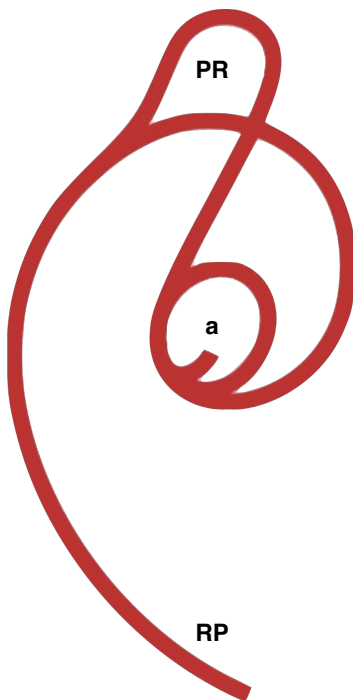**Box 1**—Yvonne Jung's photo-stream (Iterated from 154. GESTUREs). Between the urge to stay in the workshop for as long as it takes, and the urge to to move on (to cover the entire production village) there is the flow of guiding which moves within and beyond the workshop, doing the entire tour in good time. Notice Enrique Solis' copperplate (centre).

I will here continue to explore the materialisation of *content* through mediation: w/the expanded field of machine learning as a fulcrum. That is, a sense of *anaptúxis* that is close to the linguistic usage, but articulating at the brink of material *content* and material *expression* in Louis Hjelmslev's sense: moving beyond linguistics, in Hjelmslev's words, to physics and social anthropology. Moreover, I am interested in the shift at this brink from *function* to *communication* (as the instance of materialisation). Essentially, how content transposes *unto* expression (the so-called *ratio difficilis*).

For these purposes, Lacan's nomenclature may—once more—turn out to be the most convenient. Since we can argue that we are investigating the emergence from the signifier, of a signifier of the signifier: not as a separate entity, but intermingled, entangled, interspersed with the signifier. That is, the sense which linguistics attributes to *anaptúxis*; which corresponds exactly to the shift *from* function (the sign-function of the signifier) *to* communication (the signifier of the signifier). Here, what I have previously called the materialisation of the content specifically, makes intuitive sense.

Contents that are generic in *concept* will become specific at the *delivery*: this is the original drift of *anaptúxis*. The question is how we acknowledge and account for it. In the linguistic account of how meanings are generated in language, it is the phonemic level of language description that prevails before the phonetic materialisation. Which is why structural linguistics ends up in the conundrums of idealism. Language cut short of materialisation ends up indebted to the real. With the focus of *anaptúxis* we take this from the other end: flowering of growth, development, explanation.

The hylemorphism of *individuation*—as conceived by Gilbert Simondon—with *form* such as it turns out through *materialisation*, that is *information*. In the scope of *anaptúxis*, however, we are interested in the *logic of sense* that catches the *material drift* through the aspect of *formal drive* (in a bold attempt to reconcile Simondon, Deleuze, Lacan and Schiller on this particular point). It is suggested that the formal drive therefore extends to partake of *hylemorphism*, whether at the level of content (or, reception) or at the expressive level (production): the difference is provisionally explained as one of relative emphasis.

So, in the wake of the walkabout with the research librarians from the *Section for visual media and conservation* at NLN—hosted by KHiO June 20th 2024—there was an encounter between *two* production milieus: the *content*-production milieu at NLN, & the production-village at KHiO dedicated to *expression*. In the sense that the reception of expressive work turns out as content-production (NLN). And the expression production (KHiO) has a receptive aspect to it: which is a dimension both of artistic research, and of workshop encounter such as mediated by the walkabout. Here *anaptúxis* features a single drive with differentiating difference of emphasis as provisional explanation.

But then let us turn to machine-learning. My intuition is that the emergence of explanation as indigenous to *anaptúxis* can only be understood and determined at this level (going beyond the relative emphasis defining the two vantage points of productive content and receptive expression above). This is because machine learning can be intercepted iff. the function-to-communication shift occurs: which is *not* by evident under immersive conditions in the workshop, where the functional mode readily dominates. *Neither* is it evident from a position of mediation (my role) that relates to the workshop from the outside.

Box 2. The co-generative relation between receptive production (**RP**) and productive reception (**PR**) in *anaptúxis* (**a**). In this relation it clear how it can hatch explanation. Mode: future anterior.

So, there are *two* stops to *one* flow between—*within* and *beyond* each

workshop—as we did see during the walkabout. Which is to say that *anaptúxis* is *not* intrinsically locked to hylemorphism, (which still is a good place to start) but also is intrinsic to the stop and flow: a difference that makes a difference at a level of learning that involves machines, from which not only growth and development emerges, but also explanation: that is, a heterostructural momentum between two constraining cross-pressures on flow. Essentially, what is called a *disordered system*.

This expanded understanding of machine-learning stop-and-flow is what determines machine learning materialistically: that is, tethering what machine learning is—in the digital sense of the term—to processes in which it is a contributing part, rather than considering it in an idealistic abstraction, according to which machine learning takes place in a dialogue *within* a computer and *itself*. I do not accept machine learning in this sense. Machine learning takes place in the stop and flow of learning, of which machine learning (as AI) is a particular case, attracting *alot* of attention.

So, instead of resorting to arcane definitions of first- and second-order cybernetics (Bateson), if may be better to keep to *one* definition of cybernetics, which is machine learning in the expanded field (Lacan). Here, the definition of a *stop* is dual: one to stop the flow (immersive), one to exceed the flow (abstractive). Which makes for a ternary rather than binary cybernetics. When confined to the digital isolate, this difference becomes invisible/blind. It hides the fact that the integration of a computer in tasks, occasions and encounters evolves at the crossroads of immersion/abstraction.

Anaptúxis defines at this crossroads—or, the action of this crosspressure—featuring the drift and drive, in various *ratios*, that accounts for and assigns the shift from function to communication, from generic content to specific materialisation, from a signifier S_1 to a signifier of the signifier S_2. Perhaps it is possible to simply identify S_1 and S_2 with *Stop 1* and *Stop 2*. The immersive stop is then S_1 and the abstract stop is S_2. That is, abstract in the sense of the computer as an *isolate*, but *not* to machine learning in the expanded field: here it can partake of materialisation (but not always).

In binary terms, if we consider that 0 is as a *locked* door (Lacan) it is *not* the same to be locked *in* and to be locked *out*: if the *Forman* wants to keep you [for at long as it takes], the *Drover* wants you onwards [to keep up with the schedule]: between the two there is the *Guide* whose main concern is *flow* (1)—s/he moves *within* and *beyond* the place in good time. There are two zeros: 0_1 & 0_2. And there is one one: 1_1. If zero means locked, and one means open (Lacan) then a sum of *elements* is locked to these elements (0_1), but the elements of the *sum* are locked to that sum (0_2).

It is clearly not the same thing. Because it means that the first elements are unique, while the second elements are replaceable. This is in the aspect of *stop*: S_1 and S_2. But in the aspect of *flow*, defining the sum of the elements in ordinal sequence, adds to their uniqueness. Just as the seeing the elements of the sum in cardinal con/sequence adds to their replaceable/generic definition. The pentagonal Leporello note-pad used during the walkabout at KHiO, and the dodecahedron built from it during the Sandbox session in the afternoon feature a deep ordinal/cardinal unity.

$$[1] \qquad \begin{bmatrix} 0_2 \end{bmatrix} \qquad \begin{bmatrix} 0_1 \end{bmatrix}$$

$$\begin{bmatrix} 0_1 \end{bmatrix} \qquad [1] \qquad \begin{bmatrix} 0_2 \end{bmatrix}$$

$$\begin{bmatrix} 0_2 \end{bmatrix} \qquad \begin{bmatrix} 0_1 \end{bmatrix} \qquad [1]$$

Box 3—Two stops—S_1 and S_2—are differently situated and positions: hence the modified Boolean expression: {0_1; 0_2; 1}. Discrete and entangled: environmental cybernetics. Tense: in progress.

Whereas the two stops—S_1 and S_2—are not one, in this sense: they are and remain discrete. They can appear interspersed and entangled, or piecemeal and fragmented, depending on the *flow*. This is, I propose, an adequate definition of cybernetics: disordered systems made up by two stops and one flow; a co-generative compound in which the action is defined by the *cross-pressure* between two stops (acting as constraints), and the *emergent* (hetero-structural) *pattern* of flow. The information results from individuation and is *ternary* (rather than binary).

The compound defines the material drift and formal drive of *anaptúxis* where information hatches from individuation with size as a difference that makes a difference: beyond the human scale understanding the work of *anaptúxis* takes an analytical effort. It doesn't appear as a resident of the human life-world. And needs to be configured.