Many others in the art field closed their eyes to the whole idea. If they should find it to be true, they would have to rethink all their concepts about art. Artists, art critics and historians often are not inclined to mathematics, and tend to shy away from it as something they don't know much about, and would have to make an effort to understand.

It takes some mental effort to understand and use the geometrical diagrams. Some can't do it; some, who must "paint as the bird sings" find it confusing to the point of interrupting their intuitive inspiration. Many artists resented the proposition that proportion and line direction, that they had worked so hard to master, could be achieved easily and perhaps more effectively by the use of a diagram. Many, not versed in mathematics, cannot appreciate the beauty of order in mathematics, and interpret it as "mechanical."

Will the situation resolve itself as before—the survival of the fittest—only now with the means of survival open to all those equal to grasping it? Or will the secret handed down through the ages as a "precious jewel" to those carefully selected for ability and responsibility, be diffused and list in indifference and sloth?

SOURCES

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Jay Hambidge, *The Diagonal,* monthly review, 1920.
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From (5) it can be shown by induction that

(6) $$\alpha^n = \alpha F_n + F_{n-1} \quad \text{and} \quad \beta^n = \beta F_n + F_{n-1},$$

where F_n and F_{n-1} are Fibonacci numbers defined for integral n by

(7) $$F_0 = 0, \quad F_1 = 1, \quad F_{n+1} = F_n + F_{n-1}.$$

From (2) and (3) we may write

(8) $$\exp \frac{x}{2} L_{2k+1} = \sum_{n=-\infty}^{\infty} U^n J_n(x)$$

From (6), we specialize

$$U^n = \alpha^{(2k+1)n} = \alpha F_{(2k+1)n} + F_{(2k+1)n-1}$$
$$U^n = \beta^{(2k+1)n} = \beta F_{(2k+1)n} + F_{(2k+1)n-1}.$$

Therefore (8) becomes

(9a) $$\exp\left(\frac{x}{2} L_{2k+1}\right) = \alpha \sum_{n=-\infty}^{\infty} F_{(2k+1)n} J_n(x) + \sum_{n=-\infty}^{\infty} F_{(2k+1)n-1} J_n(x)$$

and

(9b) $$\exp\left(\frac{x}{2} L_{2k+1}\right) = \beta \sum_{n=-\infty}^{\infty} F_{(2k+1)n} J_n(x) + \sum_{n=-\infty}^{\infty} F_{(2k+1)n-1} J_n(x)$$

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