

The old year to the new.

" Alas ! Alas ! The span of life
Is filled with striving, stress and strife !
And when to love one would incline,
Impelled by thoughts on things divine,
The world intrudes and orders all
To honour every worldly call,
Enthroning self, enslaving truth,
Degrading Age, corrupting youth,
Until the Soul with anguish riven
Escapes, and wings its way to Heaven.

" But, stay, fair youth, the worst I have told,
Men cannot always worship gold.
For somewhere in the mind of man
Is laid the Great Creator's plan,
By which through years of toil and pain,
Man's better self will rule again,
Exalting Right, overthrowing wrong,
Each matin prayer a triumph song.
And when the theme swells forth in praise,

" I Will announce the promised days
Of Love and trust, of mirth and cheer
A never-ending glad New year.

RALPH FLEESH,
(*The Scottish Farmer.*)

Association between reaction times in the case of different senses.

BY PROF. KOGA AND G. M. MORANT,

The authors investigated the relative extent to which a short reaction time depends on the acuteness of the sense concerned and on mental briskness. With this end in view they measured (1) acuteness of hearing with Galton's whistle (2) acuteness of sight by the capability to read diamond type at regulated distances (3) reaction time to sound (4) reaction to sight, the last two were measured by Galton's simple pendulum chronograph (5) age. These deductions were arrived at from records of 3379 males.

Age and highest audible pitch. The correlation was negative and substantial, indicating that the power to appreciate high pitches decreases rapidly with age. The regression was sensibly skew.

Age and acuity of vision. The correlation was negative and fairly high in magnitude. The regression is far from linear. These data brought out that the maximum acuity of vision is not reached till the age of 21 when the average value is 19.56 inches by the test used. This differs from acuity of hearing. In the case of sight the youthful eye is not so keenly acute as that of the young adult although far more acute than that of the aged. The fact that hearing in man reaches its maximum acuity before sight, suggests some evolutionary importance.

Influence of age on reaction time to sound. The regression is skew and of a peculiar kind. The reaction time is very large in childhood, decreases to a minimum at about 25 years of age and then slowly increases with old age. The reaction time of a baby at birth is indefinitely great. It does not respond to light and sound. Delay in executing an order by a child is often treated as disobedience, when it may well be only a very long reaction time to the sound signal. It will thus appear that the maximum of mental alertness is reached at a later stage than the sensory maximum acuities. A man reaches his sense prime before he reaches his mental prime. Before a man has reached his highest mental alertness, he has begun to lose the highest grade of sensory acuity.

Influence of age on reaction time to sight. The regression is again skew. The minimum reaction time to sight occurs at 25.25 years of age. It is thus half a year later than the age at which the minimum reaction time to sound occurs i. e., 24.75. The reaction time to sight is, except in childhood always greater than that for sound. The mental response is also variable from man to man.

6. *On the association of sensory and mental characters after correction for age.*

1. Reaction times depend very little on the sensory acuteness.
2. Variability in reaction time depends in the main neither on sensitiuity nor age but on some other factors probably mental.
3. Acuity of hearing becomes slightly less as reaction time increases. On the other hand, as the highest audible pitch increases from 4,000 to 10,000 vibrations per second the reaction time falls very rapidly and then from 10,000 hardly falls at all i. e. increased acuity of hearing beyond 10,000 vibrations per second is not accompanied by any real gain in reaction time.

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