

Insufficiency

JACQUES LEZRA

ABSTRACT The essay seeks to define, and to show what is to be achieved by constructing, a principle of insufficient reason for thinking (concerning current states of affairs, crises, matters social, environmental, and political that seem outrageously excessive; as well as thinking “abstractly,” if such is conceivable). What is the structure of this “principle,” what is its philosophical genealogy, what sorts of judgments does it make possible, what sorts does it exclude? In particular, what relation will the principle of reason’s insufficiency have to indeterminate mediation? The matter is approached through an analysis of the shift in Heidegger’s argument from the years of *Being and Time*, between 1927-8, to the lectures on *Satz vom Grund* of 1956, concerning the first of the three great principles—the principle of sufficient reason—which joins the principle of contradiction or identity, the principle of the excluded middle to form the logical ground of Western metaphysics.

L'écriture est facile qui *raconte des histoires*, la narration est facile et la philosophie, malgré les apparences, ne s'en est jamais privée. Il s'agit de rompre avec le roman philosophique, et de rompre avec lui *radicalement* et non pour donner lieu à quelque nouveau roman. Le roman philosophique, la narration philosophique, c'est bien sûr mais ce n'est pas seulement l'histoire de la philosophie comme *doxographie* qui raconte, qui rapporte, qui recueille et déroule la série des systèmes philosophiques. “Raconter des histoires”, en philosophie, c'est, pour Heidegger, quelque chose de toujours plus profond et qui ne se dénonce pas aussi facilement que la doxographie. Le Romanesque dont il faut se réveiller, c'est la philosophie elle-même comme métaphysique et comme onto-théologie. Qu'est-ce que ça veut dire?

– Jacques Derrida, *Heidegger: la question de l'Être et l'Histoire*

A brief story haunts the history of Western philosophy.¹ It tells of what befell the first man who made public the limits of reason, and it provides a lasting, although sketchy and symptomatically knotty, definition of reason. At the hand of one nameless, perhaps mythic man, and on the wings of the newly-disclosed relation between what can and cannot be thought, what may and may not be thought, and what may or may not be expressed in public *about* thought and thinking, *logos* begins the slow drift into forgetfulness that becomes the *principle of reason*. In Heidegger's translation the story establishes the ground for modern metaphysics: this is the path toward the so-called "principle of sufficient reason." But it's not quite right to call this story—or any other—just the means, the *technical* means, by which that principle, or any of the great metaphysical principles, is established. Heidegger distinguishes in *Being and Time*, in 1927, between one thing and another, writing and thinking story-wise about beings ("to report narratively about *beings*": Stambaugh's translation), and thinking and writing so as to grasp beings in their Being, *ein anderes ist es, über Seiendes erzählend zu berichten, ein anderes, Seiendes in seinem Sein zu fassen*.² What will be required to break with this story "radically," without just telling in its place another philosophical story? What will happen to break with the principle that philosophy may concern itself with storytelling about *beings*, and the history of philosophy, with telling stories regarding such beings as philosophers are, and such things as their philosophies? Heidegger suspends these questions in 1927. The parallel formula, *ein anderes ist ... erzählend zu berichten* on one hand, *ein anderes ...zu fassen* gives us no grammar, no story-line, no thought-form for proceeding from one to the other. How then should we imagine reasoning *from* the age of stories *to* grasping the Being of beings? (In my question already two faculties uncomfortably, agrammatically, bump up against each other: imagination, reason.)

I'm asking this question at a moment when circumstances—environmental, biological, political, economic—so far exceed the grasp of reason that *crisis*, that *ultima ratio* of the Enlightened mind, lies on every tongue. It's the last story, the last account; and a crisis, like a story, always announces the next; it's generic. My vocabulary is dated; the jargon of reason, Being and beings, exhausted. Putting matters this way immediately courts paradoxes. Let's pursue and exacerbate them: let's seek in these paradoxes principles for imagining how reason might work past the crisis of its sufficiency, or for reasoning regarding the image of the crisis of reason's sufficiency. What remains and presses more urgently today than ever is the question of the *principle* of reason's sufficiency that writing and thinking story-wise installs.

Remark that our story concerns the *insufficiency* of reason. It reaches us indirectly. We encounter the story in Greek, told by the neo-Platonist philosopher and scholiast Proclus, who is probably working from a slightly different form of the story found in Iamblichus's *De vita pythagorica*; and it crops up as well in an Arabic translation by the great tenth-century translator Abu Uthman al-Dimishqi of a lost Greek work by Pappus of Alexandria.³ The tale concerns the school of Pythagoras. Here is Proclus's version.

It is well known that the man who first made public the theory of the irrational (*alogon, ana logon*) perished in a shipwreck in order that the inexpressible and unimaginable should ever remain veiled. And so the guilty man, who fortuitously touched on and revealed this aspect of living things, was taken to the place where he began and there is forever beaten by the waves.⁴

And here is the version we find in al-Dimishqi's rendering of Pappus's lost work:

... [A] saying became current in [the school of Pythagoras], namely, that he who first disclosed the knowledge of that which does not hear and does not speak, and spread it abroad among the common herd, perished by drowning: It is fitting that they meant by this, in the way of a riddle (*lughz*), that everything within totality that is deaf or does not speak or cannot be visually imagined ought to be veiled (*sitr*); and that every soul which by error or heedlessness discovers (*takshaf*) or reveals (*tazhar*) something of this kind that is in it [in the soul] or in this world, will wander [thereafter] hither and thither on the sea of non-identity [more literally: a sea of non-similarity], immersed in the stream of coming-to-be that has no order.⁵

The story has not remained unchanged over the centuries. The discovery of additional manuscripts, and changes in editorial conventions pertaining to the reading of these new attestations as well as of the earlier sources, have shifted the outlines of the story considerably. Its sense and the pathos that infuses it; what the story is understood to tell and to what effect—these have also changed, in and out of time with these shifts in editorial practice. The bibliography on this fable focuses for the most part, when scholars are not concerned to speculate on the identity of the authors of its different attestations, on the different historical puzzles it offers. What *did* the unfortunate Pythagorean disclose? Was it the construction of the dodecahedron? The irrationality of the square root of the number 2 (the diagonal of the square)? Or was it rather a larger principle of mathematical irrationality that would put paid to the Pythagorean world order broadly speaking? Would the Pythagorean School indeed have sacrificed one of its members in this way, even if he betrayed a secret? Did the School treasure such secrets in the first place? Is the story to be read as allegory or parable, as history, or as something else entirely?

In this story, something until now called *logos* catches the first light of mathematical reason, and first encounters what will limit it in a way that can itself be thought: an internal limit. From this point on, reason will express itself as the limit of *logos*. Reason as the thinkable limit of *logos* will emerge, complexly, from within *logos* (reason is the expression of the immanent extension of *logos*), but reason will also be given outside of *logos*, inasmuch as it will designate an outside *for logos*. There are things, sorts of things in the world and in thought, that cannot be thought reasonably; but *that logos* as reason *has a limit*, this can be thought by reason, and when it cannot be thought rationally, it will be imagined, or represented allegorically by other companion faculties. At the same time, however, the limits that reason marks for *logos* are not settled as to how

they exist—as to their way of being. Are they then subject to reason, when their not-being-subject-to-reason does not, precisely on these grounds, fall within the limits of reason that are immanent to reason, or outside of reason, as the brute fact of contingency that is not amenable to reason?

The mystery that the treacherous Pythagorean reveals hangs on an accident. What *is* this bit of information, this deadly secret? The editorial tradition has handed down two answers. The preferred reading of Proclus’s story—preferred since the first quarter of the 19th century--concerns not what is inexpressible or irrational in general, but much more specifically the incommensurability of the measurements of the diagonal and the side of the square—that is, the irrationality of the square root of two, $\sqrt{2}$, revealed by the proportional construction [*ana-logon*] of the geometric figure. On this account—which is bolstered by the observation that the form *alogon* would be out of place, grammatically, in Proclus’s text—what founders on the story will merely be a particular sub-branch of early mathematics.

On the strong, metaphysical reading that both Proclus and Pappus appear to endorse, however, what is at stake in the story is the disclosure of the unthinkable, the unthought, the inexpressible or inconceivable — *ton alogon*. On this reading, the traitor in my story (who may be Hippasus of Metapontum) threatens to bring about what one critic calls, perhaps hyperbolically, “the sudden collapse” of the “rational, ordered vision of the world set in place by Pythagoras.”⁶ For Pythagorean cosmology, in the definitive versions we find in Iamblichus, in Porphyry, and in Proclus, tends toward numerical “rationalism.” Here is Proclus: “Pythagoras, being asked what was the wisest of things, said it was number... But by number, he obscurely signified the intelligible order, which comprehends the multitude of intellectual forms: for there that which is the first, and properly number, subsists after the superessential one.”⁷ The metaphysical version of the story produces a paradox. Properly *irrational* numbers, if that is what *alogoi* are in this story, and if the texts do indeed intend *alogon* at this juncture, both belong and do not belong to the “intelligible order,” inasmuch as they occur within it but are not part or members of this order; they are and are not intelligible. If “number” “signifies the intelligible order,” however obscurely, then our unfortunate Pythagorean philosopher bears us news of something that is and is not a number, and which is unintelligible both in lying outside the order of the intelligible, and in violating the twin logical principles on which intelligibility in general stands, the principles of identity and of non-contradiction. Condemning the bearers of such news to eternal, Promethean suffering, over and over, at different historical junctures and under aspects that differ according to how “intelligibility” or rationality are marked, defined, or valued—this seems not only just, but philosophically constitutive, constitutive of the discipline of philosophy, in its long history. Philosophy, understood in part as the study of the extension of reason, of its principles of coherence and application, of its limits and possible worlds, is born where the limits of *logos* are tendered to thought by reason as objects of thought that peculiarly resist being understood.

Miraculous births of this sort persist in the registers of national history and of national mythology, where they then acquire surplus values, catch the pleasures of audiences clothed in sublime bodies of different sorts, die and are reborn splendidly. In the register of philosophical inquiry, something similar may be said to obtain. A great deal happens, of course, between 1927

and 1955-1956—a great deal in the long eclipsing of European global hegemony, a great deal in the national histories of middle Europe, and in the history of peoples, the Jewish people, the Germans, the Poles, the Spanish. A great deal too, in the history of modern philosophy, where small legions of heretical figures challenge the School on many fronts, disclosing the insufficiencies of one or another orthodoxy, often at great cost: here we witness the emergence and eclipse of psychologism in phenomenology, a momentary consolidation of Hegelianism, the eclipsing of the project of mathematical logic initiated by Frege. These small legions of treacherous philosophers include figures such as Russell and Whitehead, Husserl, Wittgenstein, Gödel, and of course Heidegger. My bookends, 1927 and 1955-56, are the publication dates of *Sein und Zeit* and of the collection of lectures that Heidegger devotes to Leibniz’s so-called “principle of sufficient reason,” published as *Der Satz vom Grund*.⁸ I’ll remind you that the “principle” of sufficient reason, generally attributed to Leibniz but found in Spinoza and, inchoately, earlier and elsewhere in the history of philosophy, stipulates that “Nothing is without reason,” or, in an expanded form, “Nothing exists whose sufficient reason for existing cannot be rendered.” Heidegger’s controversial, beautifully argued lectures shows how the “principle” of sufficient reason, after a long “incubation” period, comes after Leibniz to underwrite the designation of the human animal as *animal rationale*, and in consequence as what in 1956 Heidegger calls “the creature that requires accounts and gives accounts” (129). The thinking that is particular to and definitive of this “reckoning” creature, Heidegger says, “brought the world into the contemporary era, the atomic era.” But does the “determination [*Bestimmung*] that humans are the *animal rationale* exhaust the essence of humanity,” Heidegger asks? And if not, “[A]re we obliged to find paths upon which thinking is capable of responding [*entsprechen*] to what is worthy of thought instead of, enchanted [*behext*] by calculative thinking, mindlessly passing over what is worthy of thought? That,” he writes, “is the world-question of thinking. Answering this question decides what will become of the earth and of human existence on this earth.”

The stakes, as you can see, could not be higher. Our time and our world may have lost the anxious dread that informs the cold-war expression “the atomic era,” but not because the question that Heidegger poses has been answered, or because the question has been forgotten. The contemporary era is no longer the “atomic era.” It is the era of catastrophic global warming, of pandemics, of manifest racial injustice, of environmental depredation, of massive, increasing social and economic inequity linked closely and complexly to all of these. The question whether the “essence of humanity” is “exhausted” [*Erschöpfen, erschöpft*] is not particularly or necessarily tied to a concrete existential threat to “human existence on this earth,” whether this particular threat is nuclear war among superpowers, environmental disaster, or a pandemic spread on the wings of those aircraft that so enchanted Heidegger. It is tied to the way in which thinking imagines, or thinks, “the essence of humanity.” If the “essence of humanity” is among those things that are indeed “worthy of thought,” Heidegger is saying, then, like all such things, “the essence of humanity” is not to be reckoned with. What is worthy of thought takes shape poetically and in the

form of poetic expression, as a *Sprechen*, to which Dasein then responds, non-calculatively. The principle of sufficient reason is enchanting, it casts a spell, not because it is wrong — this is the wrong way to imagine the principle of sufficient reason — but because it establishes or determines, *Bestimmung* is the word constantly at work — because the principle of sufficient reason determines as the principle of thought, as the ground, what the principle *reveals*: that being and reason have a relation, that they can be thought to hang together. When this hanging-together of being and reason is thought as a *principle*, then “the essence of humanity” can only be reckoned with. When, however, we learn to attend once again to what is worthy of thought, then we have rethought, or rather we have disclosed “reason’s limiting of *logos*” to *logos*, rather than to *thought*. To the limitations of the Leibnizian formulation of the principle of sufficient reason, Heidegger opposes the archaic sufficiency of *logos*.

If there is a “principle” of *in-sufficient* reason, or of insufficiency tout court, it will be of use as an alternative to the sufficiency of reason and of *logos*. A principle of insufficient reason will reawaken a now-dormant aspect of our old story, by stressing again that the limits of the extension of reason are not sufficiently established within the field of reason—and that the field of reason is never, for this and other reasons, identical with itself. (Reason has violently axiological dimensions.) A corollary: the limits of the extension of the discipline of philosophy cannot be established philosophically.

Philosophy too has violently conditioning axiologies. More interestingly, however, a principle of insufficient reason will help us to ask the sorts of questions that Heidegger wants us to ask, that is, “world-questions,” questions that bear upon the way the “world” can be thought as a world. If there is such a thing, the principle of insufficient reason will allow us to ask “world-questions” while avoiding two sorts of outcomes. On one side, I would like to think that a principle of *in-sufficient* reason will avoid the pitfalls into which the later Heidegger seems to me to fall—a chthonian naturalism, linguistic essentialism, different forms of quietism. This side of Heidegger’s thought too quickly allows his “world-questions” to become global questions, questions regarding the reach of empires and markets, the flow of commodities, languages and products. These are urgent questions, but when based upon an unexamined notion of the “world” they limit their scope and quickly become proxies and devices for installing the very sorts of power- and resource-inequities they seek to diagnose, and to change. On another side, I would like to avoid the deflationism of much contemporary Anglo-American philosophy, which rules out certain sorts of questions because they seem misformed, in the sense that they over-reach: on this description, “world-questions” clothe themselves in sublimity when, and because, they venture outside the rather small, conventional fields in which the pertinence of questions can be assessed, their claims and consequences reckoned—when they abandon philosophical “realism.” The Anglo-American tradition asks questions that concern states of affairs in “worlds” in which those particular questions can be asked and in which, and for which, they can be answered: the “world” in question is reflexively defined by the questions it permits us to ask and answer concerning states of affairs

in that world. But such a “world” is not a state of affairs “in” the “world,” and so asking “world-questions” must mean asking questions about, and within, a “world” in which particular “worlds” become states-of-affairs with respect to one another and to that higher-order “world.” A poisonous regress threatens—and worse. For “state of affairs” substitute “individuals,” for “world” substitute the word “set,” and you have described nothing other than the intractable paradox that Russell hit upon in his efforts to mathematize the field of philosophical logic at the turn of the 20th century.

Both of these outcomes see to me undesirable. The “principle” of insufficient reason as I imagine it, and as I will sketch it out briefly, has an uncanny similarity to a term discarded for the rather bad company it has kept historically—the concept of *mediation*, always to be found where the roughest of trades are practiced, dialectical materialism, critique, psychoanalysis. Of course for my purposes, and craving your indulgence, I’d like to rough the term up even more by marrying it to a couple of my favorite modifiers, whose import I’ll suggest in brief. “World-questions” are and should remain ungovernably and incalculably over- and under-determined, and they are and remain so because they are always wildly and *indeterminately* mediated. In what this “wildness” and “indeterminacy” consist are questions to which I’ll return at the conclusion.

But why should we want to ask “world-questions,” wild or tame, determined or indetermined, in the first place? Isn’t it possible for human animals to address economic inequity, climate change, pandemics, and other existential threats, in other ways? To address them more narrowly, with greater focus, more realistically? Our lexicon here would include terms like “know-how,” “enterprise,” and craft; we would be speaking the horribly familiar language of “precision,” “targeting,” and “outcomes.” Our ethics would be consequential rather than deontological; our aesthetics, serviceable. Here Heidegger seems to me indispensable, since he allows us to see that this “narrowing” of the focus, this greater “realism,” the more “practical” or technical approach to these questions begs the question in a most disturbing, but predictable way. It will turn out that these ways of approaching the catastrophe, and the whole lexicon we deploy in this narrowed field, are themselves, in the most important way, the disaster. To the extent that we address circumstantial threats from the perspective of calculative reason, as threats to ourselves imagined as *animales rationales*, Heidegger will suggest, we will have already consigned what he calls “the essence of humanity” to the domain of reason alone, and hence to the disaster of the camp’s efficiencies.

On the other hand, I have no interest, myself, in “the essence of humanity,” nor should any other human animal. My aim is not to recover such a thing, or to discover it or to invent it if it isn’t there to be recovered. Indeed I think it’s a surprisingly silly concept, even a dangerously silly concept in Heidegger in most ways. In most ways, but not—and here is where I really set out—not as a logical operator. What Heidegger calls “the essence of humanity” is what I propose to call the “principle” of insufficient reason, or of wild or indeterminate mediation—provided that we understand a little more clearly what we’re talking about.

So let me begin again. The principle of sufficient reason, you will remember, joins the other great principles—the principle of contradiction or identity, and the principle of the excluded middle—at the heart of Western logic, a stable tripod on which the metaphysical tradition stands.⁹ It is the first two—the principles of identity or of contradiction, and the law or principle of the excluded middle—that are in some measure Heidegger’s opening target in *Sein und Zeit*. What can be said minimally and emptily of every other thing or object, whether it is or is not an actually existing object in our world, namely, that it is itself—this cannot be said of Being. And what can be asserted minimally of every statement, namely that it must be either true or false—this cannot be asserted of statements concerning Being. Aristotle puts the first of these principles, the principle of identity (“the firmest of all principles”), in this way, in *Metaphysics* Book Gamma: “For the same thing to hold good and not to hold good simultaneously of the same thing and in the same respect is impossible (given any further specifications which might be added against the dialectical difficulties) (1005b, 18-22).”¹⁰ The fuzziness of Aristotle’s expression can be clarified if we say instead that no thing can both have an attribute and not have it, including (or perhaps, as Plato’s *Parmenides* argues, beginning with) having or participating in the attribute of being *one*, one thing; of *being* determinable as one thing. Accordingly, one can say that a table is a table, or even that every table is a table; or one can say that Martin Heidegger is Martin Heidegger: but one cannot say that Being is Being, or even that a Being *is*, not because such statements would not be true, but because they would be circular. They would not be statements; they would not be true or false; they would be empty, *in a peculiar way*. Similarly, it would seem to be analytically true that it is either true or false that a table is round or square, or that this window is open or shut. I say “analytically,” because it would *seem* to be the case that the old principle of bivalence applies, whether the object to which a proposition refers actually exists or does not. This principle is often attributed to Aristotle as well, or its most lasting and discussed formulations are, which Russell himself picks up—namely, in Russell’s words, the “proposition stating that ‘all propositions are either true or false.’”¹¹ So we say that it is true, analytically, that the statement “This table is round” is either true or false, or, to put the matter as a problem of ontology, we may say that a table either is or is not round, or that a unicorn either exists or does not, and that it either has a single horn or does not. This sort of statement is true even though we could imagine square as well as round tables, and these sorts of statements are true although we can imagine worlds with and without unicorns, and aberrant unicorns with two horns (this would be a super-unicorn, a bicorn, but still it would be a subspecies of unicorn) or horsey unicorns with no horn, a wannabe-unicorn, a sorry excuse for a unicorn, a shamefully castrated unicorn, but still a member of the subclass of those things we call unicorns. But in precisely the same way that we could not imagine a table that is both round and square, or a circle that is also a square, we could not imagine a unicorn that both did and did not have a horn simultaneously, and we could not say that the statements “This unicorn has a horn” and “This unicorn does not have a horn” can *both* be true, when we stipulate that the phrase “this unicorn” is the same in each of the two phrases. (By putting it this way I don’t commit myself to saying that either of these phrases “refers to” a unicorn or to anything else, and that it is this referent that really keeps me honest. What is “real” in this case is the identity of the

phrase “this unicorn,” not any unicorn to which the phrase might refer at one or another time, or any world in which a unicorn might or might not exist.) I recognize that I am using a bit of shorthand here by inserting the operational verb “to imagine,” when in fact what I’m describing, the Law of the Excluded Middle, has nothing to do with the actual imagination: it is a principle of the well-formed statement that it is either true or it is false, at least according to Aristotle’s bivalent logic, and by a kind of extension an ontological principle: either a thing is, or it is not, and of no thing can it be said that it is and it is not. But it is not analytically true to say that it is either true or false that Being is, or that Being is Being, or that Being is a unicorn, or indeed to say anything or to predicate anything *about* Being. Here again the reason is not that it would be *false* to say that anything that is predicated of Being is either true or false, but rather that it is not established that we can say what would be minimally required for such predications to be either true or false, that is, that it is not established that “Being is” is the sort of thing about which we can speak, in part because “Being is” is an expression that, according to Heidegger’s reading of the Principle of Identity, remains, again, *peculiarly empty*.

I’ve twice used the expression “peculiarly empty.” For emptying-out—the emptying-out of a particular philosophical lexicon, of the great pillars of the metaphysical tradition—emptying-out is just what the opening paragraphs of *Sein und Zeit* set out to do—to clear out, even to destroy the defensive misconceptions of a tradition that has obfuscated, displaced, translated, and forgotten the question of Being since the pre-Socratics. Only *after* this clearing-out has been accomplished does it become clear that the question of Being lay before us all along, but was also the condition of this clearing-out. This before-and-after movement and discipline on which *Sein und Zeit* opens, if it is a movement or a discipline, is not a psychological principle or a psychological discovery, but rather a structural one. What the clearing-out of the two logical principles achieves, the clearing-out of the principles of identity or of contradiction, and the law or principle of the excluded middle, is a kind of askesis, the disclosure of a clearing into which what lay-before us, the question of Being, can be gathered. In the 1953 lecture on Heraclitus’s fragment 50, “Logos,” the way in which Being lies-before-us to be collected is indeed called “logos,” rather than “reason” or reckoning. But can Logos, as the way or shape of the re-collection of the question of Being that lies before us in the disclosure of the clearing-out of the two great logical principles I have outlined, can *Logos* become a ground [*Grund*] for propositions or statements [*Satz*] *about* Being?

This is a very tricky question indeed, inasmuch as it is also a question of method, even of methodology. We might say that the reason that *Sein und Zeit* cannot come to a conclusion is that it has not posed this question to itself satisfactorily or sufficiently. This might be for the sound reason, of course, that Heidegger does not have at his disposal yet the tools he will require to pose it, and in particular the tool provided by a thorough-going critique of the third of the great logical principles, the principle of sufficient reason. And it might also be that the principal tool that he *does* have at his disposal in clearing out the two other great logical principles is an account of the structure of logical propositions taken from an unusual, productive but also quite limiting spot—the field of mathematical logic, in particular one of the determining concepts in the work of

Gottlob Frege.

Let's look at this suggestion in parts, then. Toward the end of his 1956 lectures on the "principle of sufficient reason," Heidegger casts his eye back across these terrible years to light on *Sein und Zeit*, from the perspective of a different question than he had posed himself in 1927. These disastrous years also mark a change in the history of thinking, Heidegger says—his own thinking, of course, but also, by implication, in the history of thought. This is nothing as momentous a change as the ones he tracks in *Sein und Zeit* or in *Der Satz vom Grund*—we are, he says, in an "atomic age," whether in 1927 or in 1956, a "calculated world [that] still remains and everywhere includes humans in its reckoning inasmuch as it reckons up everything to the *principium rationis*" (101).¹² The thirty years that separate *Sein und Zeit* from *Der Satz vom Grund* have not passed in vain, but they are years in the same moment of thought, a modernity whose world is the world of the *principium reddendae rationis*, the principle that Leibniz most clearly articulates, and whose importance Heidegger had insufficiently understood, we gather, at the time he was writing *Sein und Zeit*. Now, he tells us in 1956, now he can describe how things stand for us in this way: "[W]e are the ones bestowed by and with the clearing and lighting of being in the *Geschick* of being, and accordingly the same ones that being touches in and by its withdrawal." (86) Then, in 1927, "in the crude ... and awkward language of the treatise *Sein und Zeit*" ["crude ... and awkward" is Lilly's translation of *noch unbeholfeneren und vorläufigeren Sprache*, the "still-awkward and preliminary language"], back then, in *Sein und Zeit*, then, at that time, the proposition that "[W]e are the ones bestowed by and with the clearing and lighting of being" was expressed by Heidegger and understood by his readers to mean that "the basic trait of Dasein, which is human being, is determined [*bestimmt*] by the understanding of being." (86) This retrospective description of *Sein und Zeit* that we find in the 1956 *Satz vom Grund* lectures tells us something of importance about the arc of Heidegger's thought—that for Heidegger, the earlier work's "crudeness" or "provisionality" is to be linked with an inadequate treatment of the way *in* which, or even whether, the understanding of Being may be said to determine human being, or Dasein. More strongly put, too strongly put—Heidegger neglects to treat Leibniz's great principle in *Sein und Zeit* because he cannot do without it in his efforts to displace the other two legs of the metaphysical-logical tripod. The function of "determination" in *Sein und Zeit*—where it is a tricky, miscegenated term for a tricky, mixed function, hailing from Hegel in part, in part from the field of mathematical logic—determination or *Bestimmung* renders and follows the structure of the principle of sufficient reason. That Dasein is determined by the understanding of being, means that the reason that can be rendered for the being of Dasein is the understanding of being. Without a sufficiently developed account of what "reason" might be—and of its relation to being—the logic of *Sein und Zeit* cannot do without the productive haziness with which "determination" plays the role of "sufficient reason."

Heidegger is aware of this haziness, certainly, by the time that he prepares for publication the lectures of *Der Satz vom Grund*. "Here," the Heidegger of 1956 tells us, making explicit an argument found less overtly in *Sein und Zeit*, "here," and by this he means "here in *Sein und Zeit* as I now understand it," "here [in *Sein und Zeit*] understanding of being never means that humans as

subjects possess a subjective representation of being and that being is a mere representation.” (86) *Then*, in 1927, what was at issue was a thinking concerned with, or perceived to be concerned with, determination and definition, *Bestimmung*. Thus *Sein und Zeit*’s three introductory propositions or observations concerning Being—that the question of Being is the first; that Being is undefinable; and that Being is a, or rather *the*, self-understandable or self-evident, *selbstverständliche*, concept--these three are taken, together, to clear the ground for the formal way of posing the question of Being that follows. *Now*, in 1956, Heidegger says, he can see that *then*, in 1927, he was providing “nothing other than an interpretation, thought through from the point of view of the question of being, of the old definition of human nature: *homo est animal rationale*; humans are the creatures endowed with reason.” But *now*, in 1956, the history of thinking has moved beyond the crude and preliminary shape in which *Sein und Zeit* found and left it. *Now*, in 1956, Heidegger is able to ask the earlier question differently, or he is able to *translate* the earlier preoccupation into a different language: “The question we are faced with by the principle of reason is this: To what extent,” he asks, “‘are’ being and *ratio* the same? To what extent do grounds and Reason (*ratio*) on the one side, and being on the other belong together [*zusammengehören*]?” (104) [*Inwiefern »sind« Sein und ratio das Selbe?*

Inwiefern gehören Grund und Vernunft (ratio) einerseits und Sein andererseits zusammen?] There is much to ponder in this expression—not least, whether “The question we are faced with” is or is not a single question, as Heidegger claims. Pause for a moment on the difference suggested by the two logical functions corresponding to each of these questions, one ascribed to the “crude and preliminary” idiom of 1927, the other to the mature position outlined in *Der Satz vom Grund*. The first places on one side the function of determining or defining, *bestimmen*; and on the other, the association of identity, the bracketed “is” of the expression “Being and ratio ‘are’ the same.” The two questions--which are supposed to be one question—are arranged chiasmatically, according to the figure called, not surprisingly, *ratio* in Latin rhetorics, or *analogon* in the Greek: “To what extent ‘are’ being and *ratio* the same? To what extent do grounds and reason (*ratio*) on the one side, and being on the other belong together [*zusammengehören*]?” Now ask: how, beyond the chiasmus, does the first expression “hang together with,” cohere with, the expression that seems if not a repetition then a translation of it, since they’re something like the same question? To what extent do Ground and reason on one side, and Being on the other, to what extent do they go-together? This seems to me to mark one way in which Heidegger’s project has changed, from 1927 to 1956. The logical shape of the argument moves from a critique of determination, as a way of clearing out the two great logical principles of identity but providing only an interpretation of a definition, to something no longer “preliminary,” something that has to do with the way in which these two questions hang-together, and both are and are not synonymous, are and are not one question. They are called by a single name but they are not the same question—that is, they cannot be determined to be the same, or, to be entirely clear here, they are one and not-one at the same time. We have moved from an interpretation of a definition, an interpretation of *Bestimmung*, to the posing of a single-as-

double, inside of which two things hang together. In what way are these two questions *not* the same, single question? Or rather, to what extent, *inwiefern*, are they not the same question? The syntax at least suggests a certain symmetry; the chiasmatic arrangement, the difference that a mirror makes, or the persistence of a *ratio*: “To what extent,” Heidegger asks, “‘are’ being and *ratio* the same? To what extent do grounds and Reason (*ratio*) on the one side, and being on the other belong together [*zusammengehören*]?” A conceptual symmetry should follow: “being-the-same” *should mean* “belonging-together,” or “being-heard-together,” to stress the “hearing” in *Hören*, as if the motif of listening and attending-to were to be heard here alongside the register of logical predication. “Being-the-same” *should* both “be-the-same-as,” “mean-the-same-as” and “belong-together-with” or “be-heard-with,” the operator in Heidegger’s *second* question, the operator “mean-the-same-as” and “belong-together-with” or “be-heard-with.” That’s a bizarrely convoluted expression, but I think necessarily so. Heidegger, the Heidegger of 1956, is showing how far, to what an extent, *inwiefern*, one question does not hang-together with itself. This may or may not be true for any and all questions, though it is hard to see how this strange not-hanging-together-with-itselfness applies to questions that do *not* pertain to the relation between *ratio* and being. Questions like “Is Martin Heidegger the author of *Sein und Zeit*” “Do unicorns exist?” or “Is the round table round?” may well hang together, but even in this case they do so with an uneasiness that is radicalized extraordinarily when we ask after terms that are not proper or common names, but the terms *ratio* and being. We would say, for instance, that “Martin Heidegger” “means the same as” “the author of *Sein und Zeit*,” and thus we would truthfully answer “yes” to the question “Is Martin Heidegger the author of *Sein und Zeit*?” But the name “Martin Heidegger” also names other things as well (“Martin Heidegger” is also the author of other works, including works critical of the “preliminariness” of *Sein und Zeit*, and “Martin Heidegger” does other things, many other, than write works of philosophy). These other senses of the name “Martin Heidegger” “hang together with” and “are heard together with” the sense “is the author of *Sein und Zeit*,” but they are not the same as, and do not mean the same as, “is the author of *Sein und Zeit*.” To get a sense of the trickiness of these questions even at this level, consider what happens when you say, as if they were synonymous expressions, that “Martin Heidegger was the author of *Sein und Zeit* and was a member of the National Socialist party” and that “being the author of *Sein und Zeit* ‘means the same as’ being a member of the National Socialist Party” or “being Rector of Freiburg University” at a certain period. The discomfort we feel at the confusion of these sorts of assertions of identity when what is at issue is a proper name, the name “Martin Heidegger,” is a manifestation of the structural problem that the Heidegger of *Satz vom Grund* is embedding into the description of the question he can *now* ask, in 1956, though not as *a* question, or not as *one* question, inasmuch as the being-one of the question presupposes the being-one of the object of the question, and although *ratio* may be construed as being-one, as depending on the possibility of saying, of *one* being and *of* being, that it is one, that it is one being and that being is the One—this is something that, presumed in *Sein und Zeit* to some extent, is by 1956 no longer the case.

Inwiefern, to what extent, how far can we go, how far can we go in asserting that Heidegger’s two questions in *Satz vom Grund* are one question? How far can we go in asserting that Heidegger’s

one question in 1956, when he has moved beyond the preliminary and crude formulations of *Sein und Zeit*, how far can we go in asserting that one question does not hang-together as one, but is always at least two, is always to be heard, not as a single tone but at least as a doubled one? An over-determined tone? To what extent will reason, *ratio*, ever be sufficient to determine or define, *bestimmen*, what is called “one question,” when it is *ratio*, the formal structure of reason, that divides the question into two identically structured, apparently synonymous but different questions, and holds the difference, guards it, *thinks* it?

I am asking the questions in this way, laying stress on Heidegger’s adverbial phrase, “to what extent,” “how far, *inwiefern*,” because I find it so peculiar—because, I want to say, it is here that insufficient reason, that the *insufficiency* of *ratio* and of *logos*, spectacularly enters the work. The lexicon of distance and extension is not, or not only, the lexicon of mathematizable or even of physical space, space to be reckoned or measured. *Inwiefern* suggests a strange empiricism—how far can I go out on the thin ice without falling through it? Such questions, when they designate, are tested in the event; they can be reckoned in advance, but only approximatively. They have a strange propinquity with rhetorics of persuasion, with pedagogies, with counterfactuals, with the imagination. I no longer am asking myself, “Is my argument true? Are my claims and assertions true?” but rather I am asking myself: “How far can I take my argument, before it becomes acceptable or unacceptable to my audience? How far must I go, before my argument becomes, or reveals itself to be, convincing, to me, to my audience? I wonder what will happen if I state this or that. Let me find out,” I say, and then I proceed to pile hyperbolic claim upon hyperbolic claim until (imagine!), exhausted or enraged or convinced, my audience says, “Ah no, we’ve had it, that’s enough, that’s *sufficient*,” meaning in one part of the audience that they’re satisfied with the argument, they’re convinced—and in another part of the audience that they’ve heard enough to be sick of it, they are unconvinced and unpersuaded, even unpersuadable, and they’re leaving, as when we say in French *ça suffit!* and mean something like “Enough already!” Adverbial expressions of this sort are also, and indeterminately, symbolic and rhetorical functions. When Cicero asks, in the first of the Catiline orations, “when,” “for how long,” “to what extent,” *quo... quam... quem...* Catiline will try the patience of the Senate, he is not asking for a reckoning, but establishing a limit, a political limit. Less colloquially, more formally, you might put it this way. The criterion of “how-far-ness,” of “sufficiency,” that is introduced by Heidegger in *Satz vom Grund* is *either* an ontic, even an empirically-testable; or an *imaginary* one. The mode of reckoning it invokes is not mathematical, perhaps not even mathematizable, but ultimately pragmatic.

“The question we are faced with by the principle of reason,” writes Heidegger in 1956, “is this: To what extent, *inwiefern*, ‘are’ being and *ratio* the same? To what extent, *inwiefern*, do grounds and Reason (*ratio*) on the one side, and being on the other belong together [*zusammengehören*]?” (104) [*Inwiefern »sind« Sein und ratio das Selbe?*

Inwiefern gehören Grund und Vernunft (ratio) einerseits und Sein andererseits zusammen?] The questions might have been asked differently; Heidegger might have asked, “Are’ being and *ratio* the same?” and “Do grounds and reason on the one side, and being on the other belong together?”

The adverb *inwiefern* calls for an answer that works aslant the domain of judgments regarding the *formal* truth or falsehood of statements, including statements about being; that moves away from a rational relation with the metaphysical ground installed by stories; away from the domain of sufficiencies; and is to be articulated instead in judgments or propositions—or stories—characterized by insufficiency and formal defectiveness. I will want to call these insufficient, defective judgments, propositions or stories *material*.

What are *material propositions*? What do we gain, what commitments are entailed, by using the word “material” to characterize them? Do these entailments help us imagine reasoning *from* the age of stories *to* grasping the Being of beings, or do they rather make explicit what holds us, perpetually tossed, at the lip?

Here in 1956, where he structures the logic of insufficiency around an adverbial phrase that opens onto the practical as well as the formal domain, Heidegger revisits old concerns. Here, where he is dismantling/disclosing the destructive/preserving function of *ratio*, Heidegger takes up the project that *Sein und Zeit* envisioned, in 1927, with regard to what, in 1912, a very young Martin Heidegger had called “a universal theory of the concept,” a metaphysical and mathematizable theory of the concept through and through. The phrase is taken from a review essay titled “New Research in Logic,” dedicated to Gottlog Frege’s “overcoming of psychologism in principle.” Heidegger discusses in particular Frege’s “works on “Sense and Meaning” and on “Concept and Object,” which, Heidegger says, although they “cannot be disregarded by any philosophy of mathematics,” are also “equally valuable for a universal theory of the concept.” There’s very little trace of the *mathematical logic* of Frege in Heidegger’s own work, of course, but what Heidegger does take from Frege is a way of construing as-yet-unsatisfied predications. These—which pertain in the first place to the relation between “argument “ and “function” in Frege (“I am concerned to show that the argument does not belong with the function, but goes together with the function to make a complete whole; for the function by itself must be called incomplete, in need of supplementation, or ‘unsaturated.’ And in this respect functions differ fundamentally from number”) are “equally valuable for a universal theory of the concept.”¹³ Now what Frege means by “incomplete, in need of supplementation, or ‘unsaturated’ ... functions,” his translator Max Black tells us, is “such fragmentary expressions as ‘--- conquered Gaul’ or ‘the capital of,’” in other words, incomplete predications whose truth, falsehood, or even standing as statements making one sort of claim or another is deferred until the advent of the name or token that completes, supplements, or saturates them: until that arises which will make them, you might say, *sufficient*. You can see the similarity between this *unsaturated* structure and what I described regarding *Sein und Zeit*—a clearing-out of the great metaphysical principles intended to make it possible for the question of being to step into its proper place, to give-itself, or, in the event, to arrive (if, indeed, it has such a “proper” place). The project of *Sein und Zeit* might be construed, then, as the “saturation” or “satisfaction” of the emptied proposition “is being,” a project of saturation whose “satisfaction” is achieved by means of (rather, *in*) *Sein und Zeit*.

This remains a problematical way to proceed. Frege’s term *ungesättigt*, *unsaturated*, is drawn not from the formal but from the physical sciences, where it designates a molecule which “is ready

to form additive compounds,” in the preliminary definition given by Matthew Muir, in his 1884 *A treatise on the principles of chemistry*.¹⁴ “Definitions so indefinite as ‘readiness or unreadiness to form additive compounds,’” Muir notes, “do not help us to understand the apparently precise formulae... in which these definitions are expressed.” (129) Muir is intervening in a debate which would have been familiar to Frege in its German form, and which took focus in the work of Johannes Wislincenus, whose decisive 1887 paper on “Über die räumliche Anordnung der Atome in organischen Molekülen und ihre Bestimmung in geometrisch-isomeren ungesättigten Verbindungen” was translated into English in 1901.¹⁵ Frege borrows the term *ungesättigt* for his description of not-yet-satisfied or not-yet-saturated functions in order to differentiate functions from numbers. He has in mind *both* the aspect of the term that bears on the not-yet-applicable truth or falsehood (we can’t assess the truth of unsaturated propositions: we don’t know whether “--- is the author of *Sein und Zeit*” is true or false until a name or a token has been supplied, although that truth value as it were awaits, lies before us as we provide that name or token, or number); *and* the aspect of the term that has to do with the still-unsettled question of the physical principle according to which compounds are indeed added to molecules until the point of saturation is reached. Muir’s sense of “indefiniteness” captures both these—both the formal, logical state of indeterminacy or attentiveness, not even a being-toward (since the substantive is the retroactive product of what arrives): a toward-ness, *un à-venir*; and the “readiness or unreadiness” of molecules to “form additive compounds,” a possibilist state of physical affairs that tells us precisely nothing about how such compounds will eventually be formed (just as the shape of Lucretian atoms and their laminar flow tells the observer, shorn of the verbal or dynamic, but aleatory, principle of *declinatio*, just nothing about the formation of bodies). *Inwiefern*: “to-what-degree-ness,” “how-far-ness.” A characterization of the event. Without quite giving it its proper name, Heidegger calls the form of insufficient, defective judgments *about* the unsaturated, insufficient, cleared space opened in metaphysics by the name *of* that cleared, insufficient space.

I opened affirming that today’s crises pose urgently the question of the *principle* of reason’s sufficiency that writing and thinking story-wise installs. “Today’s crises” is a baldly historicist formula, but I’ve been offering throughout a mixed answer to the question, in the form of arguments with mixed formal and historical shape and content: the story of Heidegger’s development, from 1912 to 1927 to 1956 (and “these terrible years... these disastrous years;” an “atomic age”); the lurid fate of our nameless Pythagorean; the story of the passage from the metaphysics of story-telling to our grasping the being of Being; the satisfaction or the saturation of unsatisfied propositions. The principle of insufficient reason that I have been at the same time arguing for, describing, and instancing passes again and again through lexicons that it cannot saturate, that it cannot map entirely, whose limits fall within and without it. In this sense the principle of insufficient reason is indeed kin to the figure of mediation—though mediation of a special sort. Mediation here is *principal*, in the sense that it antecedes but is not the sufficient condition for the emergence and constitution of the terms to be mediated: being and beings; story

and Being; etc. We'll say that insufficient reason is the narrative "principle" of our old, Pythagorean and anti-Pythagorean stories.

These stories are lurid; over time they gather and shed cultural values, whether they concern Pappus or a certain Martin Heidegger. They work allegorically, parabolically, and for this reason none of them, and not even *all* (all?) or more than one of them, counts as *an* event, a founding, self-identical event, in a story or for a discipline, a machine for sanctioning the coherence, intelligibility, and values of stories. Instead, it, they, fall out of al-Dimishqi's tale; it, they, fall out of the path of epic return, of *nostos*, and "wander[s] [thereafter] hither and thither on the sea of non-identity [more literally: a sea of non-similarity], immersed in the stream of coming-to-be that has no order." Its--their--Promethean heroics must appeal, must repel: the disclosure of the mystery; the betrayer who bears philosophical fire (who bears the fire of the camps); the secret he discloses that democratizes knowledge, or renders it again a sacred cult tended by hierophants; who extends *philosophia*, and not just geometry, into "the form of a liberal discipline, seeking its first principles in ultimate ideas, and investigating its theorems abstractly and in a purely intellectual way," *ton peri auton philosophian eis schema paideias eleutherou metestisen*, as Proclus writes of Pythagoras.

My stories' contradictions are signs, I suspect, of conceptual and historical compromises. To note that the gods, outraged at the revelation that *ratio* discloses the limits of *logos*, brought about the traitor's death is to exonerate the School, and in the same stroke to make the School's mysteries matters of divine concern. To draw an analogy among the various mysteries revealed—the construction of the dodecahedron, the discovery of the irrationality of the diagonal (the incommensurability of the diagonal with the sides of the square: *ana-logon*), the discovery of the irrational, *ton a-logon*—to do this is to betray the historical record, which insists on the particularity of each mystery; but it is also to establish the commensurability of these singular events, to bring them under the measure of a single scheme, or to bring—violently—two schemes into contact. Is this a mistake? Can I deliberately, intentionally, make a mistake? Is it rational to claim to do so? Imaginable?

To read the stories I have been telling as allegories, parables or riddles is to place veils before them, to be removed by initiates in possession of esoteric knowledge; the allegorical mysteries revealed thereby amount to this: that esoteric knowledge must be kept veiled. (Hippasus revealed that *there is* a School, a discipline; he publicized the scheme of disciplinarity.) Whether in their hyperbolic or in their more restricted shape, the stories tell also, allegorically, parabolically, the story of the disciplinary formation of philosophy, and of the costs entailed in moving from an esoteric mystery-cult toward *paideia*. The history of *lectiones* of Proclus's *scholium* seems the record of a parallel circuit: moving from an anecdote regarding a cult whose extreme limit is the *alogon*, what is deprived of the *logos*, reason, enunciation, articulation; to a discipline concerned instead to settle the internal paradoxes of the commensurable and the proportional, *analogon*. (The consolidation of Lachmannian method in the positive, technical discipline of philology, another school might say.¹⁶)

What do we achieve by installing principal mediation, that is, something like the story of

non-similarity (al-Dimishqi), where the principle of insufficient reason also stands? That mediation is principal means that no self-similar terms exist to enter, from outside or from before it, the “sea of non-similarity” or of “non-self-identity.” That reason is insufficient means that “reasonable” judgments concerning states of affairs—call these “today’s crises”—only *by mistake, violence, or heedlessness* remit to, discover (*takshaf*) or reveal (*tazhar*) its principle. (And do so not by a *leap*, that other, sacrificial-heroic figure that keeps guard over Heidegger’s story, and Kierkegaard’s, and Kant’s—as Derrida’s last gloss on *Der Satz vom Grund* recalls:

This may appear to be both a provocative formulation and just common sense: that which grounds cannot be grounded. That which grounds, the grounding, is necessarily ungrounded, without ground. One could, as I for my part do all the time, draw countless consequences from this obvious fact: the grounding of anything whatsoever, for example, a state, a constitution, an institution, is never grounded, legitimate, legal, since it grounds. The founding of a state is always violent, as is the institution of a principle or a law. The positing of something, for example, a state — this is, of course, not one of Heidegger’s examples — or a law or a constitution, this “positing,” this position [*Setzung*, if you like] is a leap since it is a matter of positing what was not there, and this by means of a gesture that is necessarily inaugural, violent, without prior justification, whence the relation of affinity between the *Setzen*, positing, positioning, and proposition [*Satz*] but also the leap [*Satz*].)¹⁷

“Today’s crises,” the catastrophe, the state of affairs. I want to list what counts for me. I look out my window; I imagine worlds, beings, and ecologies without me, for others, for you, across plastic seas. In what languages, in what untranslatable frames, do matters force themselves on us, on others none can imagine? Imagine unsatisfied worlds. To attend to crises by instituting or allowing-to-be-instituted, in the *concept* of disciplines that address or administer them and in their corresponding practices, principal mistake, violence, and heedlessness: perhaps this.

NOTES

1. My epigraph is from Jacques Derrida, *Heidegger: la question de l'Être et l'Histoire* (Paris: Galilée, 2013), 57. Derrida’s own, decisive, treatment of the principle of sufficient reason, especially in Jacques Derrida, “The Principle of Reason: The University in the Eyes of Its Pupils,” tr. Catherine Porter and Edward P. Morris, *Diacritics* 13: 3 (1983), 2-20, and in his seminar on the Death Penalty, session 6: Jacques Derrida, *The Death Penalty*, Volume II. Edited by Geoffrey Bennington and Marc Crépon, Tr. Elizabeth Rottenberg (Chicago: University of Chicago Press, 2017), 136-160.
2. Martin Heidegger, *Being and Time*, tr. Joan Stambaugh (revised edition) (New York: SUNY Press, 2010), 36. *Sein und Zeit* (Tübingen: Max Niemeyer Verlag, 1967), 39.

3. See Walter Burkert, *Lore and Science in Ancient Pythagoreanism*, E. Minar, tr. (Cambridge, Mass.: Harvard University Press, 1972), 409 ff.
4. T. L. Heath, *The Thirteen Books of Euclid's Elements* (Cambridge: Cambridge University Press, 1928). See also Proclus, *Commentary on the First Book of Euclid's Elements*, tr. Glen Morrow (Princeton: Princeton University Press, 1970).
5. Pappus of Alexandria, *Tafsīr Bābūs li-al-Maqālah al-'āshirah min kitāb Uqlīdis (The commentary of Pappus on Book X of Euclid's Elements*, as translated into Arabic by Abu Uthman al-Dimishqi), tr. William Thomson and Gustav Junge (Frankfurt am Main: Institute for the History of Arabic-Islamic Science at the Johann Wolfgang Goethe University, 1997), 64 (English), 2 (Arabic). I am delighted to acknowledge Jeannie Miller's help in correcting the translation. Here is Thomas Taylor's translation of *Iamblichus's Life of Pythagoras* (London: Watkins, 1818), 126-127: "It is said, therefore, that he who first divulged the theory of commensurable and incommensurable quantities, to those who were unworthy to receive it, was so hated by the Pythagoreans that they not only expelled him from their common association, and from living with them, but also constructed a tomb for him, as one who had migrated from the human and passed into another life. Others also say, that the Divine Power was indignant with those who divulged the dogmas of Pythagoras: for that he perished in the sea, as an impious person, who rendered manifest the composition of the *icostagonus*; viz. who delivered the method of inscribing in a sphere the *dodecahedron*, which is one of what are called the five solid figures. But according to others, this happened to him who unfolded the doctrine of irrational and incommensurable quantities. Moreover, all the Pythagoric discipline was symbolic, and resembled enigmas and riddles, consisting of apothegms, in consequence of imitating antiquity in its character; just as the truly divine and Pythian oracles appear to be in a certain respect difficult to be understood and explained, to those who carelessly receive the answers which they give. Such therefore, and so many are the indications respecting Pythagoras and the Pythagoreans, which may be collected from what is disseminated about them."
6. I cite from the most probing account of this story I have found, Jean-Luc Périllié's "La Découverte des incommensurables et le vertige de l'infini," in *Cahiers philosophiques* 91 (2002), 9-30, online at <http://www.cndp.fr/revuecphil/> (accessed August 8, 2012), p. 15.
7. Proclus, scholium on Cratylus. See Robbert Maarten Van den Berg, *Proclus' Commentary on the Cratylus in Context. Ancient Theories of Language and Naming*. (Philosophia Antiqua 112.) (Leiden and Boston: Brill, 2008), 104.
8. See the very useful account of *grounding* in Heidegger's reading of Leibnitz, in Paul M. Livingston, *The Logic of Being: Realism, Truth, and Time* (Evanston, Illinois: Northwestern University Press, 2017), 30-32.
9. A thorough and influential account of the relation between the principle of identity, or contradiction, and the principle of sufficient reason, in Paul Davies' "This Contradiction," in *Futures: of Jacques Derrida*, ed. Richard Rand (Stanford: Stanford University Press, 2001), pp. 18-64. Davies' essay is remarkable particularly for its careful juxtaposition of Priestian dialetheism with Derridean indeterminacy, esp. pp. 33-40. What I conclude by calling "principal mediation" shares features with the latter.
10. *Aristotle Metaphysics: Books Γ, Δ, and E*. Tr. Christopher Kirwan (Oxford: Clarendon Press, 1993).
11. Bertrand Russell and Alfred N. Whitehead, *Principia Mathematica*, 2nd. Ed. (Cambridge: Cambridge University Press, 1963), 37.
12. Martin Heidegger, *The Principle of Reason*, tr. Reginald Lilly (Bloomington: Indiana University Press, 1996), 101. *Der Satz vom Grund. Gesamtausgabe B. 10* (Frankfurt A.M.: Vittorio Klosterman, 1997), 151.
13. "Function and Concept" (1891). In *Translations from the Philosophical Writings of Gottlob*

- Frege. Edited by P. Geach and M. Black (Oxford: Blackwell, 1960), 24.
14. Matthew M. P. Muir, *A treatise on the principles of chemistry* (Cambridge: Cambridge University Press, 1884), 129.
 15. Johannes Wislicenus, *Über Die Räumliche Anordnung Der Atome in Organischen Molekülen Und Ihre Bestimmung in Geometrisch-Isomeren Ungesättigten Verbindungen* (Leipzig: Bei S. Hirzel, 1887). "The Space Arrangement Of The Atoms In Organic Molecules And The Resulting Geometrical Isomerism In Unsaturated Compounds," in *The Foundations of Stereo Chemistry*, tr. and ed. George M. Richardson (New York: American Book Company, 1901).
 16. This might reasonably be said to describe the influential, even naturalized position that Sebastiano Timpanaro first describes, then subtly dismantles, in his *La genesi del metodo del Lachmann* (Firenze: Le Monnier, 1963).
 17. Derrida, *The Death Penalty*, Volume II, 153.

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