel that his most colourfully textured works only came to fruition on a 2x8' single? Did he care?

Did J. S. Bach ever play a harpsichord from the Hamburg school? (He would not have liked the wide octave span.) What did he think of the Gräbner school? (The Gräbners seem to have provided the disposition seen as normal today.¹²) We know that C. P. E. Bach disliked the Hamburg clavichords, owing to both the difficult touch and the 4' strings in the bass, but these known facts have not prevented players from recording his music on precisely that type of clavichord.

We know from a famous correspondence that Constantijn Huyghens favoured a 2x8' disposition over the more usual single-8'/4' arrangement, although the maker of the instrument, Ioannes Couchet, stated his preference for the latter.¹³ How common was either preference at the time?

How common was the two-manual disposition of stops arranged as upper 8', lower 4' and 16', mentioned by Jakob Adlung?¹⁴ Adlung's discussion (not completely quoted by Hubbard) makes no mention of the instrument's usage. Might it have been primarily employed for continuo? Conceivably, the bass was often played on the lower manual with 16' plus one or both of the other stops, and the other parts on the single 8' of the upper manual.

3x8' disposition

Another disclaimer: I am not myself partial to either elaborate registration or the 16'. But it is in nature to clutter a clear issue from time to time. I am glad to see the 16' being again accepted as a valid stop, but the 'extra' that I would like to see appearing more often is a third 8' stop, either as the Couchets sometimes provided, with two plucking positions for a single choir (a very economical invention; but was it popular?), or even a third choir of 8' strings on what would otherwise be a conventional single or double-manual disposition, as appeared on some Hass harpsichords, known from the extant specimens of 1721 and 1723. One should also note an anonymous Italian harpsichord with three 8' choirs in the collection of the Metropolitan Museum, New York (late 17th century, Accession number 45.41).¹⁵

The H. A. Hass harpsichord of 1723 (Danish Music Museum, with details from a copy shown in illus 1) is one of only two surviving double-manual instruments without 16' from the Hass family, the other being the aforementioned example from 1721. Thus we have scarcely any data from comparable harpsichords to bring to bear on the questions that surround the 1723 example, which has been subject to reworking. Even its present state is the subject of some confusion, accounts in the modern literature conflicting in several ways. To sum up: the instrument possesses three choirs of 8' strings (see illus 2 for the bridge layout) and a 4' stop. At present, the upper keyboard operates a single 8' plus a 4' doglegged to the lower manual. The latter possesses two further 8' choirs.¹⁶ Apparently, the upper 8' (in the instrument's present state) cannot be sounded from the lower manual (although the contrary is sometimes asserted). It seems, however, that true coupling of the manuals was once possible, given the presence of paired blocks (as described by Adlung (1768) acting as coupler

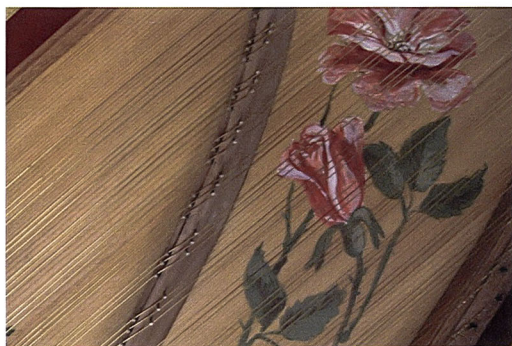
dogs *via* a sliding keyboard.¹⁷ Whether it is the upper or lower keyboard that slides is variously reported; the lower manual end blocks are furnished with knobs used in coupling, as on other Hass doubles.



Illus.1 Harpsichord by Ronald Haas (1985), after H. A. Hass (1723), detail. Soundboard painting (using California flora) by Ronald Haas.

The doglegged 4' appears, according to Lance Whitehead, to be a later modification. I would suggest that it was likely introduced in tandem with the present handstop which turns the 4' and middle 8' on or off in a single motion.¹⁸ Such an arrangement is, to my knowledge, unknown on other Hass harpsichords but quite in alignment with later 18th-century taste. It is my own purely speculative guess that the 1723 instrument was altered to resemble these later doubles, in offering differing bodies of sound on the two manuals.

As Hubbard long ago pointed out, the complex dispositions of the Hass instruments with 16' are in effect elaborations of the 'French' disposition. In this context, the presence of the 4' on the 1723 upper manual is unexpected; among known instruments, Hass' use of doglegged jacks seems to have been confined to sharing the main upper 8' with the lower manual and apparently (I understand that the mechanisms may sometimes have been altered in the past) making provision to cancel its presence by means of the so-called 'German' coupler (more 'uncoupler' in this case).¹⁹ Musically, the doglegged 4' would create awkwardness when one wants a *piano* accompaniment to 8'(s) with 4' on the lower manual, since the 4' is perforce engaged on the upper manual as well. It would seem that when Hieronymus Hass wanted an upper-manual 4', he bestowed not only a second row of jacks, but a second 4' choir as well (because of damper interference with a shared stop?), as was the case on the 1721 double.²⁰ Thus, the upper 8' could still sound by itself in contrast with the lower *plein jeu*. This elaborate five-stop arrangement allows both the flexibility of the 'French' disposition and the inter-manual variety of the later Flemish harpsichords – and without the awkwardness occasioned by doglegs and dampers.



Illus. 2 Hass harpsichord by Ronald Haas, 8' bridge layout.

In the opinion of the late keyboard maker Ronald Haas, the original arrangement of the 1723 instrument resembled elements of the other Hass doubles: a single upper dogleg 8' and the rest on the lower manual with the aforementioned (un)coupler. Thus, all four stops could sound in any combination and the 4', when filling out the lower-manual ensemble, would (again) not hobble a true *piano* on the upper keyboard. Mechanically and musically, this simpler solution is also the most flexible, and Ronald Haas built at least four harpsichords on this model. I should say that he achieved a clear, flowing tone, being adept at such subtleties as managing the extra pressure of the fourth choir on the soundboard.²¹

But why the extra 8'? It in fact increases the subtler varieties of colour in offering many more combinations than the 8' / 8'4' disposition (or that with 16'). Presuming the presence of a coupler, and that the 4' is confined to the lower manual, it also provides greater variety in the available dynamic contrasts, both of themselves and between the manuals.

Modern conventional wisdom at least formerly held that the two 8' stops on a double must be voiced to approximately equal strength. However, the forward plucking position of an upper 8' causes that stop to retain more or less equal presence and perceived volume against the lower, darker 8' even when the upper 8' is in fact voiced more weakly. (Voiced with equivalent strength, the forward 8' can be perceived as even louder than the other 8'.) A third 8' can be voiced as a true *piano* or near-*piano*. One can employ the stop as a genuinely softer sonority on its own, and use it as accompaniment to the upper 8'. Thus there is an extra resource for accompanying a solo line, beside the usual use of the upper 8' to support a solo rendered on the lower keyboard by coupled 8's. There is also more than one option for the sound of joined 8's.

The third 8' (on a single as well as a double) allows multiple shadings of the basic 8' voice of the instrument: three solo stops; three differently paired 8' stops; and the three together. This last, if heavier in sonority than the others, can be very effective in appropriate textures and is helpful in accompanying an ensemble. Naturally, the third 8' also provides several 8' + 8' + 4' voices apart from the true *plein jeu* of the four stops combined. Yet further variation is available through the sonorities of three different combinations of single 8' and 4'.

I have outlined the possibilities of a third 8' because, despite its usefulness, the concept has been generally ignored, as have the Hass harpsichords until fairly recently. All of the effects just outlined are shadings of the two basic voices of the harpsichord (8' and 8'+4') and stand in contrast to the much starker variations in tone color provided by a 16' instrument. My own preference is for the former; but again, it is important to accept the variety of the historical record.

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Endnotes

- 1 The basic material is gone over in varying ways in (among others) David Fuller, 'Harpsichord Registration', *The Diapason* 69/7 (July, 1978), 1, 6-7; Richard Troeger, *Technique and Interpretation on the Harpsichord and Clavichord* (Bloomington, 1987), ch.8; and from a technical standpoint in Frank Hubbard, *Three Centuries of Harpsichord Making* (Harvard, 1965). The present article (essentially an opinion piece) was completed before John Koster's 'Reflections on Historical Harpsichord Registration', *Keyboard Perspectives* 8 (2015), 95-131, had come to my attention. Pre-publication, Professor Koster kindly sent me a copy of the piece. Naturally we cite several of the same instances and make a few points in tandem (e.g., 'why include a buff stop if it is not going to be used?', and to my amusement we both use the word 'gimmick' in reference to modern practice with it) but my intention is only to adduce and 'talk over' certain matters in preparation for recommending a particularly interesting and flexible disposition, whereas Koster's treatment is a large-scale survey.
- 2 The manuscript is reproduced in *The Collected Works for Solo Keyboard by Carl Philipp Emanuel Bach*, vol.3, ed. Darrell Berg (New York and London, 1985), 319-28. A detailed inventory of the registrations is given in Fuller (1978), 7.
- 3 Quoted in Hubbard (1965), 153, discussed in Troeger (1987), 202, and touched on in Fuller (1978), 6.
- 4 Cf. Fuller (1978), 6; Harald Hoeren, 'Remarks on the Harpsichord in France', in Pieter Dirksen (ed), *The Harpsichord and its Repertoire* (Utrecht, 1992), 94.
- 5 Some of these arrangements are cited in Hubbard (1965), 80-82.
- 6 The most complete account of the 1721 Hass is in Lance Whitehead, 'An Extraordinary Hass Harpsichord in Gothenburg', *Galpin Society Journal* 49 (March, 1996), 95-102.
- 7 Michael Latcham, 'The 12 *Clavicordios* owned by Queen Maria Barbara of Spain and the seven *cembali* owned by Carlo Broschi, known as Farinelli: facts and speculation', in Maria Luisa Morales Lopez del Castillo (ed), *Cinco Seglos de Musica de Tecla Española, proceedings of FIMTE conferences 2002-2004* (Almería, 2007), 255-81.
- 8 Cf. remarks in Ralph Kirkpatrick's 'Fifty Years of Harpsichord Playing', *Early Music* xi/1 (January, 1983), 31-41.
- 9 Sheridan Germann, 'The Mietkes, the Margrave, and Bach', in Peter Williams (ed), *Bach, Handel, Scarlatti, Tercentenary Essays* (Cambridge, 1985), 138-9. Since this article first appeared, it has become known that 16' harpsichords were much more common than had been previously realized.
- 10 J. S. Bach, *Six Partitas* played by Rafael Puyana (Sanctus Recordings), Notes, 47.
- 11 Quirinus Van Blankenburg, *Elementa musica* (The Hague, 1739), 142ff., translated and quoted *in extenso* in Hubbard (1965), 237-40, and in Grant O'Brien, *Ruckers, A harpsichord and virginal building tradition* (Cambridge, 1990), 295-7.
- 12 John Phillips, *The Surviving Harpsichords of the Gräbner Family* (unpublished monograph, 2000), 33.
- 13 See O'Brien (1990), 305-6.
- 14 Jakob Adlung, *Musica mechanica organoedi* (Berlin, 1768); facsimile edition by Christhard Mahrenholz (Kassel, 1961), part II, 110; translated in Hubbard (1965), 267.
- 15 See also a description of a likely 3x8' harpsichord, and other examples, in Will Bruggmann, 'A Harpsichord from Switzerland', *English Harpsichord Magazine*, ii/2 (1978), 40-44.
- 16 Donald H. Boalch, ed Charles Mould, *Makers of the Harpsichord and Clavichord 1440-1840* (Oxford, 3/1995), 365, col.2.
- 17 Information kindly supplied by Lance Whitehead.
- 18 Again, my thanks to Dr Whitehead for this data.
- 19 The German coupler involves the lower manual sliding in to engage the doglegged upper 8'. It is an efficient device and is desirable for the sake of avoiding extra weight when engaging three or four choirs of strings. It also of course allows for independent 8' stops on the two keyboards. Illustrated in Hubbard (1965), Plate XXVIII, Fig.5, showing the arrangement on the Hass harpsichord in the Yale Collection of Musical Instruments. (In an understandable error, reference to the same instrument on p.179 states that it is the upper manual that slides. But the end block knobs of the Yale instrument are on the lower manual.)
- 20 Cf. Whitehead (1996).
- 21 The tone of my own instrument - one of the four made by Ronald Haas - has flowered even further with its recent restringing in the 'phosphor iron' made by Stephen Birkett.