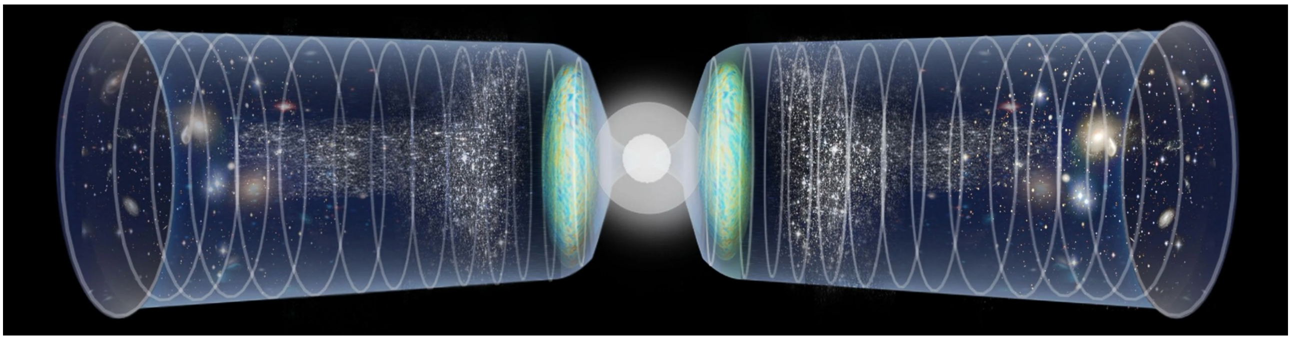

Fig. 1—what distributive patterns bounce off as we operate an experimental observation? How does distributive intelligence impact operational rigs? Do certain hypotheses—like the big bounce alternative to the Big Bang in cosmological studies—take the shape of certain mathematical problems, owing to the nature and inner logic of these two questions?

Two engineers are invited over for dinner, in order to discuss areas of interest, in the light of a certain mathematical topic: *homomorphism* (broadly defined). The one engineer is interested in cosmology (astrophysics). The other in artificial intelligence (AI). Both have been working at SINTEF and in the private sector, with a variety of computer services. We can define them broadly as knowledge engineers. The host is an anthropologist—background from SINTEF,—working with design-areas *assigned* to computing: working, living, learning and thinking in the electrosphere.

The event brings to mind Anatole France's novel (1892) *La Rôtisserie de la Reine Pédauque*: the plot is placed at the beginning of 18th century France, amongst dealers of duck roast, whose worldly errands gravitate the mystical core of alchemy, at the dawn of the Encyclopaedia. An historical framework featuring a wealth of past futures: a point of history, where the boilers and grills had a potential of bringing humanity in a number of alternative possible directions, than the one that actually came about. Conquering the future: a number of alt modern alternatives.

This handout features the *menu* of the planned event: the dinner with the two engineers, at Idunsgt. 3b, 0178 Oslo. The menu presented here includes some dishes—riddled by an easily decrypted code—and a topic which is *not* (easily decrypted): the formula $\boldsymbol{f}(1\oplus2\oplus3\oplus4\oplus5) = \boldsymbol{f}(1) \diamond \boldsymbol{f}(2) \diamond \boldsymbol{f}(3) \diamond \boldsymbol{f}(4) \diamond \boldsymbol{f}(5)$ as the basic form of a certain kind of problem. The sums of this (broad-lay defined) homomorphism are written respectively as $\oplus$ and $\diamond$, because they belong to discrete domains of *application*, in which summation can the *same*, *similar*, *different* or *other*. It overlaps.

If $\boldsymbol{f}(1\oplus2\oplus3\oplus4\oplus5)$ determines the sum of operations contingent on emergent security issues—w/ *safety instructions*—on an *oil-rig* on the surface of the continental shelf, the summation will depart from a variety of *mediated* views conveying aspects of the oil-rig's *size*: they are discrete and their summation hinges on *viewing protocols*, such as conveyed on screen by an *interface design*, or in *space* with a variety of screen-surfaces. Hence, $\boldsymbol{f}(1) \diamond \boldsymbol{f}(2) \diamond \boldsymbol{f}(3) \diamond \boldsymbol{f}(4) \diamond \boldsymbol{f}(5)$. That is, the sums are likely to be in aspects the same, similar, different and other (in the latter case, incomparable).

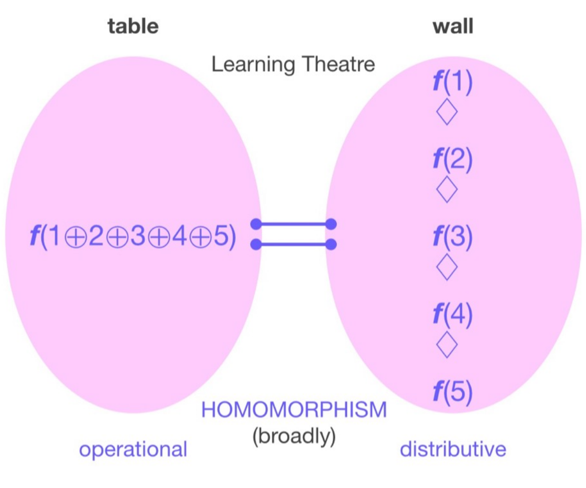

Fig. 2—the shape of a mathematical problem broadly defined as homomorphism.

To study this sort of problem—which the host hopes will be *immediate* to any mind set to engineering—we introduce the learning theatre. The word theatre is here used in a sense that is a fairly open: with the *dramatic* theatre and the *anatomic* theatre as historical references. The defining elements of the learning theatre are a *table* and a *wall*: they are placed at two ends of a space. If limited to this setup, the simplicity reverberates with the mental experiments we know from quantum physics. If we define the experimental agency as *agent* and the experimental outcomes as *other*, we can denote this provisional compound as **agent—other**.

But this alone does *not* define the learning theatre as we introduce some other critical elements: **a)** a tablet-computer with camera mounted to the *table* by the help of a goose-neck, and a projector beaming to the *wall* at the other end of the room; **b)** facing rows of chairs with an audience/attendance, seated according to the pattern of the British parliament, in alongside the beam; they face each other at each side of the beam. When the tablet-camera is used to view any item placed on the table, there are two competing elements in the same room: the object on the table and the image on the wall at the other end of the room.

Which means that the attendance are in situation in which they *alternate* between turning their heads to the *table* with the item (object perception) and the *wall* projection at at the other end (image perception). As they turn their heads they will *intercept* reaction patterns from the crowed seated opposite to them in the learning theatre. Which means that the learning theatre establishes a situation parallel to the example with the oil-rig, but *with* a parliamentary seating pattern, and practice, added. Here, expanding the **agent—other** model we will have *truth* and *impact* added.

Here, a variety of positions on the *truth* of what is being demonstrated, are argued and learned (based on the assumption that truth is underlying what is at cause). A variety of impacts from the optical arrangement of the learning theatre when *performed*, set in motion or put to work (that is, what emerges through the application and iteration of the arrangement). In sum, the learning theatre is structured by the superposition of the *constraints* of the arrangement and the *emergent/* generated outcomes. *Between* the variety of individual positions *and* the collective journey.

Hence, the expanded model of the learning theatre is **truth—[agent—other]—impact**. In both models, we have denied ourselves the use of (left **—>** right) *arrows*, because it would amount to the assumption of a direction from the *departure* to an *arrival*: for the same reason (Fig. 2) the two groups/domains indicated by the pink ovals cannot be assumed in relation of departure and arrival, since any design process can proceed from *distributed views* (plans, diagrams, images etc.) or from *manufactured operations* (card board models and prototypes/mockups). Either of them!

The learning theatre proposes a third alternative setup, which is to superpose viewing protocols and operational instructions: conjointly. We are interested in their *sum*: we are superposing ⊕ and ◇ which we know are part the same, similar, different and other in a *ratio* that will depend on what is being shown and argued: as a result, there are a number of contingencies at game in the learning theatre, that need to be sorted out. Here the modes will fluctuate between *mastery*, *hysteria*, *analysis* and making *a point*. As the normal life cycle of *assignment* in a learning theatre session.

Consider a common e-mail life-cycle of this kind: it starts with a sense of *mastery* as it is written, continues with a sense of *hysteria* when sent off, is subsequently *analysed* and may prove itself stable, and we are ready to make a *point* of it in the next exchange. It is the life-cycle of communication with *emergence* taken into account. The learning theatre is a contraption that is made to reveal this. For instance, our interactions with **AI** has gone through these phases: *mastery*, *hysteria*, *analysis* and *point made*.

What could be interesting from a **cosmological** vantage point, is that not only the presence/absence of an observer makes a different, but also from emergent learning, by which we no longer can see the universe/reality in the same way (as we did aforehand). Can we link such learning to **(1)** the *superposition* of operational *instructions* and viewing *protocols*; **(2)** the *intraaction* whereby the settings of the instrument changes the relation between the body of the observer and the phenomenon observed; **(3)** the *entanglement* between ⊕ and ◇ in the learning history of the case, moving from principle to the experimental case?

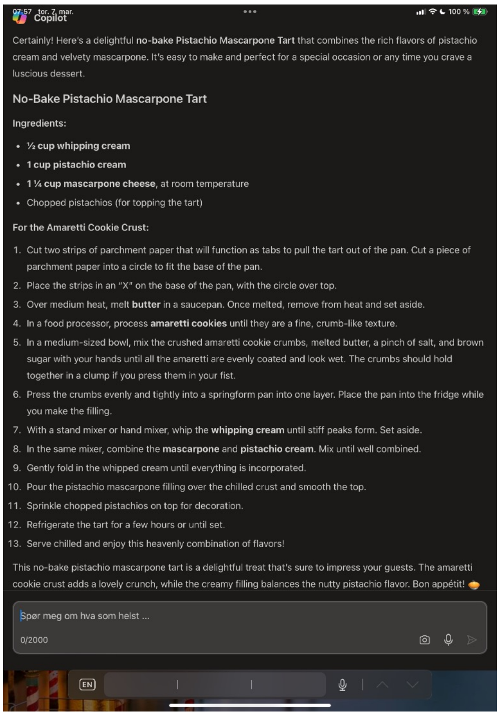

Fig. 3—A desert proposed by Copilot (AI) prompted by the question: can you propose a recipe for a desert based on pistachio cream and mascarpone? Who knows before trying. It could be a canard!