Gluonics and *den Seinsfragen*

Die Idee der »Logik« selbst löst sich auf im Wirbel eines ursprünglicheren Fragens.[1]

Graham Priest claims that "gluon theory provides a solution to Heidegger's notorious *Seinsfrage*—the question of Being."[2] He summarizes the argument:

> "The being of something is that in virtue of which it is. To be is to be one. So the being of something is that in virtue of which it is one. And what is it in virtue of which something is one? By definition, its gluon, *g*. The being of something is therefore its gluon. We have answered Heidegger's question as to the nature of being."[3]

Is that really Heidegger's *Seinsfrage*?—'What is that in virtue of which being is being?' We'll come back to this issue. At that time I'll try to show that Priest's discourse on emptiness (*śūnyatā*) does bear on H.'s *Grundfrage.* Right now more from Priest on 'the nothing' of *Die Angst offenbart das Nichts*:[4]

> "**Nothing** is an object. . . . This does not, of course, entail that **nothing** exists. . . . Of more importance is that **nothing** is a contradictory object. Since it is an object, it is something. But it is the *absence* of all things too; so **nothing** is nothing. **Everything** is the mereological sum of the universal set. **Nothing** is the mereological sum of the empty set. . . . But there is nothing in the empty set, so **nothing** is absolute absence: the absence of all objects, all presences. It is no thing, no object. . . . **Nothing** both is and is not an object. In this respect, it behaves exactly as does a proper gluon. In fact, it is a gluon. For **nothing** can have no parts (other than itself): if it did, it would not be the *absence* of everything. Hence, it is a simplex, and so is its own gluon. **Nothing** is the gluon of **nothing.**"[5]

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[1] Martin Heidegger, *Was ist Metaphysik?*; *Gesamtausgabe Band* 9: 117 :
https://www.beyng.com/gaselis/?vol=9&pg=117 .

[2] Graham Priest, *One: Being an Investigation into the Unity of Reality and of its Parts, including the Singular Object which is Nothingness* (Oxford U. P. 2014) xvii.

[3] *Id.* 51.

[4] GA 9: 112.

[5] *One* 56. Boldface here signifies noun-phrase as opposed to quantifier. Priest incorporates into his arguments many doctrines (which he has always somewhere carefully proved to his own satisfaction) that may be highly dubious in the eyes of other logicians. One reviewer notes that the book "is veritably teeming with logico-metaphysical heresies. Several have already been mentioned: some contradictions are true; identity is not transitive; some objects are not self-identical; the empty set has a mereological fusion. There are many others, however: some objects don't exist but it is possible to perceive them nonetheless (passim, p. 158); parthood is not anti-symmetric (p. 89); set-membership is not well-founded (pp. 191 ff); there is a universal set, and it has a fusion (p. 100); there is a mereological fusion that neither overlaps itself, nor is an improper part of itself (pp. 91, 97 ff.); identity needn't be necessary or permanent (p. 26); Plato was a dialetheist (Ch. 8); every object is ontologically

Building on this, Priest shows "The Huayan were right" (*sc.* that all jewels in the Net of Indra encode each other; that "Each one, as it were, contains the whole;" that every thing interpenetrates with every thing):

> "Consider any object, *a*. This relates to **nothing** (that gluon) in a very particular way. As we noted in Section 4.5 [the discussion of the *Seinsfrage*], ¬𝕾*x x* = 無 [*wu*, 'nothing'], and so 𝔄*x x* ≠ 無, thus, in particular, for any object, *a*, *a* ≠ 無. But the relationship between *a* and **nothing** is tighter than mere difference. Part of the quiddity[6] of *a* is to be an object. (It could not be *a* unless it were at least an object.) And it could not be this, unless it stood out, as it were, against **nothing**. Its not being nothing makes it possible to be (an object). Heidegger puts it in his own distinctive terms, thus: 'The nothing is neither an object nor any being at all. The nothing comes forward neither in itself nor next to beings, to which it would, as it were, adhere [*dem es sich gleichsam anhängt*]. For human existence the nothing makes possible the openness of beings as such. The nothing does not merely serve as the counterconcept of beings; rather it originally belongs to their essential unfolding as such.'"[7]

So, Priest continues,

> "Conversely, **nothing** is what it is in virtue of being the ontological backdrop of every object, and so *a.* Any object and **nothing** are, then, like [his earlier example of interpenetration] the magnetic *n* and *s*. That is, they interpenetrate. Writing ⇌ for interpenetration, and letting *a* and *b* be any two objects, we have *a* ⇌ 無 ⇌ *b*. And since interpenetration is a transitive relation, we have the interpenetration of *a* and *b*: *a* ⇌ *b*. Every thing interpenetrates with every thing, as the Huayan had it."[8]

For the moment let's drop the Net of Indra and ask, What's a gluon?

> "Suppose that an object has parts *a, b, c,* and *d,* and that these are held together by a gluon 中. The Bradley regress is generated by the thought that 中 is distinct

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prior to (ontologically dependent upon) itself (p. 187); there are things that are absolutely ineffable (p. 200)." Michael Price, Book Review of *One*, 126 *Mind* 269, 271 (2017). But one person's heresies are another person's alternative language games; didn't the Trinity's career start as a non-standard monotheism? Is the Trinity in fact a Quadrinity: Father, Son, Spirit, and divine gluon ('glutheon')? *See* Francis Jeffry Pelletier, "Discussion" of *One,* 65 *The Philosophical Quarterly* 822, 828 (2015).

[6] A non-standard quiddity, not Aristotelian 'essence': "the quiddity of an object is constituted by its locus in a network of relations." *One* 172.

[7] *Id.* 180, quoting "What is Metaphysics?" in *Martin Heidegger: Basic Writings* (ed. David Farrell Krell 1977) 106. GA 9: 115: https://www.beyng.com/gaselis/?vol=9&pg=115 .

[8] *Ibid*.

from each of the other parts. If this is the case, then there is room, as it were, for something to be inserted between 中 and *a*, and so on. Or to use another metaphor, there is a metaphysical space between 中 and *a*, and one requires something in the space to make the join. Thus, the regress is broken if 中 is identical to *a*. There will be no space, or need, for anything to be inserted. Of course, 中 must be identical with *b, c, d,* for exactly the same reason. Thus, 中 is able to combine the parts into a unity by being identical with each one (including itself). . . . The explanation of how it is that the gluon manages to unite the disparate bunch is, then, that it is identical with each of them."[9]

Bradley regress? Priest shows that Bradley, Russell, and Frege each encountered the same regress in their respective considerations of the unity of the proposition. In addressing the unity of the proposition Bradley starts, says Priest, "by supposing that a proposition has components *A* and *B*. What constitutes them into a unity? A natural thought is that it is some relation between them, *C.* But, [Bradley] continues,

> [we] have made no progress. The relation *C* has been admitted different from *A* and *B* . . . Something, however, seems to be said of this relation *C*, and said, again, of *A* and *B* . . . [This] would appear to be another relation, *D*, in which *C*, on one side, and, on the other side, *A* and *B*, stand. But such a makeshift leads at once to the infinite process . . . [W]e must have recourse to a fresh relation, *E*, which comes between *D* and whatever we had before. But this must lead to another, *F*; and so indefinitely . . . [The situation] either demands a new relation, and so on without end, or it leaves us where we were, entangled in difficulties."[10]

The unity of the proposition is only one case of unity. Priest is pursuing the problem of unity in general, and he claims that something like the Bradley regress is at the heart of the problem in every instance. As he says of Frege's difficulty, "At root, the problem is not about meaning at all, it is about how parts cooperate to form a unity of any kind."[11] The general problem is posed, Priest says, "by the contrast between an object, which has a unity, and a congeries, which is a plurality."[12] The gluon is his general solution. In abstract terms here is the problem of unity and how Priest solves it:

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[9] *Id.* 16-17.

[10] *Id*. 10. The Bradley regress is vicious: "a regress is vicious if, after every step, what is to be accounted for is the very same thing as was to be accounted for before. Thus, if we try to explain how to join two links of a chain by saying that we insert an intervening link, we have exactly the same problem of how to join two links. And if we want to explain how a bunch of objects form a unity we cannot do so just by invoking another object [*sc.* of the very same kind] . . ." *Id.* 186. Solution: invent a different kind of object; e.g., a link that is and is not a link.

[11] *Id.* 7.

[12] *Id.* 9.

"Take any thing, object, entity, with parts, $p_1, \ldots, p_n$. (Suppose that there is a finite number of these; nothing hangs on this.) A thing is not merely a plurality of parts: it is a unity. There must, therefore, be something which constitutes them as a single thing, a unity. Let us call it, neutrally (and with a nod in the direction of particle physics), the *gluon* of the object, *g*. Now what of this gluon? Ask whether it itself is a thing, object, entity? It both is and is not. It is, since we have just talked about it, referred to it, thought about it. But it is not, since, if it is, $p_1, \ldots, p_n$, *g*, would appear to form a congeries, a plurality, just as much as the original one. If its behaviour is to provide an explanation of unity, it cannot simply be an object."[13]

"We see that the solution to the problem of unity does indeed presuppose that a gluon may be both an object and not an object;" i.e., "Gluons are dialetheic: they have contradictory properties."[14] So Priest configures the logical apparatus necessary for establishing gluonicity; including but not limited to dialetheism,[15] paraconsistent[16] material equivalence,[17] noneism,[18] and a non-transitive identity relation.[19]

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[13] *Ibid.*

[14] *Id.* 27, 15.

[15] "where ¬ is negation, there are sentences, propositions (or whatever one takes truth-bearers to be), *A*, such that *A* and ¬*A* are both true. Given that *A* is false iff (if and only if) its negation is true, this is to say that there are some *A*s which are both true and false." *Id.* xviii.

[16] "Explosion is the property of [a relation of logical consequence] according to which any contradiction implies anything. That is, a relation of logical consequence, ⊢, is explosive iff for all *A* and *B*, (*A*, ¬*A*) ⊢ *B.* A [relation of logical consequence] is paraconsistent iff it is not explosive. . . . if one is a dialetheist, one had better hold that the appropriate logical consequence relation is paraconsistent, on pain of accepting everything: triviality." *Ibid.*

[17] Material equivalence means 'having the same truth value;' symbolized by ≡ . "Classically, every situation partitions sentences of the language into two zones, the truths (𝔗) and the falsehoods (𝔉), the two zones being mutually exclusive and exhaustive: [diagram omitted] Sentences *A, B, C,* . . . therefore find themselves in exactly one or the other of the zones. If two sentences are both in the same zone, their material equivalence is in the 𝔗 zone; whilst if one is in one zone, and the other is in the other zone, their material equivalence is in the 𝔉 zone. In paraconsistent logic, everything is the same except that the 𝔗 and the 𝔉 zones may overlap. [diagram omitted] As before, the material equivalence of two sentences is in the 𝔗 zone if both are in the same zone (𝔗 or 𝔉), and in the 𝔉 zone if they are in different zones, but now a sentence can be in both zones [i.e., in the lens of overlap]. *A* ≡ *A* will always be in the 𝔗 zone, since *A* is always in the same zone as itself. If *A* ≡ *B* is in the 𝔗 zone, then so is *B* ≡ *A*, since these are just ways of saying that *A* and *B* are in the same zone. So equivalence is reflexive and symmetric; but it is not transitive. *A* and *C* may be in the same zone ['proper' 𝔗 and lens, respectively], and *C* and *B* may be in the same zone [lens and 'proper' 𝔉, respectively], though *A* and *B* are not, because *C* is in the overlap. Hence, we may have *A* ≡ *C* and *C* ≡ *B* being in the 𝔗 zone, without *A* ≡ *B* being so. Note also that detachment for ≡ may fail: we can have *C* and *C* ≡ *B* in the 𝔗 zone without *B* being in it." *Id.* 18-19.

[18] "Some objects do not exist . . . The domain of objects comprises, then, both existent and non-existent objects. . . . I will write the particular and universal quantifiers as 𝔖 and 𝔄, respectively. Normally one would write them ∃ and ∀, but given modern logical pedagogy the temptation to read ∃ as 'there exists' is just too strong. Better to change the symbol for the particular quantifier (and let the universal quantifier go along for the ride)." *Id.* xxi, xxii.

[19] "The definition is the standard Leibnizian one. Two objects are the same if one object has a property just if the other does. In the language of second-order logic, *a* = *b* iff: 𝔄*X*(*Xa* ≡ *Xb*) . . . [so] the behaviour of identity is going to be inherited from the behaviour of ≡ . In particular, it is going to be reflexive and symmetric, but, crucially, not transitive. Suppose, for the sake of illustration, there is only one property in question, *P,* and that *Pa*, *Pb* and ¬*Pb*,

Having established this understanding of identity-relation Priest defines formally what a gluon is.

> "Given a partite object, *x*, a gluon for *x* is an object which is identical to all and only parts of *x*. By being identical to each of the parts and to only those, it unifies them into one whole. Note that a gluon is identical to itself; it follows that it is a part of *x*. Note also that the gluon of an object is unique. For suppose that *g* and *g′* are gluons of an object, *x*, then since *g* and *g′* are parts of *x*, *g* = *g′* (and *g′* = *g*)."[20]

In his Preface Priest assures us that "The constructions of formal logic demonstrate that the notions employed [throughout the book] are at least technically coherent."[21] That is, if we have the requisite proficiency we can check his work. But, again, a demurrer with respect to the *Seinsfrage*: Even if Priest's argument tends to establish the gluon as a *res nova* in ontology, i.e., responds to *die Leitfrage* of metaphysics, of what consequence is that in answering **Heidegger**'s *Grundfrage*: 'how does **any** ontological *res* show up as *Anwesen*, meaningful presence to human being?'

This formulation of the *Grundfrage* is to read Heidegger under Sheehan's interpretation, and thereby to forestall the quest for some fundamental constituent of *Sein*.[22] "The proper entrance into Heidegger's *Seinsfrage*," Sheehan contends, "is to realize he used the word *Sein* as only a provisional stand-in for *Anwesen*, the intelligibility or meaningful presence of whatever we encounter."[23] "Heidegger's basic question concerned the meaning of 'being' (*Sein*) as 'significance' (*Bedeutsamkeit*) and why there is significance at all (i.e., why *es gibt Sein*)."[24]

> "The first step is to realize that Heidegger's work was phenomenological from beginning to end. This entails that his work was focused not on 'the being of beings' (*Sein*) but on 'the meaning of the meaningful' (*Sinn, Bedeutung*). . . . by *Sein*, Heidegger meant *Anwesen*, the meaningful presence of things in understanding. . . . By calling the immediate objects of experience 'the meaningful' rather than employing the ontological term 'beings,' Heidegger implies that the being of things is their meaning. Moreover, what makes things

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and ¬*Pc*. Then *Pa* ≡ *Pb*, *Pb* ≡ *Pc*, but not *Pa* ≡ *Pc*. Since *P* is the only property at issue, we have *a* = *b* and *b* = *c*, but not *a* = *c*." *Id*. 19-20.

[20] *Id*. 20.

[21] *Id.* xvi.

[22] Thomas Sheehan, *Making Sense of Heidegger: A Paradigm Shift* (2015).

[23] Thomas Sheehan, "Heidegger: πάθος as the thing itself;" https://www.beyng.com/docs/TomSheehanPathos.html .

[24] Thomas Sheehan, "Twelve Theses on Heidegger or What Comes *Before* the 'After'?" in *After Heidegger?* (ed. Gregory Fried and Richard Polt 2017).

meaningful is their relatedness to human being as the only locus (*Da*) of sense or intelligibility (*Sinn*)."[25]

That interpretation is implied in the proposition *nur solange Dasein **ist**, das heißt die ontische Möglichkeit von Seinsverständnis, »gibt es« Sein. Wenn Dasein nicht existiert, dann »ist« auch nicht »Unabhängigkeit« und »ist« auch nicht »Ansich«.* (*Sein und Zeit* 212) So to speak: *Wieviel Dasein so viel Sein; kein Dasein kein Sein.*

What is that in dollars?

> "Heidegger's entire philosophy, including his effort to overcome or get free of metaphysics, begins and ends with his radically new vision of human being. . . . What Heidegger sought to do was, first, to reveal the *hidden and overlooked foundation* of all metaphysics — that is, to reveal the clearing — and then to urge one to embrace and live from out of that mysterious fact. For Heidegger, overcoming metaphysics, whether traditional or natural, means getting 'beneath' metaphysics, to the deepest level of oneself: one's thrown-openness as the radically finite and mortal field of meaningfulness that undergirds and nourishes everything human."[26]

That radically finite and mortal field is neither more nor less than a locus of relations: "what makes things meaningful is their relatedness to human being as the only locus (*Da*) of sense or intelligibility (*Sinn*)."   And on this *topos* Priest's account of emptiness has great power for

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[25] Thomas Sheehan, "What If Heidegger Were a Phenomenologist?" in *The Cambridge Companion to Heidegger's "Being and Time"* (ed. Mark Wrathall 2013) 382, 383. More: "by das Sein des Seienden Heidegger always means Anwesen, the meaningful presence of something to someone in terms of that person's concerns and interests. Whether early or late, Heidegger never understood such Sein as something 'built into' things or as the objective presence of things in space and time. . . . the metaphysical question is focused decidedly on things, specifically from the viewpoint of why, how, and to what extent they are real. Metaphysics begins with things, then 'steps beyond' them to discover what constitutes them as real at all: their being or 'being-ness' in a variety of historically changing forms. But finally metaphysics returns to those things with that news. As Aristotle puts it, metaphysics announces 'whatever belongs to things in and of themselves' and specifically their 'first principles and highest causes.' That is, the question that metaphysics puts to things is: what is their 'essence' (their esse-ness), in the broad sense of what lets them be at all. However, the main focus is on the things. Metaphysics is clearly a matter of onto-logy insofar as the operations of questioning and answering (-logy) all bear ultimately on beings (onto-). On the other hand, Heidegger's meta-metaphysical inquiry takes up where metaphysics leaves off. It takes the very being of things (whatever its historical form) and puts that under the microscope as the subject matter. What about this realness itself, this οὐσία that things 'have'? This is the question not about ὂν ᾗ ὄν but about οὐσία ᾗ οὐσία, Sein als Sein, and specifically the question about what accounts for the fact that there is Sein at all." Thomas Sheehan, "What, After All, Was Heidegger About?" 47 *Continental Philosophy Review* 2 (2014); in the version here: https://www.beyng.com/papers/HC2015Sheehan.html .
[26] Thomas Sheehan, "Martin Heidegger: Overcoming Metaphysics" 2, 5 (2018): https://drive.google.com/file/d/1iMCNDBSVHKSpeWY_Uk5X1kPN32jrQaIu/view .

understanding Heidegger's vision. Priest's can be read as an alternative accounting for the 'way' of 'in a way, the soul is all things.'[27]

Priest holds *Was ist Metaphysik?* in high regard, invoking it three times in Part III, 'Buddhist Themes,' and highlighting Heidegger's grasp of the notion of emptiness, *śūnyatā*. Priest himself is a *śūnyavādin*, in the sense 'one who discourses on emptiness,' and he evidently takes Heidegger as another. That is—roughly, and disregarding gluonic *Sein*—Heidegger's thought is to Western metaphysics as the Madhyamaka school is to the Abhidharma. The early Abhidharma schools of Buddhism, Priest writes,

> "held that there are things with their own self-nature (*svabhāva*); namely, the ultimate parts [i.e., *dharmas*] into which all things may be decomposed. A signature of the Madhyamaka school is a rejection of this: there is nothing that has self-nature. All things are what they are only in relation to other things. That is, they are empty of self-nature—or just *empty* (*śūnya*)."[28]

Priest frames "a quite general argument for relational quiddity;" i.e., that "the quiddity of an object is constituted by its locus in a system of relations;" and that "*all* things have a merely relational quiddity. They are what they are in relation to other things."[29]

If, as Lonergan says, "insight is an apprehension of relations," the fundamental insight which Priest wants to justify is the apprehension that *everything* consists in relations 'all the way down.'[30] Indeed, Priest repeats the tale of the little old lady in tennis shoes accosting Bertrand Russell with her insight that 'It's turtles, young man, all the way down.' "When it comes to objects and their quiddities," Priest agrees with her: "it really is turtles all the way down."[31]

Priest takes up the two principal objections to this view: 1) that it collapses into nihilism by generating a vicious regress, "voiding all things of being;" and 2) that it is self-refuting; "if anything is empty, this can only be because some things (such as the relations between things) are not."[32] His response to the second objection brings us back to Heidegger's answer to the *Grundfrage.* Priest writes,

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[27] ἡ ψυχὴ τὰ ὄντα πώς ἐστι πάντα· Περὶ ψυχῆς 431b 20.
[28] *One* 175.
[29] *Id.* 172, 174.
[30] *Collected Works of Bernard Lonergan, Volume 3; Insight: A Study of Human Understanding* [1957] (ed. Frederick E. Crowe and Robert M. Doran 1992) 4.
[31] *One* 183.
[32] *Id.* 182.

"Understanding the quiddity of objects and relations as I have done shows that they are not 'free-standing'. But the understanding suggests another candidate for something which *is*—not the objects and relations themselves, but the very structure in which they are all embedded. Here is one way to see the worry. The account I have given is obviously some kind of structuralism. As we have already noted, structuralism is also a view held by some people in the philosophy of mathematics. Numbers are not platonic (freestanding) objects but simply places in structures. Thus, the number 0 is just the marker for the first place in any ω-sequence. But what is a structure? One view is that these structures themselves are 'ante rem'. That is, they are platonic structures that lie behind things like numbers. In such a view, then, we still have free-standing things: the structures. In the same way, I have analysed the quiddities of relations and (other) objects in terms of [a] certain structure. But do we not, then, have to understand this structure as free-standing? After all, it is the very provider of loci, not itself a locus."[33]

Change to "After all, it is the very possibilizer of beings, not itself a being" and we get Heidegger's notion of *die Lichtung, das Offene, Seyn*, etc. And as Sheehan documents, "Heidegger argues that our ex-sistence or thrown-openness is underivable from anything else and is ultimately unknowable. Heidegger calls this state of affairs 'facticity.'" Such is "the ultimate *factum*, that which is already the case 'before' anything else. As necessarily presupposed, this *factum* is always 'hidden' from any attempt to understand it by trying to find out what causes it."[34] In Schürmann's formulation, "Philosophy has as its mission to seek the unconditioned that renders possible the conditioned. . . . As for the unconditioned . . . it can be neither demonstrated or even discussed."[35]

Priest refutes the objection that the 'very provider of loci' must be some free-standing structure by analyzing the notion of locus. He shows by (non-standard) set-theoretical reasoning that "structure is as empty as anything else . . . In the limit, everything will have been analysed. We are left with nothing 'free-standing.'" "The overall structure," he concludes, "is X_ω or X_ϖ [ω-sequences of, respectively, sets of objects and relations and sets of relation-instances only], and this has turned out to be as empty as anything else. Indeed, we may suppose that the whole Net of Indra is a node in its own network. The whole network is one jewel amongst many." In a final remark of this section Priest emphasizes that he has put the resources of

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[33] *Id.* 188.

[34] Thomas Sheehan, "Heidegger Never Got Beyond Facticity," 13 *Journal of Philosophical Investigations* [Tabriz] 45 (2019); p. 10 in the version here:
https://docs.google.com/document/d/1ciBEtsOqu1L9b165rzBMiNp_H3IK4NLUdQSLdrQ4wgg/edit .

[35] Reiner Schürmann, "'Only Proteus Can Save Us Now': On Anarchy and Broken Hegemonies,"
https://www.beyng.com/docs/SchurmannProteus.html . Wherein he also says, "That axiom, 'there can be no infinite regress'—usually called forth out of the blue—has been the philosophers' one professional device . . ."

non-well-founded mathematics in service of the Madhyamaka and especially the Huayan insight into the ontological groundlessness of things.[36] He wants to rid us of the delusion that is *svabhāva.*

Now according to Priest's view the clearing must be an object because Heidegger talked about it endlessly, and whatever is thought about, referred to, or spoken of is an object. Yet if that object is claimed to be ultimate, underivable, and unconditioned the claim is not valid; the purportedly ultimate object is as empty—dependent on some or all other things—as any-and-everything else.

Again the Net of Indra, specifically its geometry *in der Nähe Daseins*, may illuminate the illusion of ex-sistence's appearing to be free-standing, ultimately underivable and unknowable. To show that "The view that some things have an essentially relational quiddity is not unknown in the history of Western philosophy" Priest recounts the disagreement between Newton and Leibniz on the nature of locations in space and time. He illustrates their disagreement by a thought-experiment. Here we'll put the experiment in terms of the Net of Indra. "Suppose," Priest says, "that [the Net of Indra] were picked up and moved uniformly a kilometre in a particular direction." In the alternative suppose a similar displacement in time: "all the events in the universe," the Net of Indra in our version, "started one hour later." Newton thought these suppositions make sense, Leibniz did not. Newton held that "spatial and temporal locations exist in and of themselves, and would be what they are even if there were no physical things that occupied space and time." So that the movement of the Net of Indra one kilometer makes sense as a change of location with respect to the absolute space in which it is embedded. Leibniz believed nothing would have changed because all the relations within the Net, as we're putting it, would be conserved, and there is no fixed 'background' against which the movement of the Net might be detected. Leibniz held space and time to be merely relative, so spatial and temporal locations have no intrinsic nature. Priest summarizes: "Thus, for Newton, spatial and temporal locations are what they are in and of themselves, they have self-nature. By contrast, for Leibniz, they do not. To be a spatial/temporal position just is to be a locus in a field of spatial/temporal relations. That is, it has only a relational quiddity."[37]

The Net of Indra is not embedded in pre-existent, absolute space; rather, spatial relation is an effect within the Net of Indra. So also for Heidegger's notion of the spatiality of Dasein:

> "Beings 'at hand' have their various nearnesses [*eine verschiedene Nähe*] which are not ascertained by measuring distances. . . . The structured nearness [*Die*

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[36] *One* 193.
[37] *Id.* 173-174.

ausgerichtete Nähe] of useful things means that they do not simply have a place in space, objectively present somewhere, but as useful things are essentially installed, put in their place, set up, and put in order. . . . The actual place is defined as the place of this useful thing for … in terms of a totality of the interconnected places of the context of useful things at hand in the surrounding world. Place and the multiplicity of places must not be interpreted as the where of a random objective presence of things. . . . There is never a three-dimensional multiplicity of possible positions initially given [*zunächst gegeben*] which is then filled out with objectively present things."[38]

Nietzsche invokes a Xenophanic image to characterize human being's delusion of reference: "But if we could communicate with a midge we would hear that it too floats through the air with the very same pathos, feeling that it too contains within itself the flying centre [*das fliegende Centrum*] of this world."[39] And as to pan-relationality Priest says, "Of course . . . not all relations are of equal weight; and one would expect the relation inherited by me from the flower [in a remote desert] to be pretty negligible. One can express this thought in terms of the Net of Indra: the image of one jewel in another will be larger/brighter the closer it is."[40] One can in turn express these thoughts by imagining the geometry of the Net of Indra in the vicinity of any organism as hyperbolic and representing it as a Poincaré disk, with the view from any individual jewel as from the center-point of the disk.[41] For *der Mücke* floating along in such a space everything else drops away hyperbolically as it moves from point to point; only things very near it loom large, all else diminishes rapidly to the infinitesimal. So also for Dasein. As the judge's joke goes, 'A probationer's commitment to obeying the rules of probation varies as the inverse of his distance from the courthouse.' I.e., commitment decays hyperbolically upon departure.[42] *Sorge* induces a hyperbolic space such that ex-sistence appears to itself to be free-standing, as relationality to all things beyond the horizon is out of view and Dasein experiences itself as a floating center surrounded by abyss; rather as the fruiting body atop its stalk is heedless of the vast mycelium below.

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[38] *Being and Time* (tr. Joan Stambaugh 1996) 95, 96. *Sein und Zeit* 102, 103.

[39] "On Truth and Lying in a Non-Moral Sense" in *The Birth of Tragedy and Other Writings* (ed. Raymond Geuss and Ronald Speirs, tr. Speirs 1999) 141.

[40] *One* 181.

[41] Lots of pretty pix: https://www.google.com/search?rlz=1C5GCEM_enUS1047US1048&q=poincare+disk&tbm=isch&sa=X&sqi=2&ved=2ahUKEwj5kKiJv5-AAxVRKFkFHeTPAI8Q0pQJegQICRAB&biw=1152&bih=631&dpr=2.5 .

[42] For empirical evidence and discussion of hyperbolic discounting *see* George Ainslie, *Picoeconomics: The Strategic Interaction of Successive Motivational States within the Person* (1992). Online resource here: http://picoeconomics.org/about.htm .