

Light, Utterance, and Metaphysical Unity

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1 Begining

We start with a meditation.



Figure 1: Panta rhei

Everything flows. Mountains are no more or less fluid than bodies. The body's temporality is rooted in its processes of combustion, respiration, production. Solidity is a function of temporalities and substance. The phases of matter appear real and substantial to us because of our particular form of generation and persistence.

No violence has occurred here. The body was long buried and rotted before the engineers laid the pipes for a new supermarket. The intersection of the pipe and the head is distributed in time, and was not noticed by engineer or corpse. Ahimsa. This is a place to start from. Viewing thus, we excuse ourselves for a bit from time and history.

We are concerned with the interpenetration of all things, of everything in everything. Hen to pan. This suggests a cosmic unity, but that is inexpressible. This is the problem and paradox of ONE. This ONE is not a counting unit, a number bead, nor is it a unity that can be differentiated from something else. Its intrinsic ineffability is perhaps the best known challenge to philosophy and theology. Unnamed it is the mother of heaven earth.

Name something, and duality arises. “Let $X =$ ” ..., and the complement, $\sim X$ is conjured up at the same time. And so the enfolding of everything in everything is obscured through the power of language to divide up the All into multiplicities. TWO is thus the mother of multiplicities. Named, it is the source of the 10,000 things. It is language, categories, relations and relata, this and that.

All this is well trodden ground, but ground we are constantly drawn back to. The figure of Indra’s net is a contribution to metaphysical thinking that captures some of the conundrum, and so we turn to it.

2 Indra’s Net

In Buddhist discourse, the image of Indra’s Net is frequently adduced to encourage insight into the notion of the continuous generation of the cosmos, or dependent co-origination. Now the problem of attempting to refer to ONE is not quite the same conundrum as dependent co-origination. But if one grasps the ungraspable figure of everything-in-everything, then the arising of anything must perforce be attributable to the ineffable whole, and not to a discontinuous and incoherent series of causes and effects. Thus the same figure serves both purposes. Its great act of simplification is to remove time completely from the picture. If one could “see” the whole, one would have the magnificent vision offered by Parmenides, which is timeless and changeless.

Here is an description of Indra’s Net from the Huayan patriarch Dushun (557–640):

The manner in which all dharmas interpenetrate is like an imperial net of celestial jewels extending in all directions infinitely, without limit. ... As for the imperial net of heavenly jewels, it is known as Indra’s Net, a net which is made entirely of jewels. Because of the clarity of the jewels, they are all reflected in and enter into each other, ad infinitum. Within each jewel, simultaneously, is reflected the whole net. Ultimately, nothing comes or goes. If we now turn to the southwest, we can pick one particular jewel and examine it closely. This individual jewel can immediately reflect the image of every other jewel.

As is the case with this jewel, this is furthermore the case with all the rest of the jewels—each and every jewel simultaneously and immediately reflects each and every other jewel, ad infinitum. The image of each of these limitless jewels is within one jewel, appearing brilliantly. None of the other jewels interfere with this. When one sits within one jewel, one is simultaneously sitting in all the infinite jewels in all ten directions. How is this so? Because within each jewel are present all jewels. If all jewels are present within each jewel, it is also the case that if you sit in one jewel you sit in all jewels at the same time. The inverse is also understood in the same way. Just as one goes into one jewel and thus enters every other jewel while never leaving this one jewel, so too one enters any jewel while never leaving this particular jewel. (source: Wikipedia)

There are many ways to try to convey this limit of language. In quantum physics, David Bohm introduced the notion of hidden variables that would allow any determinate entity to be nonetheless continuous with, or enfolded in, the totality. I do not know if the quantum physicists like this idea. Probably some do and some don't. That's how such suggestions fare.

Bohm got the term “enfolding” from the German mystic Nicholas of Cusa, who distinguishes the infinite unity from the unit and number thus:

Infinite unity, therefore, is the enfolding of all things; indeed “unity,” which unites all, designates this. Unity is maximum not merely because it is the enfolding of number, but also because it is the enfolding of all things. (On Learned Ignorance, Chapter Three).

Infinity, therefore, exists and enfolds all things and nothing is able to exist outside it. Consequently nothing exists that is infinity's other or that is different from it. Infinity, therefore, is in all things in such a way that it is no one of them. No name can fit infinity, for every name can have its contrary. But to infinity, which is unnamable, there can be no contrary. (De Visione Dei, par 55)

Such figures are of value, despite the verbal contortions they induce. Referential language has its limits. Indra's Net provides instead a visual figure to think with. Others are possible, and we here introduce a novel figure of similar intent. Where visual figures employ light, we arrived at our figure through consideration of another way in which the constant arising of everything may be understood: through the power of utterance.

3 Uttering

Fiat lux! Uttering and light have history. Contemplative figures based on light, such as Indra's Net, may appear somewhat insubstantial. Figures drawn with light lack any tangibility, tactility, or sense of body. As embodied beings, we are more than light. We are bloody, substantial, and we persist. The body is a resonating column. We utter the cosmos into being. Performative ‘speech acts’ are mere mundane shadows of the power of voice to create. AUM is the original creative force of the Upanishads. Voice has no origin, but in uttering everything arises.

One does not knit Indra's Net! But one might, with some satisfaction, knit a form, or paint a picture, or write an orchestral piece, that allows discussion of the net—forms for thinking with and through, for contemplation, and for discarding. Contemplative technologies are real, and widespread. A yantra is minimal in its expressive capacity, which makes it invaluable as a tool of contemplation. The synthemata of the theurgists are similarly useful.

And so we turn to uttering. Let us imagine a net now, in which each node gives utterance, and each node receives the utterances of the others—each uniquely positioned, yet each resonating with every one. Each hears everything, but from a unique position. Each node utters and each node is heard by every node. This is a cosmic chant, brought forth by an infinity of souls. This is translation from light to voice.

Attention to chant, or joint speech, unlocks treasures. Chant is, of course, synchronized respiration (just as speech is the exquisite control of exhalation). If such a form of animation were found in any animal species, it would be the single most salient property that biologists would attend to. They assemble and breathe in a common time! What exquisite communion! Surely this is a more plausible singular characteristic of the human species, than the anachronistic claims of Logic or Language?

As well as its well-known role among the metaphysical figures of the Upanishads (OM!),¹ chant is creative in the collective enaction of real, actual, very real, very actual, human collectives and identities, through ritual, protest, sports, education. Those activities in which chant is central are precisely those which create the marvellous diversity of human social worlds. It is endemic at all those occasions in which multiple people assemble and through communion lay the ground for communication. Chanting creates.

One of the strongest forms of chant is the joint silence through which collective grief and vulnerability are expressed after tragedy or atrocity. The utterance itself is reduced to a silent minimum, making the capture of the participants total, maximizing joint consciousness.

One of the most neglected forms is the cacophonous ritual of Happy Birthday, in which the individuated personal monad is jointly celebrated and stabilized. Chant also provides the most sublime music ever created. Let Hildegard von Bingen make this point for us. Chant is not musical language. It does not engender a distinction between ecstatic cacophany and angelic harmony. Nor is it to be understood in linguistic terms. Chant frequently uses words that are not from the vernacular of the participants.

We excused ourselves a bit from time and history in the opening. We can take that a little more seriously and flesh it out. Ritual, one of the main manifestations of chant, provides a time-out-of-time in which ongoing activity knows its place within the grand order of things—not pursuing something, nor fleeing, but generating and maintaining. Roy Rappaport² describes both the organic communion (entrainment of breath and pulse) and cosmic alignment (“Rituals are among the most precisely recurrent of social events”) as constitutive features of ritual.

4 NChant

In the Appendix, we describe the development of an architecture, conceived in terms of nodes who periodically utter and simultaneously receive the utterances of other nodes, as it might be supported via conventional telecommunication networks. The work grew out of the realization during the pandemic of 2020–2022 that the first victims of the social isolation enforced by the social response to the virus were precisely those places of assembly in which the associated creative activities involve chant. The churches, temples, schools, and sports stadia were locked down and bodies could no longer contact bodies. Classes moved “online.” Churches reluctantly took to streaming services. Matches were played in front of empty seats, even to robots who were programmed to chant. Protests, for which there is always adequate reason, had one more reason to assemble people, but now haunted by the spectre of transmission through the air that filled the lungs of the chanters.

Although the children of the information age like to think that computers provide communication and contact, it was abundantly clear that something was wrong. At the same time, musicians, choirs, and even families trying to sing Happy Birthday, realized that advancements in digital wizardry still did not allow synchronous uttering through networks. The problem was not that nobody had ever thought of it. There is a fundamental problem in that transmission through networks lies in time, and when we substitute cables, screens, routers for the warm bodies of others in a room, hiatuses, or lags, are introduced that are logically ineradicable. The magic that arises in communal

¹The spelling OM is the common form. The AUM variant is more practical, and stems from Tantric practices in which embodied knowledge is applied towards divinisation, which is a fine goal.

²Rappaport, R. A. (1999). *Ritual and Religion in the Making of Humanity* (Vol. 110). Cambridge University Press.

chanting is killed stone dead. No matter how fast a 5, 6, or 7G network, the arrow of time points in one direction, and transmission—which often appears instantaneous—lies in time. It takes time, and this makes chanting over networks impossible. Chanting is an activity that demands presence. It is beyond the fiction of instant communication, or “information.”

A fundamental problem for which a solution is impossible could lead one to walk away and find an easier problem. After convincing ourselves first of the absoluteness of the barrier in front of us, we decided to walk around it anyway to see what was on the other side.

To do this, we took the problem out of time, and into an ideal space. Much as we would like, we cannot fabricate a network without time delays. But chanting is repetitive. Prayers are recited over and over, stabilised by beads. Protesters, football supporters, and children learning their tables, repeat words, phrases, over and over. As chant is production, not encoding, this is necessary for it to be efficacious. We can take advantage of the inherent repetition by having little daemons sit at each node, listening to the incoming, and somewhat delayed, productions of others. Each daemon holds onto what it hears and only provides it to the node³ at the start of the next repeating cycle.

Example: Consider one node, P , uttering “ba” repetitively: “ba₁...ba₂...ba₃...”. Consider another node, Q , who utters the same. To distinguish the two on the page, let us write Q ’s productions as “pa₁...pa₂...pa₃...”

Q ’s daemon receives from P ba₁ with a little delay. But it knows the overall repetition cycle. So it holds onto ba₁ until Q is about to produce its own pa₂. In this way, the lag is overcome by aligning the tokens with a fixed delay equal to the production cycle. All productions are aligned, and the transmission delays appear to have disappeared. In fact, delays have simply been homogenized to be equal to the length of the production cycle.

From P ’s perspective:

ba₁... ba₂... ba₃... ba₄... ba₅... ba₆...
 pa₁... pa₂... pa₃... pa₄... pa₅...

From Q ’s perspective:

pa₁... pa₂... pa₃... pa₄... pa₅... pa₆...
 ba₁... ba₂... ba₃... ba₄... ba₅...

This has promise, perhaps. But it is naïve. Real delays depend on many things, including the resources needed to pass tokens around, to install daemons, and the degree of separation of two nodes in space. Furthermore, if everything is connected to everything else, growth is impossible. The network would rapidly become densely packed. Resource demands would be overwhelming. Nothing would have been achieved.

A trick is needed to grow a network such that connection between nodes is sparse—adding thousands of extra nodes should make little or no difference to the resource requirements of an individual node. Yet we want each node to receive (with delays, as above) the productions of every other node—to receive them once and once only.

The Appendix describes such a network capable of growing indefinitely large. Starting with a core of 3 nodes, we repeatedly bump up the order of the network from 3 to 9 to 27 to 81 As

³Nodes produce and receive. The habits of everyday language that would describe this as speaking and listening are not appropriate in the entrained sustained simultaneous productions of chant.

we grow it, we consider the resources required by each node. The sparse connectivity we employ ensures that at each increase in order (each time the entire number of nodes is tripled), each node adds only two new connections. The connectivity nonetheless ensures that every token is received by every node, and that the totality of tokens received by each node is unique to it. There is no center in such a network. Each node has a unique position, and a unique constellation of connections to other nodes. Consideration of the topology we had discovered leads to the comparison with Indra's Net, and we therefore relegate all the technical details to the Appendix.

5 Dreaming

One does not knit Indra's Net. But one could envisage building a finite (but potentially huge) NChant net. Thousands or millions of producer/receivers, all uttering in 'time.' Would this be anything other than a metaphysical placeholder? We believe the space is worth exploring.

If a group of us chant together repetitively, there are many ways in which we can influence, perturb, manipulate each other beyond altering timing. The voice has musical qualities, timbre, intensity, melody, many properties that the linguist ignores, but, because the linguists have yet to discover chant, remain at our disposal.

Experimentation in such a space is possible. A finite implementation would have individuals yoked together in a distributed net with patterns of variation that depend on proximity between nodes, and on the neighbourhoods produced by our proposed pattern of connectivity. It does not matter, at this stage, precisely what is uttered. Uttering could be a bang on a drum or a howl, as long as it is repetitive. What is of immediate interest is how patterns of variation (along dimensions other than time) appear, propagate, and transform as production continues. Would participants have a sense of participation that is currently lacking in conventional transmission? We can imagine they would, and we can see a path forward to exploring in a limited way, using existing technology.

But we cannot shake the suspicion that our principal innovative step of taking productions out of linear time and into a time-out-of-time has untapped potential we too cannot yet see. We know chant to harbour mysteries untouched as yet by linguistics, psychology or sociology. We are approaching an unexplored part of the entanglement of everything in everything, from an embodied standpoint. Ahimsa.