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MARCH 3, 1890.

MAJOR G. A. CRAWFORD
IN THE CHAIR.

THE FLAT, SHARP, AND NATURAL.
A HISTORICAL SKETCH.

BY FREDERICK NIECKS.

THE history of the flat, sharp, and natural is not a dull record, but a tale full of stirring incidents. If my narrative does not succeed in engaging your interest, in stimulating your curiosity, and in now and then sending a thrill of excitement through you, I have failed to do justice to the noble subject of my choice. These remarks may lead you to suppose that I am going to speak of the human flats, sharps, and naturals of our profession. This, too, is, if not a noble, certainly an interesting subject; but it is not the one of which I intend to treat on this occasion. My subject is the origin, rise, and vicissitudes of the musical signs that raise and lower natural notes and restore raised and lowered notes to their natural state. No doubt most people would suspect such a history to be dull; but nothing is dull if only we go deep enough into it. The subject in question is certainly not an exception to this rule, which could be confirmed by the study of hundreds of the apparently dry details of our notation. It is with these details as with the humble constituents of society; with the flat, sharp, and natural as with those lowly neighbours of ours whose lives seem to us an unbroken level desert. How great is always our astonishment when chance allows us to get a glimpse of what is hidden behind the plain, prosaic exteriors, and we discover loves and hates, hopes and disappointments, joys and sorrows, aspirations, successes, and failures—in short, at least as much romance as in the lives of the great and mighty. Well, let us try to get a glimpse of what is hidden behind the plain exteriors of the humble friends now under consideration.

The flat, sharp, and natural have a common origin, and this origin is the small letter *b*. If there were no direct evidence, this might be inferred from the mediæval names of these signs, which were respectively for the flat, *b rotundum*, round

b; for the natural, *b quadrum* or *quadratum*, square *b*; and for the sharp, *b cancellatum*, cross-barred *b*. But as there is direct evidence, we need not have recourse to inferences. John Cotton, who in the latter part of the twelfth century wrote a treatise on music, informs us that the oldest musicians, that is of the Middle Ages, gave to the monochord, or, as we of the nineteenth century would say, had in their system, only fifteen notes—namely, the diatonic notes from the great *A* to the second *a* above it. "There was neither added *Γ*," he says, "nor inserted the *b*, which we call round or soft *b* (*b rotundum vel molle*), but which by the Greeks is called *synnemenon*, that is, conjoint. The moderns, however, who are more subtle in all things, recognised that the number of notes which had been used up to their time did not suffice for the execution of all melodies." * The first known writer who distinguished between *b* natural and *b* flat was Odo of Clugny, who died in 942; the *b* natural being indicated by a square *b* (*h*), the *b* flat by a round *b* (*b*).† The famous Guido of Arezzo, who exercised so great an influence on the music of the Middle Ages, and on whom have been fathered so many inventions that had either existed before him or came into existence after him—as, for instance, the note *Γ*, our great *G*, and the harmonic hand—wrote about the second quarter of the eleventh century, in the second chapter of his "*Micrologus*," as follows: "The notes of the monochord are these: In the first place we put *Γ*, which the moderns have added. Then follow the seven low notes (*graves*), according to the alphabet, which, therefore, are indicated by capital letters, thus: *A, B, C, D, E, F, G*. After these the same letters are written again, among which, however, we place between *a* and *b* another *b*, which we make round, whereas we make the other square, in this way: *a, b, h, c, d, e, f, g*. To these letters we add yet, but with different signs, the superacute tetrachord, in which we double again *b*, thus: *a, b, h, c, d,* *a, b, h, c, d.* †

In the eighth chapter of the same work Guido explains why the round *b* was introduced. "The round *b*," he writes, "which, because it is less regular, is also called the added *b* (*b adjunctum*), or the soft *b* (*b molle*), forms a concord

* *Johannis Cottonis De Musica*, in Vol. II. of Gerbert's "*Scriptores ecclesiastici de musica sacra potissimum*."

† "Præterea a voce sexta *F*. per quatuor divide, et retro *h*. aliam *b*. rotundam pone: quæ ambæ pro una voce accipiuntur, et una dicitur nona secunda, et utraque in eodem cantu regulariter non invenietur."—(*D. Oddonis Dialogus de Musica*, in Vol. I. of Gerbert's "*Scriptores ecclesiastici de musica sacra potissimum*."

† *Micrologus de disciplina artis musica*, in Vol. II. of Gerbert's "*Scriptores ecclesiastici*." See also *Micrologus Guidonis*, translated and explained (Latin and German text) by M. Hermesdorff (Trier: J. B. Grach); and German translation by Raymund Schlecht, in *Monatshefte für Musik-Geschichte*, Vol. V., p. 135.

with F, for which reason it has been added, as F cannot form a concord with the fourth note above it, the h, on account of the discrepant tritone. But the b and h should not be joined in one and the same phrase."

This is not all Guido says of the use of the round b, but we have not time to hear him out.

Thus far I have spoken only of the two b's as they occurred in the letter notation; now, what was done when they were written in the stave notation? The already once-cited John Cotton of the twelfth century, remarks with regard to this, that the two b's stand on the same line or in the same space, but that if b flat is intended, a round b has to be placed above the note in question.

The round b, however, was not only placed above, but also before the b natural that was to be lowered a semitone.

As musicians had found that a b flat was necessary for the satisfactory execution of their melodies, so they found before long that other modifications, sharpenings as well as flattenings, were required, especially in their harmonic combinations. It is interesting to note how the idea gradually dawned upon them, and how they struggled against the recognition of its true significance. For although they allowed these new notes to be used, they would not admit them into their system on equal terms with the other notes. The b flat had been thus admitted, but the other semitones obtained by flats and sharps came under the denomination "false music" (*musica falsa*), and at a later period, "feigned music" (*musica ficta*), and also, but more rarely, *musica inusitata*. We have here one of the most striking and astounding instances of self-deception—an instance of the human intellect eclipsed by a theory. We may well call it astounding, for more than 600 years were needed to eradicate the strange notion, which to us appears in the highest degree childish.

No less interesting than the self-deception of the theorists and their followers is the clever utilisation which the early musicians made of the two forms of their b; for the round b came gradually to be used with other notes besides b that were to be flattened, and a happy thought suggested the employment of the square b for sharpening notes. The forms of our natural and sharp are nothing but variations of the square h, and owe their existence simply to careless writing. By making the short vertical line of the square b (h) a little too long we get our natural (h); by making the two vertical lines of the square b quite or nearly equal, and the horizontal lines long enough to extend beyond the vertical ones, we get our sharp, the cross-barred b, the *b cancellatum* of the olden times. Both signs, the natural and the sharp, were concurrently used with the same meaning.

Although at a later period—but never generally—there was a distinction made in the use of them, it was not till the eighteenth century that these signs were thoroughly differentiated, and their powers strictly defined and established as we at the present day know and acknowledge them.

Now let us return to the mediæval theorists. Johannes de Garlandia, who probably wrote in the first half of the thirteenth century, is already quite on the modern standpoint in dividing all tones into semitones. He says: *Falsa musica* (which is very necessary for instruments, especially for the organ) arises when we take a semitone instead of a tone, or the reverse. Every tone is divisible into two semitones, therefore the number of the signs which indicate the semitone may be increased in all the modes."*

Walter de Odington, who wrote somewhat later, probably in the last quarter of the thirteenth century, does not go quite so far as Johannes de Garlandia, but he adds to *b* flat, which, as we have seen, formed part of the regular system, the notes *f* sharp, *c* sharp, and *e* flat, saying, the double *b* effects, according to the moderns, a double *f* and a double *e*, and the double *f* effects a double *c*, in order that for both perfect fifths may be found. He explains also how the raising and the lowering of a note a semitone is indicated respectively by a square *b* and a round *b*, and adds: "The two *b*'s belong to the monochord; the other alterations are called by musicians *falsa musica*, not because they contain anything dissonant, but because they are outside the disposition of the monochord, and were not used by the ancients."†

Philippus de Vitry, of the fourteenth century, produces an example with *b* and *b* on all lines and in all spaces.‡ Another writer of the fourteenth century, Johannes de Muris, says that the false mutations (*mutationes falsa*—that is, the chromatic alterations other than the *b* flat) are contrary to the character of plain-song, but that it is otherwise with mensurable song (by which we have to understand "harmonic music"). He discusses also the question whether a semitone should be inserted between the low *A* and *B*, and remarks that this was done in the case of some artificial instruments, such as the organ, in which almost all the tones are divided into unequal semitones. But he thinks that this is not so useful for the human voice.§

* *Introductio Musica secundum Magistrum Garlandia*, in Vol I., p. 166, of Coussemaker's "Scriptores de musica mediæ ævi."

† *Fratris Walteri Odingtoni De Speculatione Musica*, in Vol. I., p. 215, of Coussemaker's "Scriptores."

‡ *Ars Contrapunctus secundum Philippum de Vitriaco*, in Vol. III., p. 26, of Coussemaker's "Scriptores."

§ *Johannis de Muris Speculum Musica*, in Vol II., pp. 294 and 271, of Coussemaker's "Scriptores."

The absence of the low B flat from the mediæval theory has its explanation in the then flourishing hexachord system, according to which series of six notes, with a semitone between the third and fourth degree, were started from the notes *G, c, f, g, c', f',* and *g'*. The *b* flat was required for obtaining the semitone in the right place in the hexachords starting from *F*; but there was no low *F* (only *f* and *f'*) and hence no need for a low *B* flat. This was the theory. And the low *B* flat remained absent from the system for hundreds of years after the note was in practical use. Here we have another instance of the conservative propensities of the human mind. Or should we say, of the intellectual inertia of the musical profession?

There is a remark of Johannes de Muris which deserves to be dwelt upon for a moment or two—namely, that the chromatic alterations of notes are contrary to the character of the purely melodic plain-song, but not to the harmonic mensurable song. This distinction has to be borne in mind; it is of great importance. One of the greatest authorities on both these kinds of music, Franz Xaver Haberl, the editor of service books and of the complete works of Palestrina, delivers himself on this point of the following opinion: "As the Gregorian chant as such is always executed *unisono*, the laws for the formation of cadences in two-part counterpoint are not at all applicable to it, and there is no other rule than this: except a flat before *b*, in order to avoid the tritone, no sign of sharpening or flattening is allowable in Gregorian chant."

This is the view taken by one who belongs to the party that insists on a strictly diatonic execution of plain-song. But there is also a party that favours a certain amount of chromaticism. The question is one of taste rather than of history. No doubt plain-song was at first strictly diatonic, but as soon as chromatic notes came into use elsewhere they could not easily be kept altogether out of plain-song. If some resisted, others would succumb to the temptation. This is not only according to reason, but, I think, may be gathered from the contradictory and often ambiguous accounts that have come down to us.

Even if we grant the admissibility of certain modifications of the radically diatonic plain-song, there remains still a great difference between it and harmonic music with regard to the amount of accidentally sharpened and flattened notes, with regard to the amount of the so-called false or feigned music. *Musica ficta* has been said by an anonymous mediæval writer to have been invented on two accounts—out of necessity, and for the sake of beauty. In harmonic music dire necessity made itself naturally more strongly and more frequently felt than in the purely melodic plain-song, and also the desire for beauty, for a smoothing down of the sharp corners of diatonicism.

Musica ficta, says another mediæval theorist, has been contrived for the purpose of obtaining good consonances, and of avoiding bad ones. Franco de Colonia writes: "When the *discantor* cannot get useful consonances by right music (*rectam musicam*), he may at his pleasure make false music (*musicam falsam*)."^{*} These statements are too general to tell us much. Let us go for some particulars to Prosdocimus de Beldomandis, who wrote at the beginning of the fifteenth century: "As to the use of these signs—namely, the round ♮ and the square ♯, you must know that they are applied to octaves, fifths, and similar intervals in so far as these require to be enlarged or lessened in order to make good consonances of them if they be dissonant, because such combinations should be in counterpoint always major and consonant. But these signs must also be applied to imperfect consonances, such as thirds, sixths, tenths, and the like, as they require to be enlarged or lessened in order to make them either major or minor, for these combinations must be in counterpoint, now major and now minor. If you wish to know when they are to be major and when minor you must consider the degree to which you intend to proceed immediately after such an imperfect consonance, and then you must see whether the degree which you leave lies farther away from that to which you intend to proceed if you make this imperfect consonance major or if you make it minor. For you must take that which is less distant from the degree to which you intend immediately to proceed, be it major or minor, and you must make them such by means of the above-named signs—a major of the minor, or a minor of the major—according to the requirements of the case. The reason is no other than a more pleasing harmony. But as this more pleasing harmony results from it, this reason can be regarded as sufficiently convincing. For if it belongs to the nature of the imperfect to strive after its perfection, which cannot be otherwise than by its approach to the perfect, the conclusion is that an imperfect consonance becomes the more perfect the nearer it approaches a perfect consonance, and also that thereby a more pleasing harmony of the song arises."^{*} And then Prosdocimus de Beldomandis gives the following example:—



^{*} *Tractatus de Contrapuncto*, in Vol. III., p. 199, &c., of Coussemaker's "Scriptores."

This is a very clear, simple, and comprehensive doctrine, which, however, raises a number of uncomfortable questions. Did it correspond to the prevailing practice? And, if the practice corresponded to the doctrine in the first quarter of the fifteenth century, did it do so in the remaining part of this and in the sixteenth century? And, further, if the practice of Italy corresponded to it, did that of other countries do so likewise? Unfortunately, answers to these questions are not forthcoming, for no other theorist before or after Prosdocimus de Beldomandis has been so outspoken as he. Now, one unacquainted with the history of music might here ask: Why make so much ado about theorists and their opinions? Have we not works of art in which both the theory and practice of their time and country must be embodied? Ah, here is the rub. The old compositions embody these things but very incompletely, as the necessary accidentals are either entirely wanting or imperfectly indicated. Nay, not only were the necessary accidentals omitted, but accidentals which had no business to be there were sometimes introduced—namely, for the purpose of warning singers not to sharpen or flatten notes in circumstances where they were accustomed to do so. Imagine the stupefaction of an uninitiated modern in coming across an *e* with a sharp and an *f* with a flat in those venerable works of the past! Even when the Italians and the French had become a little more liberal in the use of accidentals,* the Netherlands and Germans kept true to their old reticence, and when works published in the former countries were reprinted in the latter, it was not an uncommon thing to omit the accidentals of the original print.† In an Italian manuscript of the fourteenth century occur the words, "False music ought not to be indicated" (*Non debet falsa musica signari*); and the Italian Pietro Aaron says in "*Il Toscanello in Musica*," the first edition of which appeared in 1523: "Accidentals are not needed by learned and practical singers, but are inserted only for inexperienced and unintelligent ones." In fact, the musical profession of those days, to all appearance jealously guarding the secrets of its craft, reminds one of what is told or fabled of the mason brotherhoods of the Middle Ages. The object of the accidentals, which the composers wholly or partially neglected to indicate and the singers had to supply, was a compromise between the modes (the ecclesiastical scales) and euphony. That this compromise is not likely to have been made on the same terms at all times, countries, and schools, is a proposition that needs no demonstration. Much

* The English composers were particularly careful in the use of accidentals.

† See in this connection and on the use of accidents in early times, articles by Robert Eitner in *Monatshefte für Musikgeschichte* III. (1871), 133; XIX. (1887), 20; XX. (1888), 75.

has been learned and much will be learned by carefully gathering and putting together the bits of information scattered here and there, the hints in the treatises of the theorists, the occasional, real, and cautionary accidentals in the works of the old masters, and the practice of the composers who wrote in German tablature, where accidentals received more attention. Nevertheless, it is hardly to be expected that editors of works of the Middle Ages and of the sixteenth and part of the seventeenth centuries will agree much better in the future than they have done in the past. The existence of the compromise will no longer be denied by any reasonable man, but there will remain open the question of what nature that compromise is, which side, the modes or euphony, is to be favoured, what shall be the amount of accidentals allowed in each individual case.

I shall now quote what Dr. Carl Proske, the editor of "*Musica Divina*," says on the subject of signature and accidentals. His conclusions with regard to these latter were arrived at by a thorough study of a manuscript collection of sacred music made in the sixteenth century for the Duke of Altemps at Rome, which was carefully prepared for practical use by the addition of accidentals, the additional accidentals being distinguished from those of the composers by being placed above the notes. "The old writers," says Proske, "did not require any chromatic sign in the signature of their modes in their natural position, but put in the signature a flat when they transposed them a fourth higher. Another essential signature of this kind could, according to the laws of those modes, never take place. Now, there frequently occurred in the modulation of a piece the employment of accidental intervals (\sharp , \flat , \natural), in the indication of which the old writers, otherwise so correct, proceeded in a very imperfect and uncertain manner. To be sure, they saw in such a raising and lowering of the intervals, in so far as they were not demanded by the nature of the modes, something extra-essential, and consequently called the signs used for that purpose accidentals, and the practical carrying out of them *cantus fictus*. Now, some, especially in the earliest times, omitted altogether the insertion of such signs; others inserted here and there a \flat , but avoided the indication of the requisite \sharp (diæsis); later on these signs came more into use (the \sharp was generally substituted for the \natural), but a normal completeness of their indication is almost nowhere to be found. For the singers of the earlier times the want of the indication may have been less felt, for they possessed a thorough knowledge of the melody and harmony of the old tonal system, and could ascertain from the laws of solmisation and the harmonic modulation [*Ausweichung*] (the modulation of our modern modes is not applicable to this) a correct use

of the accidentals." He then gives four rules for the supplying of the necessary accidentals. Here they are in an abbreviated form. (1) and chiefly: The perfect cadence at the end of a piece, and the imperfect ones occurring in the course of it must be always preceded by the leading note. (2) To avoid false relation, the augmented fourth and diminished fifth have to be modified. There are, however, frequent exceptions to this rule. (3) When in the scale of *C* the note *b* is preceded by *a*, and descends immediately after, this *b* is to be flattened, especially if it returns to *a*. The same takes place in the scale of *F*, with one flat in the signature, where *c* is flattened in similar circumstances. (4) A minor sixth proceeding to the octave is often changed into a major one.

The temptation to pursue this subject farther is great, but I must resist it as I have already dwelt on it too long.

Proske's remarks have brought us to the end of the sixteenth century. But, before we proceed, we must look back for a moment, and take note of some of the details which we have disregarded in our general view of this part of our subject. Coussemaker's "*L'Art harmonique aux 12^e et 13^e siècles*," for instance, contains several harmonic compositions of the twelfth century in the signature of which, occupying the space of the note *f*, is a square *b*, formed like our natural and having the power of our sharp. In one case, one of the three parts of a composition has even two square *b*'s in the signature, calling for *f* sharp and *c* sharp, whilst the two other parts have at the same time only one. Then we meet with an unexpected employment of accidentals. Some time after the occurrence of a *c* with a square *b* (*♯*) before it, the same note recurs with a flat. And the same occurs in another composition with *f*.* Now, that is not at all according to the general practice that prevailed soon after and down far into the seventeenth century. The rule being that the accidental applies only to the note before which it stands, and to the immediate repetitions of that note; if one or more other notes come between two notes of the same name, the accidental loses its effect. This rule remained in force even after the introduction of bars. At an earlier period, however, there was an exception to the rule; the round *b* being at times treated somewhat like our signatures, holding good till revoked by a square *b*. We find in the specimens which Coussemaker gives of the harmonic music of the twelfth and thirteenth centuries also the practice of placing an accidental not immediately before the note to which it applies, but before the preceding note, or even before the note preceding the preceding note. This practice, too, continued for a very long

* The flat having here the force of a natural, recalling the preceding accidental.

time. Lawes' "Ayres and Dialogues for one, two, and three voyces," published in 1652, supplies an example of a bar intervening between the accidental and the note to which it applies, that is to say, the accidental stands at the end of one measure and the note at the beginning of the next. To return to Coussemaker and his early specimens, we meet in them with a peculiarly shaped flat, being somewhat like a square *b*, with three sides of the square leaning downward on the right side, thus: \flat . This is, with one exception, the most striking of the numerous but generally slight variations of the form of the flat I have seen. The exception I found in a manuscript volume in the British Museum containing "In Nomines and other solfainge Songes," by Taverner, Tye, Mundy, Philipps, Byrd, and others. It might be described as an angular capital \flat with an elongated vertical line, thus:—



If the Latin treatise of the thirteenth century included in the "Histoire de l'harmonie au moyen age" is correctly printed by Coussemaker, the writer used besides the flat both the natural and the sharp, and used these latter in the same sense. For we find the note *b* with a square and with a cross-barred *b* before it, and so we do *f*. One of these signs is revoked by a round *b*.

A composition of the thirteenth century, a Rondeau, "Fines Amourettes," by Adam de la Halle, is interesting for the form of the sharps it contains. Ambros says in his History that the sharp had here this form \sharp . But that statement is not borne out by Coussemaker's fac-simile, where the sign presents itself thus \sharp , and thus \sharp . There is a still more interesting form of the sharp (Plate xxxvi.) in a fac-simile of a composition of the fourteenth century. It shows clearly how the square *b* (*b*) became a cross-barred *b* (\sharp). The form of it is this, \sharp .

The old form of the cross-barred *b*, the one that is identical with our sharp, was subsequently supplanted by the double St. Andrew's \sharp , I suppose because this latter stood out more boldly from the stave. In the sixteenth, seventeenth, and a great part of the eighteenth centuries, this form of the sharp was the one commonly used. An exceptional form of the sharp—namely: \sharp —is to be found in Palestrina's "Hymni totius anni," printed at Rome in 1589. In Henry Purcell's "Sonatas of three parts," printed in 1683, a sharp like ours is used, but with larger and more slanting cross-bars, thus \sharp .

The square *b*, our natural (*b*), fell into disuse. The composers either used only the flat and the sharp, or used also the

natural, but to a limited extent. The limitation, however, was not always the same. Some used it only in connection with *b*, others also with *f*.^{*} The distinction made in these cases between a square and cross-barred *b* is explained in the third volume (page 30) of Michael Prætorius's "*Syntagma musicum*," published in 1619. From this writer we learn that the square *b* is properly placed before the *b* flat in the transposed system when this note has to be raised in order to obtain a perfect fifth to *e*, and before *f* in the regular, non-transposed system when this note has to be raised in order to obtain a perfect fifth to *b*. The raising here required is equal to a full semitone, whereas the raising required for the change of a minor third or sixth into a major is less than a semitone. Our use of the square *b* (*♭*) as a natural, as a revoker of flats and sharps, cannot be traced farther back than the end of the seventeenth century, and was not generally established till about the middle of the eighteenth.

As we have already seen, the old composers put, as a rule, no sharps in the signature and no more than one flat. But there were occasional exceptions to this rule. In addition to the early examples cited by me, I shall mention two of the first quarter of the sixteenth century, cited by Dr. Hugo Riemann in his "*Studies in the History of Notation*"—viz., Josquin's "*Le Serviteur*," with two flats, and Okeghem's "*Prennez sur moy*," with three sharps. The manuscript volume of which I spoke a little while ago supplies likewise examples with two flats.

In the second half, and more markedly in the last quarter of the sixteenth century, the composers began to be more liberal in the use of accidentals. And this was the case not only with rampant chromaticists like Gesualdo, Prince of Venosa, whose music swarms with accidentals, but even with what we may call the classical composers of the time. Burney noticed the first A sharp in a composition by Orlando Lasso published in 1655, and the occurrence of A sharp and A flat in the same movement in a composition by Cipriano de Rore. This change in the notation was simply an inevitable consequence of the great changes that were then going on in the nature of our art—the change from diatonicism to chromatico-diatonicism, the change from the old to the new tonality, the change from the polyphonic to the recitative and arioso style, and all the changes implied in the rise of the musical drama and the advance of instrumental music.

Ludovico Viadana, one of the leading spirits in the new movement, says in the preface to the "*Cento concerti ecclesiastici*," published in 1602: "The greatest diligence has

* See what Adlung says on this matter in the quotation given farther on.

been used in indicating all the accidentals— \sharp , \natural , and \flat —where they are required, and the prudent organist [whose duty it was to execute the thorough-bass] ought to be careful to observe them." Having pronounced the word thorough-bass, *basso continuo*, I will remind you in passing of the fact, well known to you, that when a minor third was required in the harmony, it was indicated by a flat above the bass note, the major third being indicated by a sharp. This was a general practice. But we find in Viadana a practice which became less general. An accidental applying to the bass note itself he placed before it, an accidental applying to the third of the unwritten harmony he placed sideways, somewhat to the left of the bass note, and on the line or in the space where the third would be noted.

But although Viadana is particular in indicating the accidentals, this had not yet become the general practice. Michael Prætorius wrote in 1619 as follows: "The cross-barred \flat (\flat) and the round \flat (\flat) were either not at all or very rarely marked by the chief and most excellent old composers in the places where they were nevertheless necessary. And even now there are composers who adhere to this practice and think it is wholly superfluous. They pretend that every singer and musician knows that he has to sing or play a perfect fourth and fifth when he meets with an augmented fourth and a diminished fifth, and a semitone in the cadences, and likewise a semitone when the melody ascends only one note above *la*. For this reason Philippe de Monte and other more distinguished composers will not allow their pupils to indicate in such cases the round \flat . But I am of opinion that it is not only convenient, but also in the highest degree necessary, not only for singers so that they may not be put out in their singing, but also for the simple town instrumentalists and organists who do not understand music, and are still less able to sing properly, and consequently, as I have myself often seen and experienced, do not know what to do in this respect; not to mention that the nature of the composition of composers is such that in some places these two chromatic signs have to be applied and in others must be disregarded. Therefore the best course would be if the composers were to write them down distinctly in all places where they are required, then it would no longer be necessary to ponder and doubt." Prætorius's remarks throw much light on the execution of music in his time, and whoever takes up the compositions of Frescobaldi, the great organist and composer of the first half of the seventeenth century, cannot fail to sympathise with the view expressed by the German writer. For they contain many sharps and flats, but not enough, and we of the nineteenth century are at a loss

what quantity we may and ought to add. Let us hear what Haberl, the editor of a collection of pieces by that composer, has to say on this head: "A much debated question in the case of Frescobaldi is that of the so-called accidentals (\sharp , \flat , and \natural) that are not marked, but were probably executed by him. Only in some obvious places have I indicated them by small signs above or below the notes in question. Some passages and harmonic combinations appear hard and unbearable, but they are not improved by accidentals, and false relations as well as chromatic dissonances were at that period by no means unheard of."

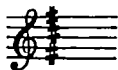
Every age is of course a period of transition. In the matter of flats, sharps, and naturals, the seventeenth century was this in the highest degree. Things were in an unsettled state and no serious attempts were made to settle them. No doubt some things were settled, but these were exactly those that required to be unsettled. Let us take a look at one or two things.

Burney tells us that Carissimi never wrote a sharp, and never more than one flat in the signature, even though the keys demanded several. The same may be said of many of his contemporaries, the younger as well as the older, not to speak of his predecessors. It holds good of Cavalieri's "Rappresentazione di Anima e di Corpo," of Caccini's and Peri's "Euridice," of Gagliano's "Dafne," of Monteverdi's "Orfeo," of Cavalli's "Giasone," of Cesti's "La Dori," and other works. For instance, in the last-mentioned opera we meet with the keys of D major, A major, and B minor, and with B flat major and C minor; but in the keys with sharps there are only accidentals, and in the keys with flats no more than one flat in the signature. But key-signatures with more sharps and flats are to be found early in the seventeenth century, and especially later on—for instance, a composition with two sharps in the signature, by Adriano Banchieri, of the year 1603. For a long time the number of two sharps or flats in the signature was not exceeded *whatever* the key might be. Thus we find in Alessandro Scarlatti's Opera, "La Rosaura," produced about 1690, A major with two sharps. But we find there yet other inconsistencies: D major with two sharps, but B flat major with one flat; D, G, and C minor with a flat less, and E and B minor with the correct number of sharps in the signature. By and by three sharps were sometimes put into the signature. But as late as 1728, the composer and theorist, Heinichen, wrote that the fourth sharp in E major was *rarely* put into it. And in the same work he complains of the incorrect notation of the modes by the omission of the essential major seventh and minor sixth. Most of our dictionaries and other books of information are silent on this

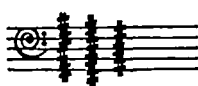
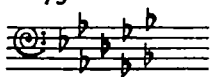
interesting point in the history of notation, and the few that take notice of it make inadequate, if not absolutely misleading, statements. One tells us that the last flat or sharp was frequently omitted; another that frequently one sharp was omitted; and a third, that in the minor keys the composers placed one flat less in the signature. The fact is, that the signature of the major as well as the minor, of the keys with sharps as well as the keys with flats, was often defective, and that there was no generally accepted system in this defectiveness. That there was no system may be proved by the following particulars. Couperin in his "*Pièces*" of 1713, writes the signatures of the major keys correctly, but puts one flat or sharp less in those of the minor keys. Taking up Pepusch's score of Corelli's Sonatas and Concertos, we find G, D, A, E, and E flat major, with one sharp or flat less; but F major with one flat, D major with two sharps, and B flat major both with one and with two flats. As to the minor keys, E, B, F sharp, and D minor are correctly marked; but G and C minor have one flat less, and F minor two flats less than they ought to have. Turning over Corelli's Op. 5, which is not contained in Pepusch's score, we find the following variations: D minor with one flat, A major both with two and with three sharps, and B flat major again with one flat. Some Concertos of Vivaldi's have in the keys of G, D, A, F, and B flat major, E, B, and D minor, the full complement of sharps and flats, but one flat less in E flat major and G minor. Again, in a book of Concertos by Giovanni Matteo Alberti, we come on F major with a flat, on G major without a sharp, on D major with two sharps, and on B flat major without the second flat; on E minor with a sharp, and on D minor without a flat. The signatures in Torelli's compositions are equally incalculable. Flying in desperation to the theorists, I thought, after much searching, that I was going to get what I wanted in a book published in 1708 by Friedrich Erhardt Niedt. Alas! another disappointment was awaiting me. Here is what I found: A major with three sharps, E major also with three sharps, and B major with four; E, B, and D minor correctly marked, and G, C, and F minor with one flat less. Gentlemen, I invite you to evolve a theory out of these facts; I, myself, feel constrained to admit my incompetence, and I need hardly add that I do so with the greatest possible reluctance. This unsatisfactory state of matters came to an end, roughly speaking, about the middle of the eighteenth century, but many composers had before then adopted a better practice; some, on the other hand, continued for some time yet to pursue their evil courses. A pleasing contrast to all this confusion is to be found in the eighteenth edition of John Playford's "*Introduction to the Skill of Musick*," of the year 1724,

where the keys given have the correct signatures; but the number of keys given is limited, comprising only the keys with one, two, and three sharps and flats, the major key with four sharps, and the minor key with four flats, of which E major and F sharp minor are said to occur only sometimes. As to the other keys, the author remarks: "There may be more thought on to puzzle young beginners, but not of any use, here being variety enough to please the ear."

In connection with key-signature, one peculiarity has yet to be mentioned—namely, the repeating of the sharps and flats if more than one note of the same name was to be found on the stave, the space below and above being generally included, sometimes also the first ledger line:—



As long as composers did not write in keys with many sharps and flats, and did not even mark every one of the few in the signature, this accumulation was unobjectionable—nay, even praiseworthy; it was otherwise when keys with more sharps came to be used, then a state of matters arose that was akin to the most terrible species of nightmare. Here are examples of the signature of E flat minor and C sharp major from Mattheson's "Great Thorough-Bass School" of the year 1731:—



Here has also to be mentioned that the place of the signs in the signature was not fixed as it is now—for instance, the sharp for the note *f* stands sometimes in the first space instead of standing on the fifth line, the sharp for *g* on the second line instead of in the first space above the stave. In short, the succession and position of the several sharps and flats was variable.

I spoke of composers not writing in keys with many sharps and flats. Saint-Lambert, in his "Principes du Clavecin" of 1697, says there were only three scales with sharps—G, D, and A major. And Mattheson wrote so late as 1731 that he had never seen a piece in E flat minor, and from another remark it appears that, if he had seen one in G sharp minor, it must have been a great rarity. You remember the quotation bearing on this point which I made from Playford's "Introduction."

The placing of accidentals *in the course of a piece* was no less curious than the placing of sharps and flats *in the signature*. "Parthenia, or the Maidenhead of the first Musick that ever was printed for the Virginal," the date of publication of which is 1606, shows accidentals placed before, below, and

above the notes. This was not an exceptional proceeding. Christopher Simpson does the same in "The Division Violist" of the year 1667. And Saint-Lambert, as late as 1702, writes that they are placed generally before, sometimes above and below, but never after the notes to which they apply. However, in Lock's instrumental music to *The Tempest* we find also accidentals placed after the notes to which they apply.

The long-obtaining practice of permitting the accidental to be separated from the note to which it applied by one or more notes, and of the occasional occurrence of an intervening bar, has already been mentioned.

Among the matters which the first half of the eighteenth century had to settle was the use of the natural. Adlung writes in 1758 that the natural was formerly used only before *b* flat and *e* flat. But mostly it was either not used at all or synonymously with the sharp—the flat reducing sharpened notes to their natural position, and the sharp doing the same for flattened notes. Loulié, a French musician, was the first who, to my knowledge, taught our use of the natural. He distinctly propounded in 1698 that a sharp raises a note a semitone, a flat lowers it a semitone, and a natural brings it back to its normal position. However, he immediately gives an example in which a flat revokes a sharp, and comments on this thus: "Note that a natural has the same effect." Indeed, many decades had yet to pass by before our use was established. For even in 1760, Rameau, who had for about thirty years been in the habit of using naturals in the modern way, writes in his "Code de Musique": "People are still pretty much in the habit of recalling the sharp by the flat and the flat by the sharp." Leopold Mozart, on the other hand, says nothing of the old style in his "Violin School," published in 1756.

In Loulié's time accidentals still applied only to the note before which they stood and those of the same degree immediately following. And this question has, even at the present day, not yet been settled. The usual rule in the latter part of the eighteenth century was that all the notes of the same name in the bar were affected after an accidental, and if the last note was one of these notes and the first note of the next bar of the same name, the latter was likewise affected. Later theorists limited this part of the rule to tied notes.

Next we must consider the introduction of the double flat and the double sharp. At first musicians had recourse to the next natural note—for instance, substituting *g* for *f* double sharp, *a* for *b* double flat. The learned theorist and excellent musician Mattheson tells us in the second edition of his "Great Thorough-Bass School" that in the first edition he had done this in the case of double sharps; but dissatisfied with this illegitimate proceeding, he now placed two sharps

before the notes in question. He does this because he has not the necessary type for the special sign which he had already proposed for the purpose—namely, a single St. Andrew's Cross. The composer Marcello opposed, in the preface to the third volume of his Psalms, the introduction of this sign, because it had already another signification, that of the enharmonic diæsis. Leopold Mozart gives in 1756 two forms of the double sharp: † and X. In 1758 we learn that its convenience had already made the latter the most fashionable form, and thus it has remained. Other forms had been proposed, but without finding favour. Here are two: X and ##.

No special sign has been introduced for a double flat, although Mattheson proposed the Greek β. Sorge's proposal, made about the middle of the century (1745-7, in "Vorgemach"), of a special sign for a double natural failed likewise to find acceptance. It was this ♮.

To one other matter I must yet allude. The Germans had in former times no special names for flattened notes except *b* flat. They gave to *d* flat the same name as to *c* sharp, to *e* flat the same name as to *d* sharp, and so on. We read, for instance, in the theory books of the time, that the chord of *E* flat major consists of the notes *d* sharp, *g*, and *b* flat. How did this ridiculous custom come into being? You know there was a kind of letter notation called German tablature or German organ tablature. Well, in that system they had only one chromatic sign, a curved line or flourish added to the letter, answering to our sharp. So anyone writing in this notation had to substitute a sharpened note every time he wished to write a flattened one. This is the little-known solution of the riddle. Afterwards the syllable *es* was introduced to distinguish the flattened notes by name from the sharpened notes, which were already in possession of the syllable *is*. But this innovation was not brought about without difficulty, as the writings of the first half of the eighteenth century show us. Another curiosity are the German names of *b* for *b* flat and *h* for *b* natural. This is simply a case of mistaken identity. Even without going farther back and without studying old styles of handwriting, a black letter *h* cannot fail to strike you with its similarity to the square *b* and our natural.

I have not said all I wished to say, and a very great deal more than I could say is needed to make my slight sketch a finished picture. But I must conclude, having indeed kept you already too long; for though there was no lack of incidents in my account of the brothers flat, sharp, and natural, your faces, which I have been anxiously watching, showed me but too clearly that the thrills did not come off. Gentlemen, I thank you for the patient hearing you have given me.

DISCUSSION.

THE CHAIRMAN.—Ladies and gentlemen, in opening any discussion on the lecture I will only make one or two remarks. I am perfectly certain that to any of us who have at any time indulged in the pleasure of investigating old music, printed or in MS., Mr. Niecks's remarks will be of very great use, for in printed music down to a comparatively late period we often find some of these curiosities of literature to which he has referred. I have often wondered how people in those days were ever able to read anything correctly at all, or to know at sight what the music was intended to represent. The habit of placing the accidentals at some little distance away from the note it was intended to qualify continued, I know, up to about 1700, for I have seen it in music of that date, and sometimes it is very puzzling to know what note is really affected, especially when the printer has made a mistake as well, and put the accidental in the wrong place. It was often placed not merely at the beginning of the next bar, but at the distance of several notes, and to that was sometimes added the difficulty occasioned by the notes not being in their proper relative places. I have seen a book printed in Germany in 1690, in which the treble finished at the end of the staff, while the bass, not being able to be crammed into its proper place, was turned over for some distance into the next staff, so that it was a very difficult matter to find out which notes of one part were intended to go with those of the other part.

Mr. C. E. STEPHENS.—I think we have to thank Mr. Niecks very much for this interesting paper, and we also understand his regret that he could not have extended it to considerably larger proportions, so as to embrace many questions which he has been utterly unable to touch upon. One point I should wish to refer to in music printing is the absurd method that until very recently prevailed of contradicting a double sharp or flat by putting a natural and a sharp, or a natural and a flat, after it. Of course that is like the old system in which, if there was a sharp in the signature and a natural was required, it was indicated by the use of a flat. That was common, even in Handel's time, for I have found it in his cantatas. If in the key of G, and F \sharp were desired, it would be indicated by a flat, and, in the figured bass, curiously enough, it is put after the figure. But of all the absurdities of even quite modern times there is that mode of contradicting the double sharp and double flat, a point which I think is not much touched upon in the paper.

Mr. NIECKS.—No, I did not mention the modern practice at all.

Mr. C. E. STEPHENS.—It seems to me the only thing necessary is to put the sign of what is actually required, and the thing then is plain and straightforward. It must be a matter of surprise in these days that we have not a single sign to indicate a double flat. It would be very desirable, but certainly not the sort of signs instanced by Mr. Niecks, which are most complicated. I remember a gentleman, an amateur, who some years ago looked upon these sharps and flats and double sharps and double flats as an invention of the ill-natured profession to try to bother the amateur; but he said it did not succeed in his case, for he never took the slightest notice of them.

Mr. HIGGS.—I was reminded, when Mr. Niecks was speaking, of Handel's method of expressing a double sharp in a figured bass by the use of a single sharp. A double sharp never occurs when there is already a single sharp in the course of the piece. In the first song in the Oratorio of "Susannah," with its signature of four sharps, there is a modulation into G \sharp minor, and it is expressed by a single sharp over the D \sharp —F \times is of course intended.

Mr. JACQUES.—I have to thank Mr. Niecks very much for the great profit and pleasure I have derived from his lecture, and I feel that when it is published we shall find it exceedingly useful. There are only one or two little things which struck me. He spoke about there being two parties with regard to the use of accidentals—those who favoured no accidentals before the notes at all, and those who wished some to be placed. I understood him to say that with those who did place them it was purely a matter of taste, and that there is no rule for it. Is that so?

Mr. NIECKS.—I said it was purely a matter of taste, not a matter of history; that the matter could not be tested by historical facts.

Mr. JACQUES.—I understood the chief rule they followed at that time was that the characteristic note of each mode was not to be interfered with; that was the point. For instance, in the mode beginning on D, it was necessary to have the major sixth, but you might have the seventh sharpened.

Mr. NIECKS.—The major sixth is, as a rule, flattened whenever the sixth goes back to the fifth.

Mr. JACQUES.—Is not that the *Æolian* mode?

Mr. NIECKS.—Let us take the scale D, E, F, G, A, B. If the melody were to rise, say, from A, the fifth, to B, and then go back to A again, in that case the B would be flattened. But if the B were to rise and go on to C, then the B would remain natural. There seems to be no doubt about that, because all the theorists mention that particular point.

Mr. JACQUES.—I think I first met with that theory in

Dr. Marx's "School of Composition," that the characteristic notes ought to be retained. I think he has given a whole table of them?

Mr. NIECKS.—Yes, that is quite correct.

Mr. JACQUES.—Then Mr. Niecks said he had no explanation to offer, and invited us to invent one, for the perplexing discrepancy in the placing of accidentals. May not that have been from a desire on the part of composers to conform, as they thought, to the mode? For instance, if we saw what we call D minor indicated by the note being flattened, was not the composer, perhaps, meaning to indicate the Dorian mode, what we call the first Gregorian tone? Is not that a possible explanation of the discrepancy that we find the same composer sometimes uses a flat in the D minor, and sometimes leaves it out?

Mr. NIECKS.—I do not think so. Our scales were already firmly established and fixed.

Mr. JACQUES.—I mean to suggest that they sometimes might have used our scale, the major or minor, and at other times they did not.

Mr. NIECKS.—I have often thought of that. But even if this theory should be found to hold good in the case of the minor scale, I do not see how it could be made to work with the major scale.

Mr. SOUTHGATE.—In the mention of *musica ficta*, about which there has been a great deal of discussion, it has always struck me that it is very doubtful whether there should be accidentals or not in the passages disputed over. There are two parties, one desiring that the accidentals should be used, and the other that they should be left out; we can hardly say whether they were required or not, and possibly there was no fixed practice. One cannot help noting that if from the chord of G minor you go to the chord of C, there is rather a desire to make the B flat (in the G minor chord) a B natural. Such is an example of questionable notation, difficult to settle in old music. We have examples of old music which has been reprinted, and you find theorists, and probably many of us, who doubt whether there should be certain accidentals in or whether there should not. Of course our ears have lost the old tonal feeling that the people who sang and wrote in those days had, and we are not well able to decide. It is certainly very much to be desired that these accidentals should be put in. With regard to the St. Andrew's cross sharp, I think it was used later than Mr. Niecks said. If my memory serves me rightly, in some of the earlier editions of Handel published by Walsh I think you will find that.

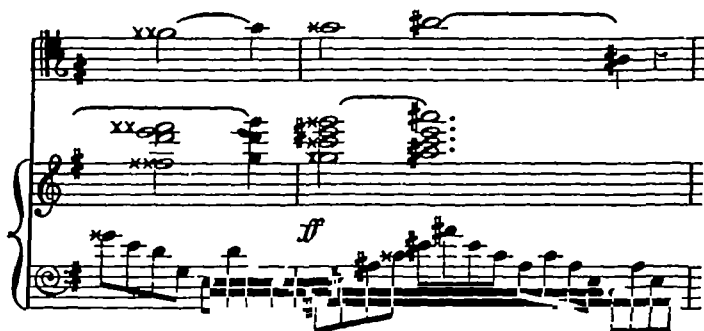
Mr. NIECKS.—Much later than that even.

Mr. SOUTHGATE.—That which interests me very much is

the old German Tablature. I lately had a very curious book in that tablature sent me from Berlin. It was an old book of organ music made for, or by, an organist of the name of Erasmus Hofer, and it had the date of 1601 at the end. The several pieces in it evidently consisted of the organ parts of Motets by Orlando Lasso, Vecchio, Rienero, and others, composed in four, five, six, seven, or eight parts, and all written in this curious tablature. I went to work to translate it, and found it a difficult task, but by perseverance and counting I found the key. One of the things which puzzled me more than anything else was that extraordinary method of indicating sharpened or flattened notes to which Mr. Niecks has called attention. It did seem a most extraordinary thing that the perfect fifth to A \flat should be D \sharp , and it puzzled me for a very long time; but at last I found that the Germans were not so perfect in their notation as we were, and that they were obliged to make one sign do for the E \flat and D \sharp , &c. It is very curious that that organ tablature should have lingered so very long in Germany. We had a tablature ourselves at a very early period, and we discarded it. There are some known examples of its being used as early as the time before the Norman Conquest, but in the time of Ethelred music was written on lines and spaces, so that we had got rid of our alphabet. But for other music, such as the viols, and the bassoon and flute, tablature was used down to the time of Playford. It is strange that the Germans should have kept up the old plan so much longer than we did.

Mr. WESCHÉ.—I should like to know if Mr. Niecks has ever seen an instance of a double double sharp. I found one in a modern work—a Sonata for pianoforte and violoncello, in G major (Op. 25), by Jean Louis Nicodé—





It is not really intended to raise the note two whole tones, but only a tone and a half.

THE CHAIRMAN.—I think we must certainly pass a vote of thanks to our lecturer of this evening for his very interesting paper.

[The vote of thanks was carried unanimously.]