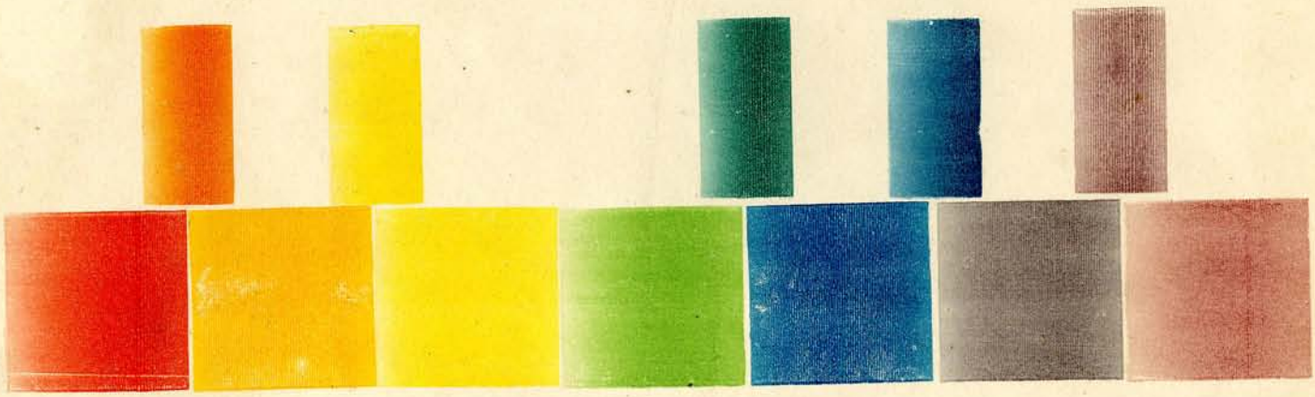
COLOUR-MUSIC

With the Publisher's Compliments

THE GAMUT

4th. octave.



Morison's Patent Printing.-First stage.

COLOUR-MUSIC.

BY

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LONDON:
SMITH, ELDER AND CO., 65, CORNHILL.
1844.

Printed by Stewart and Murray, Old Bailey.

PREFACE.

THE object of this short treatise is of a simple and practical nature — to introduce a new music, called *colour-music*, a practical system of which is now constructed for the first time; and to apply some of its principles to render the study and practice of *sound-music* easier and more popular than they are at present; by substituting distinct and definite sensations, which, being the language of nature, are at once understood, for the arbitrary mnemonics in use.

Some reference to the theory of the subject

has, however, been considered proper: and this has occasioned the use of technical terms; but that part of the book in which they occur does not concern the learner of *sound-music;* who, from reading the part called "*Teaching,*" can acquire, in a few minutes, the whole practice, which is the simplest possible.

CONTENTS.

HISTORY.

It is probable that the sensic correlations of colour and sound attracted notice at an early period; but no reference to the subject has been found, previous to Y. B. C. 300.

This, and the other esthetic analogies, however, were not latent to the Athenian sages.

Plato speaks of the isomorphy of music with formic beauty; and the following passage occurs in Aristotle:—

"Colours may mutually relate, like musical concords; for their pleasantest arrangements, like those concords, mutually proportionate."

The term *chromatic*, applied by the Greeks to the semitonic scale, seems also to indicate, either a knowledge of the correlation, or an intuitive perception of its principle. Indeed, it has been supposed that they were acquainted with an art of colours, unknown to the moderns.

If so, it is a melancholy thought, illustrative of the slow progress of knowledge in this world, that, even in the present day, though we stand, in imagination, upon the summit of that vast pile of human learning, elevated by the slow hand of Time, we still scarcely rise to a level with the gigantic forms of its founders; which, like spectres of the BRACKEN, are shadowed in the surrounding mists of antiquity.

Perhaps we should do well to follow, even were it but partially, the steps of the Greeks in *analogism;* rather than to heap exclusively the BABEL of *induction:* which, if it has not failed in its *legitimate* object, seems at least never likely to attain the *ultimate* end proposed for *it* in common with its scarcely less presumptuous prototype: and even already the confused and conflicting technical terms of its builders indicate an approaching cessation of their labours.

The progress of the theory of this art, in modern times, may be traced on reference to the following authors:—

In support of it:—LE BLON, ARCIMBOLDI, CASTEL,

NEWTON, BACON, BURNETT, GARDINER, GOETHE, FIELD, HARRIS, and HAY.

Against it :—EASTLAKE and LESLIE. The former considers the analogy fanciful; and the latter terms it *mystic*.

Two of the eleven writers quoted in favour of the correlation, attempted to reduce its theory to practice.

These were ARCIMBOLDI and CASTEL.

I have not met with a detail of the method of ARCIMBOLDI.

CASTEL's consisted in the simultaneous apparition of inherent colours, and aurition of relative sounds: produced by a partial diversion of the usual percussive motion.

This method, however, was not found to succeed in practice, for which two reasons may be assigned.

1. The spaces of the colours were not commensurate to the times of the notes.

2. It was found impossible by any practicable extension of *inherent* colours, to produce a sensic effect equivalent to that of aural music.

The mode here introduced has obviated both these,

which were the only difficulties. It therefore affords a foundation for inductive science.

It consists in the use of *transient reflected colours*,* for the production of sensic effect; and of *permanent inherent colours*,† in a mathematical series, for the purposes of notation, analysis and composition.

* Sensic effect.

† Notation.

PRACTICE.

SENSIC EFFECT.

APPARATUS FOR COLORIFIC EXHIBITION. — A dark chamber, lined with bright tin plates; 12 round apertures in the wall, holding glass globes,* containing translucent liquids of the prismatic colours, and their semitonic intermediates; lamps on the outsides of the bottles, mobile opaque covers on the insides. A piano-forte, with its keys connected to these covers; with power to elevate them, on percussion of the keys, to heights proportionate to the vibrative extent of their respective octaves.

With each note, a strong colour is evolved in the dark room, and reflected by its sides; and the duration and extension of this colour are greater or less, according to the time and position of the note which it represents and accompanies.

The factors of music and colorific exhibition being thus correlatively fixed; the performance of the one is attended with the other; which has an enchanting effect.

* The bottles seen in the windows of druggists' shops can be used for this purpose.

APPLICATION TO SOUND-MUSIC.

PREPARATION OF INSTRUMENTS.

PIANO-FORTE. — Papers of the several colours, of the different sizes, and in the order specified in the following Table, should be pasted on the keys of each octave of the common piano-forte.* *See Illustration.*

TABLE.

Colours and Semi-Colours, in their order.	Heights.	Widths.
Red. Red-orange. Orange. Orange-yellow. Yellow. Green. Green-blue. Blue. Blue-purple. Purple. Purple-violet. Violet.	Inches. Octave 1——2 2——1½ 3——1¼ 4——1 5——¾ 6——½ 7——¼	Whatever the keys will permit.

* A more durable mode is to dye the ivory; but then ivory should be substituted for the ebony now used for the semitonic keys.

The instrument is now prepared. The primary colours, (red, yellow and blue,) and the secondary colours, (orange, green, purple and violet,) are fixed to the keys of their correlative notes in the diatonic scale; and the intermediate semi-colours* to their correlatives, in the chromatic scale.

The order of colours is that of the prism. Their equigradence in *quantity*, to the vibratic gradation in *extent* of the gamut, is preserved, by a decrease in height,† or increase in tenuity, from left to right; to accord with the gradually tenuising tones of their correlatives from bass to treble. The *spacial* length of the colours on the 84 keys is co-equal; which expresses a further, and (at present) *passive* analogy, to the *temporal* length of notes.

The coincidences of colour and sound, in identity of ocular and aural division; and the commensuration of the lateral spacial quantity of the one to the temporal quantity of the other; and also the vertical isometry of

* Not the *tertiary*.

† Table :—Heights.

the former to the vibratic extent of the latter — these three coincidences, which may be termed *natural* analogies, in addition to the sensic correlations, have now been substituted for the artificial mnemonics previously in use.

NOTATION.

A piano-forte having been prepared, in the manner directed in the last section; any air may be slowly played. As each note is struck, its equivalent in

colour = key

height = octave

length = time

should be placed in a series, on white paper.

When this is done throughout the tune, an ocular arrangement, constructed from the aural one, will appear on the paper.

This will be found to be of a more or less pleasing character, according to the varied cast of the music.

It should not however be supposed, that the mere notation can produce, except in a very low degree, the sensations resulting from the performance* of colour-music, unless indeed to a perfect eye.

The series of coloured papers, representing notes,

* Sensic Effect.

should now be pasted to the white paper on which they have been placed; and it will then be an ocularized tune, similar to those here given.

The bass and treble notations are placed in contact that the exact application of the bass may be distinctly seen.

Accent is expressed by intensity, or depth of colour.

Accent and application being thus indicated with perfect simplicity; there is no further occasion for the *bar-bar-ism* of *bars;* which, with *staves*, and other instruments of *arbitrary* power, cede their ill-gotten empire to the mild sovereignty of the rainbow.

Rests are shown by blank spaces, of a spacial length equivalent to the temporal suspensions of the rests which they represent.

Staccato notes are distinguished by very short blank spaces after them.

Temporal augments, such as dots, are expressed by equivalent spacial augments, or increased length of notes.

Every note should be booked exactly as it is to be performed.

TIME AND LENGTH OF NOTES.*

Time.	*Length.*
$\frac{1}{2}$ breve	4 inches
minim	2
crotchet	1
quaver	$\frac{1}{2}$
$\frac{1}{2}$ quaver	$\frac{1}{4}$
$\frac{1}{3}$ quaver	$\frac{1}{6}$
$\frac{1}{4}$ quaver	$\frac{1}{8}$

* Should the time differ from the common measure, this table should be logometrically altered: as in this system there is only *one measure*, that of the stop-watch.

TEACHING.

TEACHING, by this method, is so simple, that there is really hardly anything to be described.*

The instrument being prepared, the learner should touch keys of the same colour and height as those on the paper; making their length, in time, on the instrument, equal to their length in space, on the paper; accenting according to intensity of colour; and pausing for times equal to the blank spaces.

Other particulars will be found, on reference to the last section.

* A child, 8 years old, who could play the piano-forte, but was previously unacquainted with colour-music, was taught in *two minutes*, to play new sound-music at sight by it.

THEORY.

HARMONY is the complemental neutralization of optic, aural, or other sensic, positive or negative excitement.

Melody is a diffused prolongation of the same process.

EQUATION.

plus, active, or positive side. } + red 5 + yellow 3 = 8 } = − blue 8 { minus, passive or negative side.

HARMONIC TABLE.

EXCITERS.			COMPLEMENTALS.			NEUTRALIZATION.		
Signs.	Coefficients.	Notes or Colours.	Signs.	Coefficients.	Notes or Colours.	Signs.	Coefficients.	Notes or Colours.
+	3	yellow	+	5	red	} =		white
			−	8	blue			
+	5	red	+	3	yellow	} =		white
			−	8	blue			
−	8	blue	+	3	yellow	} =		white
			+	5	red			

Recent discoveries have rendered it probable, that the result of the simultaneous percussion of the three primary notes, in their combining quantities, at the proper tangents of vibration; would be *silence:* in the same manner as darkness is eliminated by the interference of undulations of light.

Silence has already been produced by different and co-complemental vibrations of sound; but the experiment has not yet been tried with musical instruments.

The romantic idea of Pythagoras, that the universe resembles a diapason, may thus be true; and though each sphere "sings, as it shines," a different note, their whole music that "expressive silence," which is said by the poets to be the best praise of God.

ANALYSIS.

FIXATION OF THE CHARACTER OF MUSIC.—*Formula.*—Reduce the composite colours, and classify their coefficients under the three primaries; cancel out of each primary term, its combining atomic proportion. If the differential remainder be on the plus, positive or active side, the character of the piece may be defined to be gay; conversely, if on the minus, negative or passive side, grave.

EXAMPLE.

Handel.—*See Illustration.*—"See! the conquering."

First four notes.

BLUE.	YELLOW.	RED.	SOUNDS.
− 2	+ 1	+ 1	Coefficients.
$-\frac{10}{5}$	$+\frac{5}{5}$	$+\frac{5}{5}$	Tangible reduct to numericles of the fraction $\frac{1}{5}$.
$-\frac{8}{5}$	$+\frac{3}{5}$	$+\frac{5}{5}$	Like reduct of combining atomic proportions.
$-\frac{2}{5}$	$+\frac{2}{5}$		Differences.

Here equal remainders exist on the positive and negative sides. The melody is, therefore, prima-facially perfect.

But the *foible* of the positive is opposed to the *fort* of the negative.

The excess may, therefore, be considered to be on the latter.

Other distinctions have not yet been investigated; but that of gay and grave is perhaps sufficient for the present illustration.

SYNTHESIS.

In composition, an ocular arrangement originates an aural one.

Success in ocular composition depends on intrinsic synthetic beauty; or, practically speaking, on rules deduced from observation of ocularized music.

Colour notation has the advantage of making all, or a considerable part, of the music it represents, *present* to the mind, through the eye; and the ear, by sympathy of the auditory nerve: but the ear alone, whether aided by arbitrary signs, or not, sensible to only one note at a time, must depend simultaneously on recollection for the past, anticipation for the future, and judgment to combine both. This complication renders aural composition more difficult; and partially accounts for the rarity of its successful exercise.

The best method, however, would probably be a combination of the ocular and aural modes.

London:
Printed by Stewart and Murray,
Old Bailey.