Proceedings of the Musical Association

ISSN: 0958-8442 (Print) (Online) Journal homepage: <http://www.tandfonline.com/loi/rrma18>

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To cite this article: Edmund Whomes (1886) Key Colour, Proceedings of the Musical Association, 13:1, 83-98, DOI: [10.1093/jrma/13.1.83](https://doi.org/10.1093/jrma/13.1.83)

To link to this article: <http://dx.doi.org/10.1093/jrma/13.1.83>

Published online: 28 Jan 2009.

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MARCH 7, 1887.

MR. G. A. OSBORNE

IN THE CHAIR.

KEY COLOUR.

BY EDMUND WHOMES.

BEFORE commencing my paper on key colour, I would ask you to bear in mind that the instruments I refer to are those with keys—i.e., pianofortes and organs, either pipe or reed. In saying this, I am not allowing that "colour" will enable anyone to name the key played in by an orchestra, because, without perception of pitch this cannot be done; but the fact is, I know very little, and with regard to a very large majority, absolutely nothing of any instrument except keyed instruments. I feel I am quite safe in arguing from this standpoint, because there must be at least fifty pianos to any one instrument of any other kind that can be mentioned.

Key colour is rather a vague term for the characteristics said to belong to certain keys. I remember once hearing of a lady and gentleman who visited one of our good concerts, but left very disappointed and dissatisfied because Madame Norman-Néruda walked on to the stage just like anyone else, whereas she was down in connection with "Op. 25." And this particular lady and gentleman said, when explaining what they had seen, "she might have tried to do it in 25 hops, although we don't believe she could, the stage was too wide." I do not suppose that gentleman is here. If he were, however, he would probably say of my paper on key colour, "there wasn't even a brush, let alone any colour"; but as I understand the subject, I think key colour, or scale colour, is as suitable a term as can be found. Certain keys are said to give tone or colour to a song or a piece. Some keys are said to be bright, others sombre; some full, others thin; one masculine, another feminine; for these different shades of key expression, I do not think a more appropriate term than "key colour" can be found in our vocabulary.

It is admittedly a difficult subject to explain. Theorists account for it by saying equal temperament causes it; that by going into the scale mathematically, it can be proved that all keys are out of tune; that in tuning, a tuner takes

C, say of 270 vibrations—his D should be 301; E, 339·9; F, 360·1; G, 402·4; A, 453·8; B, 509·4; C, 540. In other words, the second should be flat; third, sharp; fourth, sharp; fifth, flat; sixth, sharp; and seventh, sharp. He then proceeds to tune in octaves, which are supposed to be perfect. These inequalities of the scale are said by theorists to materially assist in giving "colour" to keys; but tuners vary, so do pianos, and no rule can be laid down as to any exact ratio.

Professional men argue from another standpoint altogether. As a rule, they give no reasons whatever; but quote a few well known works—well known choruses or solos, either vocal or instrumental. They will quote "Beethoven's Symphony" and the "Funeral March" in C minor; "Hallelujah Chorus" for D; the "Heavens are telling," C major; "See the conquering Hero," G, and so on. Professional men express great surprise, and appear almost to doubt the sanity of anyone who admits his inability to hear anything of key colour. One or two professional men have spoken on the subject to me. One I met in Great Marlborough Street. In speaking of writing music, he said, "if ever you write waltzes, or things of a light nature, always write in flat keys." "Why?" "Because there are ornaments and embellishments to be obtained in flat keys quite unattainable in sharp keys." I naturally asked him to mention a sharp key not possessing anything possessed by a flat key, but the question was evaded; and as a test as to how far his notions of key colour would carry him, I asked, "Could you tell me whether I played in a flat or sharp key without looking at the piano?" "Certainly." "Could you tell me whether I played in six sharps or six flats?" "Most decidedly I could. I could sit in one room, you in another with the piano, and I should see every note in the proper key as you played, in the eye of my imagination." Although it is stated in one of Novello's Primers that G♯ is soft and rich, and F♯ is brilliant and clear, I do not expect any one in this room to say they can (without looking at the copy) tell me, or any one else, whether a piece is being played in F♯ or G♯. Another professional man, in speaking to me on this subject, declared the peculiarities of each key to be most clear to him. I immediately walked to the piano, and as I struck a few chords, said, "in which key am I playing?" After some consideration, he told me the harmonics rang out so clearly that the fundamental notes were veiled to such an extent he could not distinguish the key. Gentlemen, I am thankful to say my ear is not so sensitive to harmonic influence as his.

Another professional man told me I was thrashing a dead horse, that colour always had, and always would exist, and

that I was not man enough to shake it, let alone show musical people it did not exist. I asked this gentleman if he could tell me whether I played in six flats or six sharps. His reply was, "By the character of the piece I could tell you which you *ought* to be in." You must all admit that this is backing up my views, for it is obvious that in this gentleman's view the piece gives character to the key, not the key gives character to the piece. I have been told my foolish ideas respecting key colour arise from inexperience, that being a young man accounts for my odd views—in fact, I have had enough uncomplimentary and sneering remarks made to cause many men to hide their views from every one—but until I am proved to be wrong, I feel justified in saying I am right.

I now turn to a name known to most of us—Lussy, the author of Novello's twenty-fifth Primer. He says, "It would be well if composers gave more attention to the characteristic qualities of different keys. Classical composers attach much importance to this." He goes on to say, "An air may be sung in a key, not being the original key, without losing its identity; but it is not the less true that cultivated musicians can recognise and distinguish one key from another, each being characterised by its peculiar quality of sonorousness, sweetness, harshness, or acuteness. On the piano flat keys are softer than sharp keys. The cause of this is equal temperament—*i.e.*, it is the compromise which tuners adopt so as to replace by one single chromatic note the two enharmonic notes which theoretically and practically exist between any major second. The flats for some time past have been correctly tuned, of course throwing more wolf into sharp keys. A♭, D♭, and G♭ are sweet and almost effeminate, whilst E and B are hard and harsh."

The first thought that struck me on reading this has no doubt occurred to some of you. A♭, D♭, and G♭ are sweet and effeminate. E and B are hard and harsh. Four flats, five flats, and six flats are soft and effeminate; four sharps and five sharps are hard and harsh. Where is the key having six sharps? If four, five, and six flats are soft enough to be termed effeminate, surely four, five, and six sharps are hard enough to be called masculine. But no doubt it occurred to the author of this very interesting and otherwise instructive work, that as G♭ and F♯ are identical in every sense, except signature and names of the notes, he could not get people to take that without a large portion of salt—in other words, to say F♯ is masculine and G♭ feminine (especially when we remember that in Novello's sixteenth Primer it states that E♭ is the masculine key and A minor is the tender womanly key) would not quite go with thinking people. So Lussy leaves F♯ out. But he has said quite

enough to show the remarkable diversity of opinion in two men standing high in the musical world. Lussy says, if you were to play a piece in E $\flat$ that was written in E $\natural$, you would find it gain in sweetness in some parts and lose energy in others. I can tell you, Ladies and Gentlemen, that unless you have perception of pitch, you cannot tell one from the other, and even if you *have* perception of pitch, you cannot tell unless the instrument is tuned very closely to the pitch you are accustomed to. No doubt many here are thinking I am wrong, but as the proof of a pudding lies in the eating, so the proof of perception of colour lies in your being able to tell the key being played in on each of, say, three or four different pianos tuned to different pitches. But more of this later on. Lussy also says "there are people who can tell the name of a single note struck on a piano, let the pitch be whatever it may."

Wonderful men have preceded us in the world, men who had not one-twentieth part of the advantages we have—no schools of music, no instruments—whether percussion or wind—to compare with those we have; no such opportunities of getting works performed as we have—men to whom even the most aspiring cannot hope to be anything but as a tiny twinkling star is to the sun. So of those who have joined the great majority I say nothing, but I most unhesitatingly do say, there is no one here, or in London, or elsewhere, who can name a single note on a piano the pitch of which is unknown to him.

Lussy goes on to say, "Flats are correctly tuned at the expense of sharps." If there is a tuner here, I ask: Is there one key on a piano correctly tuned, let alone all those having flats?

I now come to a sentence in this Twenty-fifth Primer full to the brim of importance. "To be able to tell by the ear"—mark that; "to tell the key, *by the ear*, in which a piece is being played, is a faculty of the rarest, most essentially spontaneous and artistic; it is difficult to acquire even with the most methodical and persevering practice." This I firmly believe; in fact, I doubt whether the power to name a key with certainty can ever be acquired; if it could, how is it we meet with so few having that ability? If asked what per cent. I thought had "pitch," I should say one, certainly not more. Of professional people possibly ten per cent., but not one of those could name a key if the pitch was, say, a tone below or above. There are, of course, many professional people having relative pitch, but this is very different to absolute pitch. Relative pitch can be acquired, but absolute pitch, I think, is a great gift, a gift that cannot be over valued by those who have it, and the value cannot be estimated by those who have it not. A man having

absolute pitch has relative pitch also. He can teach with less mental strain than another, and, excepting for fingering, he can teach as well, or better, walking about or even in the next room than another not having that gift, even though he gives the very closest attention; he can sing any interval without mental effort or chance of making a wrong note; he can learn to play an instrument, perhaps with the aid of a cheap instruction book, and play in tune, whilst another is struggling on under difficulties quite unknown to him who has perception of pitch. These are only a few of the advantages, but they are not properly valued or even understood. An exhibition organist will speak of an ordinary church organist as a church grinder—the great gift of accompanying is of no value to the exhibition player—and a church organist will speak of the other as an exhibition firework maker—the rapid execution is of no value to the church organist; one neither appreciates the gift nor cares to understand the secret of success of the other.

So it is with pitch, absolute and relative. A man having relative pitch does not understand or appreciate the gifts of the man having absolute pitch; he has not the gift and generally says he does not want it. But he who has pitch, absolute pitch, has relative pitch also, and it is remarkable how many times a relative pitch man can be caught tripping the other; the reverse of this—never. But to return to Lussy. He is not alone in saying the gift of distinguishing keys is rare, exceedingly rare; yet almost every one tells you key colour is plainly observable. Ninety-nine per cent. will tell you they hear and understand key colour—then how is it the ability to name a key is so rare? There are two sides to a question generally. If the ability to hear a “remarkable difference” in keys, say masculine and feminine, is so general, how is it that even on a person's own piano it is most unusual to find one able to distinguish between F and F $\sharp$; but many can between F and B $\flat$, although those keys are said to closely resemble each other. Why is this? Because F and F $\sharp$, being only a semitone apart, are too near for any, except those having pitch, to hear any difference in, although, from a colourist's point of view, the difference in character is great; but when we get to F and descend to B $\flat$ I should say one would have a difficulty in finding anyone who would not notice a great difference, in fact, in most cases a most painful difference—yet these two keys are said to be much alike. I feel you must admit this to be a fact. I have never heard anyone say they have any difficulty in hearing the brightness of sharp keys and the mellow, sympathetic effect of flat keys (except the gentleman referred to, who spoke of waltzes in flats), and I have never met anyone who can tell me the key I play in unless the

piano is very near Philharmonic pitch, and then only those who have the gift of absolute pitch. Suppose I gave each of you a copy of a piece to read as I played, and I chose to play a half tone up or down, how many would know I was doing so? Only those who have perception of pitch. I shall be pleased to endeavour to prove this to any who are desirous of proof on some future occasion. It is said by colourists that colour does not exist in vocal music. A vocal quartet in E $\flat$ would not be masculine in effect, although it might be sung by four male voices. Nor would a quartet for female voices in A minor be feminine in character. The difficulties in naming a key, whether the music is vocal or instrumental, are exactly alike—i.e., a person who could not name a key in which instrumental music was being played could not name the key of a vocal quartet, and he who could not name the key of a vocal performance could not do so were the performance instrumental. Yet professional men will tell you colour exists in instrumental music and not in vocal; but "colour" tells them no more in one case than in the other. Is not this a distinction without a difference? It appears to me their position is the same in either case, then why the distinction? What explanation can be offered for this?

I now desire to draw your attention to amateurs. *They* can hear it, and are anxious to say so too. They think it would be admitting ignorance if they could not talk of blue keys, scarlet keys, mournful keys, joyous keys, and many other peculiarities. But take their surroundings. Look at the piano, perhaps one good one for mamma and the eldest daughter; but the children, what have they? An old worn-out box of rattles, possibly a few strings off, hammers cut through, centres worn, and perhaps moth-eaten; sticker hinges worn, levers cut, keys rattling, and heads worn; lessons paid for, possibly at the rate of sixpence per hour. Many amateurs possess pianos of this description, and their children are taught as explained, yet these people will talk to you of the peculiar effects of different keys, and in turn the young ones add their testimony as to the characteristics of different keys, although if anything could be calculated to destroy any knowledge of *timbre* or pitch, it would be the instruments on which many receive their musical education. During a tedious railway journey I once met an amateur who said it was one of the easiest things in the world to name a key being played in, or any single note struck on a piano or sounded in any other way. I must say this man had no idea of my being in any way interested in music, and I did not tell him. I asked him how was it so easy to him when most people found a difficulty. "All you have to do is to associate any given sound with a colour. If you hear D, call it red; if you hear A, call it

brown; if E, call it old gold. If you hear B $\flat$, call it green; if F, pale green; if E $\flat$, olive green, and so on." I said: "I have heard of key 'colour,' that must be what the term means?" "Precisely." "Could you name a key by the association of colours with pieces you have already heard?" "Oh, yes, with absolute certainty."

I said I was sorry there was no instrument at hand by which I could have proof of what he was saying. He then said, "I always carry proof with me," and he produced a chromatic pitch pipe. You all know the construction and working of these useful little things, it will therefore be unnecessary for me to explain them. Before he had time to look at it to see the note it would give if blown, I said: "Don't look at it, pop it into your mouth, blow, and tell me the colour of the note." "Pale Green, F." I asked the colour of D. "Red," said he. I told him he had got his colours mixed, the note blown was a red one, and hadn't a particle of green about it. "Oh dear no, look at this" (the chromatic pipe). I said, there was no need for me to look at it, if he would look that was all that was necessary; he looked and saw proof that his colours *were* mixed. I could relate dozens of similar anecdotes did time allow. I could tell you of amateurs who say they know every note on a piano, and can tell if anyone plays only "half a note" out, and one who told me she liked my playing because I kept such good time—to use her own words, I kept time to the minute; but all tell you key colour is plainly observable.

Theorists tell you equal temperament explains key colour, and will show, by figures, how many vibrations per second each interval differs from a just interval. My reply to this is, no two tuners tune alike, and, more than that, no one tuner can tune two pianos alike; if he tuned two pianos in unison the results would not be exactly together. Leverage will not account for the great difference said to exist between sharps and flats, because six sharps and six flats, seven sharps and five flats, seven flats and five sharps are respectively identical. Added to this, if my imagination were half as fertile as many colourists, I should say, suppose sharps had never been thought of, and flats had been the only signature, our tonics, E, A, and D, would be F $\sharp$, B $\sharp$, and E $\sharp$, respectively eight, nine, and ten flats. No one can deny that after the difficulty of learning a piece written in ten flats was overcome, the result of it would be our D $\sharp$.

Professional men give examples from well known works as proof of colour. Yet "Pop goes the Weasel," or "Haste to the Wedding" will be as danceable in C as in any other key. The Dead March is in C, but there are reasons why no other key would be so suitable as C for that March on modern organs.

B $\flat$ is by some said to be a sombre key. Pauer says it is open, frank, clear, and bright. Edwardes says it is remarkable for nothing save its dulness. Robert Sutton, in a most useful little book called "The Elements of the Theory of Music," says B $\flat$ is the balance between strength and richness. In fact, unless two men have put their heads together—so to speak—you cannot get two opinions alike as to the peculiar characteristics said to belong to each key. Key colour is very beautiful in theory, it does very well to talk about to the masses, but to practical minds it is all nonsense. If a man can transpose he can play a piece on a piano and no one except those possessing pitch can give the slightest idea of the key, and those having that gift must bargain for the pitch of the piano to be within quarter tone of Philharmonic pitch, or *they* will fail. If a piano is tuned C 509.4 or 480.8, the key C is still the key having neither sharps nor flats, G would still be one sharp and F one flat, and so on. The seconds on a piano tuned C 480 will be flat, thirds sharp, fourth sharp, fifth flat, sixth sharp, seventh sharp, and eighths perfect, exactly the same as on a piano tuned C 540, or Continental 517; and given three pianos, tuned respectively to the pitches mentioned, I am ready to undertake to play two or three pieces anywhere to prove what I have said. Many people will tell you, on failing to name a key, that the effect is only felt when playing themselves. This is no doubt correct, and a professional man would have no difficulty in naming a key if he could catch a glimpse of the keys. If he has "pitch" or even relative pitch, just one note being struck *that he could see* would be sufficient to enable him to name the key, and as these are undoubtedly facts, who can say and prove key colour to exist? Suppose a man said he could read music; as a test you get two copies each of two pieces, one of each you give to the pianist, the others you give to the man who said he could read. The pianist commences playing which he chooses. The man under examination listens and looks at his two copies, and then says, "Let me see *his* copy—just a glimpse of the name will be enough." What is the natural inference? Why, the man cannot read—he only fancies he can. I once had a boy in my choir who said he could not sing a note without music; but it made no difference whether his music was the right way up or not, or even whether it was another chant or not. Is not this the position of the colourist? He really believes he hears and feels the peculiar mournfulness or joyousness of certain keys *when he plays*, and were he given a piece in, say, D, to read through, as another played in D $\flat$, my belief is he would feel the effect of D. In several cases I have proved this. There is another thing to be mentioned

in connection with tuning—i.e., the absolute impossibility of tuning some pianos at all. I could take you to pianos by Broadwood, Collard, Kirkman, Erard, and dozens of other makers, that no man breathing can tune, pianos that have no sweet keys, simply because none are in tune. I could take you to instruments on which there are notes, single notes, that cannot be tuned. Single strings having beats, beats as perceptible in the one string as though you had two vibrating, one three or four vibrations per second faster than the other. If one string beats, how can you tune another to it, or, where a piano is trichord, if each of three strings beat singly, how will they be when altogether? Then consider the usual school pianos, a pianette, an instrument with a fairly good treble, bad middle, very little tenor, and no bass whatever. Take the ordinary pianette, most of them have so bad a bass that a kick at a water-butt would produce quite as much tone, yet these pianos are all supposed to have "colour."

It gives me great pleasure to say I have persuaded my friend Mr. Crook to give us a couple of violin solos. After the solos I will play a few bars of five different pianoforte pieces that are well known. I ask each of you to make a note of the key in which you think each piece is played. I believe there are a few present who have the gift of absolute pitch, and more who have relative pitch. I must ask each one of you not to communicate his idea of the key to anyone else. The best way is to write—

1. Ballade and Polonaise.
2. Mazurka.
3. Mozart's Piano Concerto.
4. Beethoven's Sonata.
5. Beethoven Concerto.
6. Mendelssohn.
7. William Tell.

As I play, write down the key you feel each number to be in. If each keeps his own impressions to himself, we shall, I think, get different opinions as to the effect, and our Chairman will tell you afterwards who are right and who wrong, for he will know the keys I really do play in.

I have no more to say, except that I sincerely hope that a good discussion may follow, not confined to gentlemen only, for this subject is quite as interesting to ladies as to gentlemen, and they are in every way as able to give an opinion on it as we are. I believe my paper has taken longer than is usual with you, but trust the importance of getting at the truth in this matter will be sufficient excuse. I now ask Mr. Crook if he will kindly play No. 1 on the list.

DISCUSSION.

Mr. CHARLES STEPHENS.—Before proceeding to this test I think there is one thing of which we ought to be assured, and that is that no deception is to be practised with regard to the pianoforte. I only go upon the basis of absolute pitch, and I should be sorry to be put to shame by saying that you are playing in the key of B when, through the piano not being at the proper pitch, it is nominally in the key of C.

Mr. WHOMES.—I am not prepared to say that the piano is Philharmonic pitch, or any particular pitch. If key colour exists it does not matter what the pitch of the piano may be.

Mr. STEPHENS.—But in the other point of view, as one having the gift of absolute pitch, I should be sorry to be convicted of an apparent fault in this matter by the fault of the piano.

Mr. WHOMES.—But I do not say it would be a fault in your case. I should make the same arrangement were I sitting there and you here. I should use words to the same effect; but if key colour exists it does not at all matter.

Mr. STEPHENS.—I know my result will be in accordance with my notions of pitch, and they will be correct throughout.

Mr. WHOMES.—I take it for granted they will be.

The CHAIRMAN.—Before we proceed to hear these different fragments of pieces of music which you will have to decide on, I think it is right we should first offer our thanks to Mr. Whomes for the very charming lecture he has given to us. We may get so enamoured of this discussion that we may, if it is prolonged, forget that we have a duty to perform of thanking him, and, therefore, I propose that it should be done at once. I am very glad to find that there is a key in music which I am very fond of, the key of A minor, which has been called, very appropriately I think, a womanly key, and being a womanly key it must be exceedingly charming. Now we shall proceed, and I believe I am to see that Mr. Whomes is perfectly loyal in what he is going to give us.

Mr. WHOMES.—My idea is not that none of you will be able to tell the key, but only to prove the different effects that certain keys have on different people, and simply to break down the rule that one key is sombre and another is not, and so on.

The various pieces enumerated at the close of the paper were then played. At the conclusion the audience were requested to name the keys, which they did as follows:—No. 1 Mr. Stephens gave as being in G minor; No. 2 was named by several persons as being in G major; No. 3 was given by several as in B $\flat$, and by some as A. Mr. Stephens put it in A. No. 4 was put in E, and by one person in F; No. 5, C minor and B minor.

Mr. STEPHENS said he did not make a memorandum of that, but it was not in C minor ; No. 6, A by several persons, or some in B♭ ; No. 7, E, and by some in F.

The CHAIRMAN then read out the keys in which they were played as follows :—The Ballade and Polonaise the original key as printed and published in G minor, but it was played in G♯ minor.

Mr. WHOMES.—The violin played in the original key being tuned half a tone sharp.

No. 2 was played in G on the violin and G♯ on the piano ; No. 3, B♭ ; No. 4, F ; No. 5, C minor ; No. 6, B♭ ; No. 7, F.

Mr. STEPHENS.—Now you see, Mr. Chairman, in every case I am exactly one semitone below the fact, and Dr. Vincent is precisely the same as myself, and, therefore, I unhesitatingly say the pianoforte is half a note flat. If I had been listening to a piano at standard pitch I should have been right throughout.

Mr. WHOMES,—You are right absolutely, but the piano is wrong.

Mr. GILBERT.—Although I have not the power of absolute pitch I was exactly the same as Mr. Stephens and Dr. Vincent in each case. They go by absolute pitch, but I go on a system of key colour.

Mr. STEPHENS.—Permit me to call attention to the simple fact that in every one case I made no variation. If I had varied at all, if I had been sometimes a semitone below, and sometimes above, I should then have been convicted of being in error, but it is not so. Throughout the pieces I have been one semitone lower than the actual notes played, therefore I unhesitatingly say (if any one present has a tuning fork they will be able to verify it) that the pianoforte is not up to pitch.

Mr. GILBERT.—I have no right to speak on this occasion, not being a member ; but if you will allow me I shall be very pleased to give you the result of some experience. I am not possessed of the faculty of absolute pitch, but I have the faculty of key colour, and hence it was rather a surprising fact to me that I was just as Mr. Stephens is with regard to the keys of these pieces. It seems a remarkable thing that I should have guessed these pieces, and guessed them exactly. It must be some intuitive perception which I have always been taught to consider as key colour (which I think should be understood as a quality apart entirely from absolute pitch), which is an inherent property of each particular scale which causes it to lend itself to the expression of certain characteristics and feelings of the human mind. When I say entirely apart, I think I am a little in error, because a third or a fourth, or anything less than half a tone, would make such a great difference that I

do not think we could then depend upon the colour. A few days since I had the honour of reading a paper on some peculiarities of musical organisation. Mr. Whomes was the first gentleman who put a conundrum to me at the end of my paper as to the difference between F# and Gb. Now, I think he generalises too much. He speaks of Gb and F# with regard to the pianoforte. Now, I maintain that, if you keep to the pianoforte alone, between F# and Gb there is certainly no difference, but I will ask any gentleman who has composed whether he feels the keys that he may remove to be precisely the same when he composes in F# that he did when he composes in Gb, and that not being the case, his feeling of the removal from the key should be somewhat different. It gives a certain character to the key of Gb, which is not obtainable from the key of F#. Again, if we go further and take string instruments, would not a violinist put his third finger usually on the Gb on the third string and the second finger on F#? I think that is a sufficient answer to the difference between Gb and F#. If key colour exists I think that probably the pianoforte is the instrument upon which we should find it first of all, because of the different leverages, and next because of the different lengths of our fingers, and next because of the tuning. We all know that singers are taught to sing to the pianoforte, and we all know that in playing the violin and other stringed instruments, if you want to get a brilliant key, you must write for those keys where the dominants come in in harmonics. If you write in the key of A you get the open strings; if you write in C you get open strings; if you write in F you get one open string, but I do not think you very often use that open string. Consequently, all keys are brilliant on the violin which have open strings with their natural harmonics, the octaves and twelfths. Db and Ab would be both very sombre. As I said before, I do not dogmatise on the matter at all, but I have a certain feeling that I think may be allied to key colour.

Mr. STEPHENS.—There are two classes of key colourists, I believe I may say. There are those who hold that key colour is an inherent property in keys, and there are those who hold that it is the result of an endeavour to tune in equal temperament. Now, with the former class of colourists, those who believe that it exists inherently in music, I can sympathise, in so far as I acknowledge that the higher a sound goes the more brilliant it is. From the very lowest to the highest we have continually increasing brilliancy, arising, no doubt, from the increased number of vibrations. Therefore, to a certain extent, there is a colour in keys, in so far as the higher one is more brilliant than the lower; but with the other class, those who attribute it all to

temperament, they definitely assign characteristic attributes to various keys. They are described in books as rich, mild, sober, contemplative, doleful, solemn, grand, gay, sprightly, unassuming, gentle, delicate, beaming, charming, religious, penitential, gloomy, golden, warm, sunny (it does not say anything about moonshine in this particular case), mournful, grave, majestic, meek, pensive, melancholy, keen, piercing, bold, vigorous, commanding, plaintive, awful, dull, noble, mellow (it does not say whether that is in the opposite sense of sober). Among these attributes are some of a very high character indeed, as majestic, pensive, and so on, and can we for a moment suppose that such distinct characteristics, instead of arising from any inherent property in the key, are simply the result of the tuner tuning those notes unequally? You cannot for a moment suppose that such grand characteristics as are claimed for these keys arise simply from the bunglings of the tuner. It is simply impossible to vindicate such a position as that, and I think colourists who pretend to this kind of thing should be put to a very severe test indeed. The "Dead March in Saul" has been spoken of as in the key of C, which is one of the brilliant keys, and yet Handel, who knew what he was about, wrote this, not only in a brilliant key, but it is a remarkable fact that throughout the whole composition, with the exception of the close in D minor, every chord throughout the whole work has a major third. When you admit, as everybody must, that the "Dead March" of Handel is most deeply impressive, and goes to the hearts of the listeners, and at the same time Haydn wrote the brilliant chorus, "The heavens are telling," in precisely the same key, what is the commonsense of talking about the characteristics of the key when you find two works so entirely opposite in character written in exactly the same tonality? Now, as we are dealing with funeral marches, we do not find the key of C prescribed, for Chopin has written a splendid one in B♭ minor, and Beethoven one in A♭ minor, but he did not stick to that in the "Eroica" Symphony, in which he wrote one in C minor. Mr. Edwards says that B♭ is remarkable for nothing but its dulness. I suppose the gentleman who wrote that never heard Beethoven's Symphony in B♭, for the last movement at any rate has an amount of hilarity that is perfectly astounding. In fact, one of the most hilarious movements ever written is in the finale to that B♭ Symphony of Beethoven's in the key which Mr. Edwards says is remarkable for nothing but dulness. Another writer, Bombét, says the key of B♭ is least interesting of any. It has not sufficient fire to render it majestic and grand, and is too dull for song. I suppose he never heard the song of "Rejoice greatly," from "The Messiah," which is almost too hilarious for an oratorio

composition, but that is in the very dull key of B $\flat$. Again, we find that is the key in which the "Adelaida" of Beethoven is so beautifully set, and there is no dulness in that composition surely. How absurd to say that it is not fit for song! The key of E $\flat$ has somehow become associated in our minds with hunting choruses, probably because they are very often accompanied by the horn, and the key of E $\flat$ is a good key for horns. Yet this is precisely the key in which Handel wrote that most touching air "He was despised." At the same time, to show that it is not capable of only one phasis, we find also that the finale to Beethoven's "Les Adieux, l'absence, et le retour," one of the most hilarious movements, is also in the key of E $\flat$. The finale of Weber's Concerto in E $\flat$, which is also suggestive of hilarity, is also in this same key. I have shown you that a composition of the most tender and touching character can be written precisely in the same key as one of the most hilarious. Let us come to that of A minor, which Bombét has spoken of as plaintive. Mr. Bombét ought to have heard Mendelssohn's Saltarello, the last movement in the "Italian" Symphony, but he unfortunately had not an opportunity of hearing that, as he died before it was written. I think that in this discussion sometimes the words sharp or flat are calculated to mislead us, because the word sharp seems to indicate something acid, something piercing, whilst flat seems to indicate something dull; but in reference to the names of musical notes it has no such signification whatever. We simply call a certain note B $\flat$ to distinguish it from B natural, and I wish to point out that the meaning of sharps and flats refers to pitch, and not to the character of any notes; that, while we climb on the left hand the order and cycle of keys, all we have to do is to pursue our investigation on the other side, and then the very keys you call flat are sharp keys. We begin with C, go on to D, A, E, B, F $\sharp$, and C $\sharp$, G $\sharp$, D $\sharp$, A $\sharp$, E $\sharp$, and, lastly, B $\sharp$, and so we have made them all sharp keys. It is a matter of expediency to call notes by different names, and if we start, in travelling, backwards, we call those we have hitherto called sharps, flats. There is no difficulty, in my mind, with regard to the word "sharp" or "flat," it does not import character, it merely indicates pitch. I wish to make a very brief summary of my remarks, which is to this effect, that the character of a work rests on the genius of the composer, and not on the particular key in which he writes; secondly, as a corollary to that, I would say that the whole range of keys is open to the composer for whatever particular phasis of thought he desires to present.

Mr. WHOMES.—May I just say one word in reference to a very strange coincidence, viz., that Mr. Gilbert wrote down the same notes that Mr. Stephens had written down. In the

first place, it cannot be key colour, because he was clean away from the key every time—half a tone too low. Mr. Stephens was perfectly right as far as Philharmonic pitch goes. I should have done precisely the same thing; but Mr. Gilbert was wrong in this case, and must be wrong if he says colour has anything to do with it, because the colour of C and C# are supposed to be entirely different. I should say the fact of Mr. Gilbert writing down those same keys that Mr. Stephens wrote down was owing to relative pitch; he heard the violin tuned, and according to the violin he was quite right. I should think that his ear retained the pitch of the violin, and from that he took the keys. That is relative pitch.

MR. GILBERT.—I am much obliged to you for giving me credit for a power I did not know I possessed before.

MR. SOUTHGATE.—I take it those who agree with key colour think it only exists on the pianoforte and instruments of that nature, and the reason given is probably the correct one, the imperfection of tuners. I do not understand that they allege it to exist in the violin or other orchestral instruments.

MR. GILBERT.—Oh, yes.

MR. SOUTHGATE.—Only so far as the open notes of the fiddle, and open notes of tubes are concerned. I would propose one new test, which might possibly, to a certain extent, help to settle the matter. Supposing you were to have two pianofortes of the same character, by the same maker, one of them an ordinary pianoforte, let us say, fitted with a transposing keyboard. It is asserted that tuners have a predilection for certain keys, and that they accommodate their intervals accordingly; now supposing we tuned one pianoforte to Philharmonic pitch, and we ask him to tune the other pianoforte to the French diapason, or say to exactly a semitone below, and then, having tuned the piano so, of course one would be just a semitone below the other. Then shift your mechanism of the transposing pianoforte down one semitone, and of course the keys of both would be found identically the same, or they should do so. Supposing, then, the two performers, one on each pianoforte, were to strike the notes together, the ear would be able to detect whether there were any beats, showing whether they were tuned exactly alike. By that means we might arrive at something like an idea whether the tuning was the difficulty in question, and had caused what is termed key colour, or whether any actual difference existed between the keys. I take it there must be some small difference found between them.

MR. WHOMES.—There is another way which would not be quite so much trouble. I have two pianofortes similar in

power, tone, and condition: tune C 540 on both; close one, tune the other throughout—when finished, close it. Go to the second piano, tune that from the C already tuned, when finished, try them together: they will be found not in unison. Showing tuners do not cause "key colour," simply because they cannot tune twice alike.

(The chairman then put the vote of thanks, which was carried unanimously, and also a vote of thanks to the Chairman.)