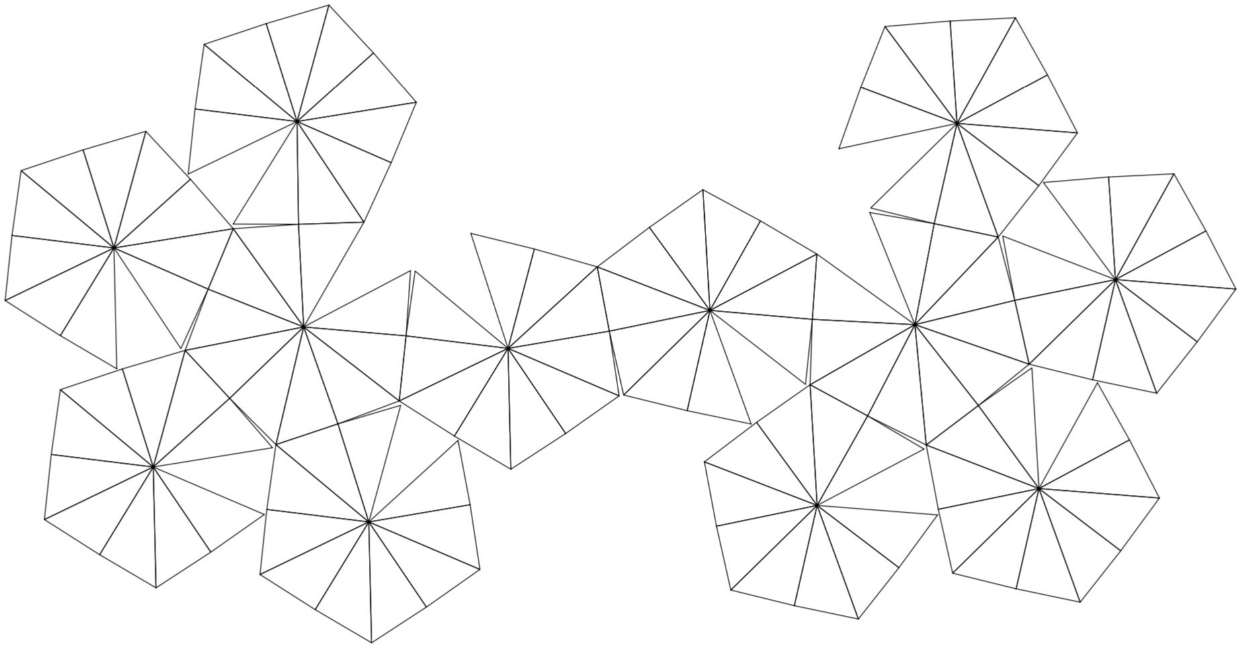

Fig. 1—the *disdyakis triacontahedron* as a geodesic grid. At the close of the dinner—mix between a symposium and a games-evening—we agreed up the following task: we would fill in the triangles with keywords from our todo-lists as they came during a day/week/weekend, to see what happened when they appear in clusters, and the polyhedron is mounted

Under the wake of a gathering at my home, with two engineers and a mathematician, substantial progress was made moving some topical *stirrings*—that both fascinate and trouble me—into the *space of problem* where I can work on them. This is also the focal aim of the staging that has been used in the *learning theatre* (during and after the pandemic). The most important is that the experiment initiated with the 3 guests on my birthday, of using the *disdyakis triacontahedron* in a geodesic experiment with *contingency*, is that mounting it reverses the ordinal/cardinal number relation.

Discussing the task—marking the farewell with the guests (**Fig.1**)—I realised that taking note of things to re/member (featuring the sequence of daily list of things we jot down *not* to forget) is random in relation to the geodesic grid, but *not* random as such: which means that *lists of this kind* (which are *already* contingent by virtue of appearing order of sequence of things not to forget *alongside* our workday) results from a *transposition* of a contingent *sequence* (list), to another contingent *con/sequence* (the *disdyakis triacontahedron* used as a geodesic grid). It is 1-to-1.

So, it is an *isomorphism*. If we assume that the tasks on the lists are completed—soon after they have been listed—they transide from an *ordinal* number (list of priority that determines the sequence) to a *cardinal* number (as x, y, z that are *done* and accordingly are taken *off* the list). A *similar* transition happens as we fold the geodesic grid into the *polyhedron*: the actual *disdyakis triacontahedron*. What happens here? For one, there will be 108 new contingencies—elements that appear alongside/adjacently—as the polyhedron is *mounted*: adding to the 120 in the grid (228).

Fig. 2—the menu: appetiser—ruccula salad with roasted walnuts, sun dried tomatoes, and black garlic vinaigrette; main dish: confit de canard, baked potatoes and puy-lentil salad; desert: cake with pistachio cream, mascarpone, savoyardi and amaretto (AI edited recipe).

Next, what appears as an *ordinal* count in the geodesic grid—whereby the tasks appear in clusters—will appear as a *cardinal* count as the polyhedron has been assembled: simply because the grid is a *multiple*, while the magic of the polyhedron is that it *counts as one*. The polyhedron happens as it is mounted, in the same sense as the task on the list happens as they are completed. However, this is a singular/exceptional case. Since a number of the listed tasks are likely not to be completed, which means that they are still on the list (ordinal). So, the elements disposed on the geodesic grid are likely mixed cardinal/ordinal. Mixes of ‘in progress’ and ‘future anterior’.

These are contingent—in the sense of adjacent—in the geodesic grid: if **n** is the number of tasks that have been *completed* (cardinal), and **m** the number that are *pending* (ordinal), then **n/m** is the *ratio* between the *cardinal* and ordinal *numbers* on the *grid*, here called its *contingency-number*. If we assume that the mounting of the polyhedron is a *homeomorphism* that reverses the relation between ordinal and cardinal numbers, then **m/n** will be a contingency-number of the *polyhedron*. The completed tasks are *now* on a new list, mapping how the pending tasks can be completed.

This transformation occurs because the *grid* is a *multiple*—exceeding our short term memory (7+/-2)—while the *polyhedron* counts as *one*: which affects the relationship between *all* the elements of the polyhedron. Understood in terms of the algebraic *homomorphism*, the grid features the sum of 120 *elements* (which we may remember through the trick of visual clustering [the method *loci* of the ancient rhetoricians]), while the polyhedron features them as elements of a *sum*. Which means that if ***f*** is the function X mapping from the grid to the polyhedron, then ***f*** = X^{-1}. But it does not stop here.

Because if the grid is used to *map* the tasks—that is the contingency of a *todo list*, mapped unto the contingency of a *disdyakis triacontahedron*—this isomorphosis features 120 adjacent connections: while the polyhedron adds 108 adjacent connections to these; featuring the sum of 228 connections. Which means that the contingency-number of the polyhedron is **m+i/n+j** (where the sum of **i** and **j** is 108). While the number **120** has **16 factors** (1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, and 120), the numbers 108 and 228 have both 12 factors: that is, they *correspond*.

These factors are **108**: 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, and **108** (**12 factors**); 228: , 2, 3, 4, 6, 12, 19, 38, 57, 76, 114, 228 (**12 factors**). Since they correspond, the numbers 108 and 228 are *dialectic* in a way that the number 120 is not. There two things I think that we should note (here the we is not scientific/royal but refers to the group of 3 guests and myself): **1)** the number of adjacen-cies in the polyhedron has 4 *less* factors than the grid; **2)** the *factor* of the total number of adjacen-cies is the *same* in the polyhedron as a whole, as for the 108 new connections that are formed.

Which is why the polyhedron has certain *holistic* properties that the grid doesn’t have: featuring the difference between **f (1)◇ f (2) ◇ f (3) ◇ […] f (120)** (the algebra of the *grid*) and **f (1 ⟐ 2 ⟐ 3 ⟐ […] ⟐ 120)**—the algebra of the *polyhedron*. The difference between the parts of the whole, and the whole of the parts. In gestalt terms this means: *the whole is less than the sum of its parts*. Reflecting the fact that 4 factors are removed, in the creating of a correspondence between the whole and the **new** (*anaptúxis*/ἀνάπτυξις).

Fig. 3—although the agreed task (Fig. 1) is yet to be completed, the dinner and its purpose of developing understandings was achieved, with some conclusions in this handout. A major learning outcome: complex events manifesting *as though* they were directed, can be understood in terms of the dialectics between grids and topological volumes explored here.

In sum, what we have here is a candidate definition of what Fredrik Barth called a *discovery procedure*. But owing to the difference between the contingency numbers of the grid and the polyhedron—when the tasks are only partially completed—it is also a *falsification procedure*: ranging from technical/empirical *flaws* to what might be *good* occasions *to do* the rest of the tasks (in sum the *encounters* of conjectural knowledge *and* social encounters).

So, what we have here is an *active model* of the kind apt to be marked by the realities monitored by it, but also to *edit* (rather than to create) these. With consequences both for how a make use of **AI**, how we do **empirical** research and possibly also how to work at structuring **archives** with big data. *More soon!*