

**EVOLUTION, EXPRESSION,  
AND SENSATION, CELL  
LIFE AND PATHOLOGY**

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Evolution, expression, and sensation, cell life and pathology by John Cleland

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**JOHN CLELAND**

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Superior Whistle  
with best regards  
J.C.



EVOLUTION, EXPRESSION,  
AND SENSATION.

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EVOLUTION, EXPRESSION,  
AND SENSATION,

*CELL LIFE AND PATHOLOGY.*

BY

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## INTRODUCTION.

THIS volume is not intended exclusively for either medical men or biologists, but for all who take an interest in the modern speculations inseparably bound up with the present position of biological science.

The first five of the six articles now published together, although they have been written at different periods and with different objects in view, are devoted to subjects more or less cognate. So that one will be found to illustrate allusions made in others.

The conception which it is sought to defend in the address "On the Evolutions of Organization" is that these evolutions are definite, and that the highest evolution of animal life is completed in man. Development both in the individual and in the totality of life is not only a development from a simple beginning, but a development towards a completed whole. There is morphological design, and when in any line of development the design is

completed, the evolution ceases, although, by the operation of environment or external circumstances, variations may continue to occur and degenerations of diverse kinds may take place.

Such views demand for the universe a background or underlying element of spirit. Among the evidences of the place occupied by spirit in nature, I count that which is afforded by what I term symbolic correlation as highly important, and the demonstration of the existence of symbolic correlation I have sought to establish by an analysis of human expression. At the conclusion of the article on that subject the existence of such a principle of expression as conducing to the characters of biological evolution is simply hinted, while it is referred to more fully, but still with great brevity, in the first article of the series.

Under the head of "Vision" it is shewn that the evolution of sense-organs is a very different thing from the evolution of sensation; and while it is pointed out that natural selection furnishes no adequate explanation of the rise of the organ of vision as a structure, attention is called to the circumstance that the very existence of vision and the other senses points to there being an unknowable territory whence, and not from the material world, they take their origin.

In discussing the subject of vision, the whole subject of sensation has naturally come up, and refer-

ence is made to the doctrine of sensation put forward in the memoir "On the Physical Relations of Consciousness and the Seat of Sensation." That doctrine may not have received much attention ; but it is in the position of remaining unassailed, while the old doctrine is unsatisfactory to some of the most competent judges, and remains undefended from the objections here brought against it.

With regard to the fifth article of the series, it need only be said that the connection of the theory of cell-life with that of life in every other aspect is too close to require more than mention here ; while to one who believes in life within life and in the unity of cause in the order of events in each, cell-life is especially interesting as the simplest of a series of which the most complex known is the life-evolution on the face of the earth.

Every one is familiar by this time with the reluctance of certain physicists and naturalists to take into consideration even the possibility of such an element as spirit being necessary for the construction of a rational philosophy of nature. The wonderful advances in physics, affording sure footing for further progress within that domain, and giving play for speculations formerly inconceivable, may lead some physicists to overleap those strict fences the observance of which has secured the advance of their favourite studies, and they may dream that the physical is the only world. So also