In this brief text by Goethe, a translation from the original text ‘Ideen über organische Bildung’ (1806) as part of his groundbreaking collection of ‘Schriften zur Morphologie’, the definition of morphology is first established. Morphology, as Goethe describes, depicts the elicited ‘character’ of systems, of both an animate and inanimate nature, by the inextricable link of form and formation. That a system is in constant transformation, Goethe breaks from the Aristotelian view that the elements of a dynamic organism can be isolated to dissect their functioning within the character of the whole. The characteristics of natural behaviour – conceptualised as interaction, iteration, generation and variation – to which Goethe alludes, and the manner by which they are deciphered is fundamental to the exacting of computation in design. Important is not only the set of instructions, but also the meta-instructions which describe the transformational activities giving rise to an overall functioning system.

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When our interest in natural objects, especially the organic ones, is awakened to the extent that we desire to obtain an insight into relationships between character and function, we believe ourselves best able to acquire such knowledge through analysis of the parts. This method is indeed likely to take us far – it requires but a word or two to remind friends of science what chemistry and anatomy have contributed toward an intensive and extensive view of Nature.

But these analytical efforts, if continued indefinitely, have their disadvantages. To be sure, the living thing is separated into its elements, but one cannot put these elements together again and give them life. This is true even of inorganic bodies, to say nothing of organic ones.

For this reason, the man of science has always evinced a tendency to recognise living forms as such, to understand their outwardly visible and tangible parts in relation to one another, to lay hold of them as indicia of the inner parts, and thus, in contemplation, to acquire a degree of mastery over the whole. How closely this scientific aspiration is bound up with the creative and imitative urges need not be dealt with in detail.

Hence several attempts are found in the progress of art, learning and science to establish and develop a theory to which we should like to give the name ‘morphology’. The varied forms these attempts assume, will be spoken of in the historical portion of our work.

The German language has the word ‘Gestalt’ to designate the complex of life in an actual organism. In this expression the element of mutability is left out of consideration: it is assumed that whatever forms a composite whole is made fast, is cut off, and is fixed in its character.
However, when we study forms, the organic ones in particular, nowhere do we find permanence, repose or termination. We find rather that everything is in ceaseless flux. This is why our language makes such frequent use of the term ‘Bildung’ to designate what has been brought forth and likewise what is in the process of being brought forth.

In introducing a science of morphology, we must avoid speaking in terms of what is fixed. Thus, if we use the term ‘Gestalt’ at all, we ought to have in mind only an abstract idea or concept, or something which in actuality is held fast for but an instant.

What has just been formed is instantly transformed, and if we would arrive, to some degree, at a vital intuition of Nature, we must strive to keep ourselves as flexible and pliable as the example she herself provides.

Notes
1 Goethe’s method of thinking has been described as contemplative cognition, ‘a mode of cognition which is at once sensory (grasping the phenomenon) and spiritual (perceiving the spirit which manifests itself in the phenomenon)’. Karl Viotor, Goethe the Thinker, Harvard University Press (Cambridge, MA), 1950, p 12.

2 Goethe’s discussion in the following paragraphs revolves about the derivation of the nouns, Gestalt and Bildung. Gestalt is derived from the Middle High German past participle of stellen: to set, place, put; Bildung is derived from the verb bilden, allied in meaning to, though not a translation of, the English verb to build. The distinction between the two German nouns may be brought out by translating Gestalt as form, Bildung as formation.