

THE COMMON SYNAESTHESIA OF MUSIC

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Synaesthesia, the reaction of one sense to the adequate stimulus of another sense, is not so uncommon as is often supposed. It is true that the very noticeable types commonly described are relatively rare, though even these are found by a recent writer to appear in from 9 to 15 per cent. of adults and in 25 per cent. of adolescents.¹ Like most tendencies in nature, synaesthesia appears in many degrees of variation. It is not a clearly-cut type of abnormality. It is, in fact, too common to be called an abnormality at all. Like any tendency, it is found in abnormal and extreme cases, but it has no absolutely definable lower limit. It is theoretically doubtful if any sense reaction takes place in absolute isolation from other senses. In the case of any meaningful experience of vision or audition, sight or hearing is the key that unlocks a complex of sensations or images or both in terms of a variety of senses, especially the deep-seated organic and strain senses and others intimately involved in feeling and emotive processes.

Doubtless there is a closer connection between either vision or audition and the deep-seated intimate senses than between these two articulate senses themselves. However, it is not strange if there be some tendency, with individual variations, to connect visual imagery with auditory stimuli. Various unusual cases of "colored hearing" and other inter-associations of vision with hearing have been reported. Reports from fifty mature students, chiefly active public school teachers, seem to indicate that the unusual cases represent an uncommon development of a common tendency. These fifty students were asked to report the colors or brightnesses which they associate with certain tones, keys, instruments, and familiar musical compositions. Only eight reported a total lack of such associations. While there is little uniformity as to particular color associations, some tentative generalizations appear warranted by these reports.

¹ Wheeler, Raymond H., *The Synaesthesia of a Blind Subject*, University of Oregon Publications, Vol. I, No. 5, May, 1920, p. 32.

1. *A low tone.* Thirty-four persons associate low tones with dark colors or grays. Fourteen associate no color or brightness with low tones. One associates with medium gray, and another with "rich colors."

2. *A tone of medium pitch.* There is no uniformity of color here, but a generally uniform medium brightness in 26 cases. The remaining 24 discover no such association.

3. *A high tone.* This is associated in all but 14 cases with bright colors or light grays. There is a wide variety of color associations.

4. *The key of C.* Twenty persons report a color or brightness associated with this key, eight of these associating it with blue. The dominant association, however, seems to be with medium brightness, which may be attributed to the commonness of this key in music and the medium range of compositions.

5. *The key of A.* Only nine persons mention color associations with this key, and these vary from blue to yellow.

6. *Key of D minor.* Fifteen persons associate this key with dull or soft colors, as pale green, lavender, or violet, and with grays.

7. *Key of A flat.* Only ten report visual associations and these show no uniformity.

8. *The piano.* Twenty-four persons associate the piano with colors or brightnesses, but there is no observable uniformity. The piano may perhaps represent a great variety of imagery according to key, pitch, etc.

9. *The violin.* Only fifteen have no color or brightness imagery associated with the violin. To nearly all the remaining 35 it suggests delicate colors, predominantly blue, violet, and related colors. In one case there was a traceable association between brightness or delicate color and the light dresses of violinists heard at Chautauqua.

10. *The pipe organ.* Nineteen have no color or brightness association with the organ. Most of the remainder associate it with dark values, brown being the one most frequently mentioned.

11. *The clarinet* suggests to 19 persons colors of high brightness value, but has no such association for the remaining 31.

12. *The trombone.* Fourteen reports associate this instrument with dark colors or yellow, with brown predominant.

13. *The cello*. In 19 reports the browns and reds predominate, perhaps due, in some degree, to association with the color of the instrument.

14. *The snare drum*. Twenty persons report an imagery usually of bright colors or gray. In four cases there is a mixture of colors or brightnesses.

15. *The bass drum*. Twenty-eight persons report an imagery chiefly of low brightness values.

16. *The flute*. To twenty-four persons the flute suggests colors of high brightness values, or white.

17. *Dvorak's Humoreske*. A large proportion of the students have color association with this familiar composition, but there is no uniformity. Some appear to distinguish different color or brightness imagery corresponding to the very distinct moods of the piece.

18. *Mendelssohn's Spring Song* is rather naturally associated with spring colors, greens, pinks, etc., in 33 cases.

19. *Chopin's Funeral March* is associated by 32 persons with dark shades and such colors as blue, violet, and lavender. The use of lavender, as well as black and grey, in funeral decoration should be noted.

20. *The Star Spangled Banner* could with difficulty be dissociated from the colors of the flag itself. However, 26 persons associate it with single colors, chiefly red and yellow.

21. *Annie Laurie* suggests to 27 people soft and relatively dull colors, 17 of them mentioning blue or green.

22. *The Soldiers' Chorus from Faust* is associated in the experience of 22 persons with bright colors, red and blue being predominant.

23. *The Pilgrims' Chorus from Tannhauser* suggests medium or dark colors or brightnesses to 17 people.

24. *A lively march* suggests red to 19 persons and other colors to 10 more.

25. *A dreamy waltz* has color or brightness associations for 29 persons, chiefly the softer colors of relatively high brightness, as light blue, pale yellow, pale pink.

It is clear that much, perhaps most, of the visual imagery aroused by musical selections or even by given musical instruments is derived from particular experiences and associated circumstances. Such imagery is apt to be very complicated and shifting, and hence anything like Scriabin's "colored symphony" involves immense, perhaps insuperable, difficulties.

There are, however, certain observable tendencies to uniformity, whatever their origin may have been. A high tone or a high pitched instrument is generally associated with bright colors or lighter grays, while a low tone or a commonly low pitched instrument suggests dark color and brightness values. There appears also to be a relation between the timbre of an instrument and the richness of color associated with its tone. Although there is a wide variation of color-imagery, it is probable that the common term "tone-color" is not a mere figure of speech based upon analogy. A tone which approaches a "pure" tone is described by musicians as "white or colorless." It is probably not a mere musician's whim that commonly associates complexity of tone with the visual richness of color.