



**Box 1** — Backdrop: panorama photo of Fagervann (N. the Beautiful Lake). Photo: Theodor Barth. Lateral elements: two C-curved strips, featuring two ordinal counts (sequence to the left, consequence to the right). They feature the two constraints where by whole (here a polyhedric Orb) will be identified. The Orb is then deconstructed into the Bifloral pattern below. The three shapes are topological parallels to 3 different kinds of sums, noted: +, ⊕ and ◇. The latter is a coupling that is both distributive and operational. This is a design.

Let us define a *topology* that serves to feature 3 different kinds of *sums*: +, ⊕ and ◇. **(1)** The first symbol features ‘the sum of the *elements*’ [+], an *ordinal* sum [i.e., with steps]. **(2)** The second the ‘*elements of the sum*’ [⊕] a *cardinal* sum [i.e. multiple mutual availability]. **(3)** The third is a ‘*coupling sum*’ [◇] a nominal sum [with names because mutually facilitating, e.g. a *trim-tab*]. That is: **(1)** two C-curved shaped strips—a sequence and a consequence—*indicating a centre* [as text-and-image]; **(2)** an *polyhedric orb* featuring a *centre* [Alexander’s wholes]; **(3)** a *Bifloral cut* through the Orb.

The premise is that numbers are *not* merely numbers, but are numbers of *something*, that are brought about when added/subtracted. By stating +(a, b, c...n) we are considering a simple in gathering of (a, b, c...n), which necessarily come in a certain order. It means that [+] is not just a sum, but a *count*. Within the same sum there may therefore be a *number of different counts*: n<sup>2</sup> to be precise. If we define each count as a whole, we will place the *centre* (Alexander) *differently*. If we change the direction of the whole count—from horizontal to vertical—we will have *cardinal* numbers.

That is, a *cloud* of numbers—in the form of a *polyhedric orb*—rather than a sequence/consequence of numbers (horizontal and vertical). The polyhedric Orb is a cloud in which the previously *ordered* elements are the same, but in which the relations between the numbers/elements are *multiple*. In the count in ordinal sequence/consequence it does not *a priori* matter where the elements are located. For example, it *doesn’t* matter where the digital files that are essential to us, for some reason, are located (as long as we can access them). We have our reasons, they can be accessed, period!

But as soon as we work with the files as one whole—our *corpus*—the connections multiply but, at the same time, the relative *position* of each file is of determining importance to how we conceive the whole: that is, how we organised the files (now, *documents*) in relation to a *centre* (Alexander). What is specific has moved: in [+]-sums, it is the *order* which is specific; while in the [⊕]-sum it is the *position* which is specific. So, in the relations of mutual availability found in an Orb-cloud the position is important: *where* they are in relation to each other: we are now in the *proximal zone*.

Centre 1 = 6	elements 1-5	Centre 2 = 12	elements 7-10
1⊕6	(+1)	7⊕12	(+7)
2⊕6	(+2)	8⊕12	(+8)
3⊕6	(+3)	9⊕12	(+9)
4⊕6	(+4)	10⊕12	(+10)
5⊕6	(+5)	11⊕12	(+11)
5 ◇ 11 levelling (trim-tab)			

The [⊕]-sum is environmental, in the sense that it can be applied to *any* environment, whether toxic or healthy: it is simply a generic expression of any relational compound (in any proximal zone). While ecological, I suggest, comes in a different kind of account: this is the point of the Bifloral pattern, of which the elements and relations are displayed in **Box 2**. It articulates the three sums +, ⊕ and ◇ in a *specific* relationship. It is specific, because there are 6 different possible cuts ending up in 6 different Bifloral patterns. So, it is a point at which some environmental *choices* are made.

**Box 2**—The counts of a bifloral cut of a polyhedric Orb. There are 6 such cuts that derive from any centre (it increases with the number of faces, 12 faces is random [χ = 2]).

The existence of such choices is what separates environmental from ecological: any field-survey in the proximal zone is *environmental*, but *not* all are ecological: there is *no* ecology by simply following and catching the drift. If you observe the tab in the Bifloral cut of the polyhedron connecting the two, it is marked by the coupling [ $\diamond$ ]-sum. This sum is particular in that it is 2 steps away from the 2 centres. If it is explained by the example of Buckminster Fuller's *trim-tab*, the general principle is the [double pendulum](#): but coming in from 2 ways, as two different faces of the same *centre*.

The point of the Bifloral cut is that the *centre* comes out with two faces that *both* connected with 2 steps/degrees of separation from each 2 faces of the centre: which means that it is less random/more constrained than a double pendulum: or, said in a different way, we have two double pendulums that can connect in the middle (which then becomes the equivalent of a trim-tab, in whichever domain of facilitation). Connecting two random dynamics constrains each of them: while the first levels with the second, the second facilitates the first. It is the principle of the [4R spherical linkage](#).

Which means that we are relating to the potential of a dynamics *between* causal *and* random. From the proximal vantage point, it clears us from trouble: the is the environmental aspect. From the vantage point of design, it features the ecological aspect. These are both resident potentials of the centre, that come out when deconstructed into a Bifloral pattern. There are 6 of these. Each with different potentials for coupling sums (like the "trim-tab"): those that are also nominal sums, because they are may call on an inventiveness with a very different range of resources/work..

The ones drawing on what is proximally available are of a *farming/gardening* type. While the ones drawing on personal imagination in the use of [acquired technology](#) is of an *engineering* type. Finally, the local hatching of resources and work that have a broader range than its local facilitation is of the *design* type. Here we are not talking about solutions, because creative adaptation is required no matter what, to *level* with the trouble (cf, [Strathern says](#)) and facilitating (in this sense living with) it. These adaptations can in turn be of the *farming, engineering* and *design* types.

In sum, *if* a whole is accountable by the existence of a centre, *then* this centre is *not* merely a matter of perception/organisation, since the the movement in towards the centre conveyed by the two *C-curved* strips (sequence/consequence) has a corollary in the *Bifloral* cut where the centre *reveals* itself (in the meantime) to be *effective* by virtue of the *potential* for levelling and facilitation that will hatch as a *real* possibility when—at some point—it is enacted. That is, enacted in the sense of activities (or a sense of activity) congenial with the workings/principles of the *proximal*.



**Box 3**—the gyroscope is made up of three interconnected circles that are hinged in such a way that they can moved independently of one another. Though the gyroscope motion is unpredictable as the double pendulum, it is used for accurate records of position.

Which means that there will be an *ethnography* for each clarification of resources/work, that has been achieved (which is never more than up to a certain extent). The quest and query of what applies in the proximal zone is: **(a) what have we here? (b) what has it hatched? (c) how far has it come in terms of what has already been achieved?** These questions are mandatory parts of an ecological accountability, and constitute what distinguishes ecological from environmental. The ecological involves a certain kind of accountability. The environmental doesn't. However, without the environmental scope, there can be no ecology. But the environmental scope can be devoid of ecology.

Beyond the ethnographic detail and waywardness, however, there is a general simile: a centre can be compared to a *gyroscope*—as multifarious as a double pendulum—yet it is used for steering, and it can also be deconstructed into levelling/facilitating aspects.