each is capable of assuming any of the functions, for we have monstrous examples (and I quote none but what I have seen) of carpels occurring among the exterior parts of a half-transformed bud, petals and imperfectly-formed stamens being found within: of stamens with anthers present having stigmas at their tips and imperfect ovaries at their lower portion; of petals and stamens passing by all degrees into each other and of all the circles returning to leaves. Besides these there are well-known intermediate conditions such as used to be called nectaries, and besides the expanded or unfolded condition of an organ, tubular, hooded, and spur or horn-like enlargements are not unfrequently met with. The leading effects of varying development may, in addition to what has been already pointed out, be conveniently noticed under the following heads, connection or separation of parts; equality or inequality of the parts of a circle, and influences on the number of parts. As to the first of these, it is a law of vegetable structure, that portions of growing plants, whether of the same, or of closely allied kinds, being in contact and continuing so, for a time without agitation, will form tissue so as to unite and become as one. This law prevails in the parts of flowers as elsewhere. The result is coherence when organs of the same circle unite by their edges, adherence when organs of adjoining circles unite by their surfaces. Increased development of the parts promotes coherence; closeness of the circles promotes adherence, and differences in these particulars have much to do with the variations of the common plan of flowers.

We need not, however, be in any doubt as to the true explanation of what occurs, as we are familiar with cases of degrees of coherence from the slight attachment of the petals of a Flax or Woodsorrel to the complete union of these parts in a Convolvulus or an Erica, from the connection of the petals at the base only in some cases, to its reaching the very tip in others, and we may have seen a little starvation restore a Bellflower or Convolvulus to five separate petals.

It is necessary, to be able to express what happens in precise and accurate language, and as the terms *monosepalous, monopetalous,* affirm what is well known not to be true, and are fitted to obscure the ideas of students, whilst DeCandolle's terms, *gamosepalous, gamopetalous,* are figurative and too long, and have met with little acceptance, I take this opportunity of proposing terms long used by me, as a teacher, which seem fully to supply what is needed without being liable to objection. Let the coherent parts be called *synsepalous,*