GENERAL FIELD OF "Origin of Geometry": The last part of Husserl's career is devoted to an analysis of a "Crisis of European Humanity," as the title of the "Vienna Lecture" would have it. Crisis is the phenomenon of a culture whose science has grown too complex. In crisis, science has lost its meaning for the culture as a whole, has become an autonomous machine, whose results seem to have been simply waiting there to be discovered. Husserl wants then to reign in a runaway science that sparks the irrational and irresponsible responses of naturalism/psychologism/historicism, which gives up universal truth and settles for relativism or Platonism/objectivism by retrieving an original sense of science as a human endeavor. In these broad outlines we should compare Kant's critical project.

Husserl's response to crisis is not just to show how scientific objects are constituted by transcendental subjectivity--for in the modes of either static or genetic phenomenology he had been doing just this from Ideas I through Cartesian Meditations--but to show the historical roots of science as a project of European, and that meant for Husserl, Greek origin. The response to crisis is to reactivate an origin from that which we have been bequethed. This origin will be both original and originary: original as first temporally and originary as first establishing the sense of science: what it means and where it is heading. To access the original and originary sense buried beneath the sedimentations--the accretions of sense piled up after the origin--will require a new form of phenomenology, one adequate to investigating the transcendental historicity of sense.

Now we should recall here that the establishment of a Berlin-Athens axis was nothing new in German philosophy, as we compare the very different projects of Hegel [completion of philosophy], Nietzsche [rebirth of tragedy from the spirit of Wagner's music; revaluation of values from a Dionysian perspective], or Heidegger [Destruktion of history of ontology by recovering original experiences covered over by metaphysical philosophy; calling of the German people to its destiny as the metaphysical people par excellence, heirs to the Greek origin]. Given this background, and Derrida's conviction stated six years later in 1967 that phenomenology is the "most modern, critical, and vigilant form" of metaphysics, we see the importance of his analysis of phenomenology's attempt to reactivate the alienated origin of geometry, for science was for Husserl both the source and the way out of crisis--if only philosophy could become the rigorous science of phenomenology.

1. INTRODUCTION

STRUCTURE: four topics: a) status of OG [25-26]; b) the "new scheme": historicity and historical reflection [26-27]; c) JD's methodology [27]; the mathematical object [27-30]

STATUS OF OG

[25-26]: Derrida begins by isolating the uniqueness of OG as the "organic unity" [26] of the twin critiques of historicism and objectivism that had been H's for a long time. Objectivism ignores subjective genesis, while historicism misses the universality of truth by concentrating on a factual, psychologial, genesis. So we are on the lookout for a non-factual, non-psychological [transcendental] subjective genesis of objective truth.
OG brings forth a "new scheme": historicity ["object" to be thematized] and historical reflection [thematizing act] [26]. Despite this newness of speaking of history, OG ultimately has same noesis-noema structure as all Husserl: it is the last structure attempting to tame genesis.

Historicity entails both origin and tradition [movement and endurance] of ideal objects according to "new rules": neither "factual interconnections" [who spoke to whom; who read what] nor "ideal and ahistoric additions" [what should have happened]. Instead, as we will see, we will have in historicity [and thus in its correlate historical reflection] an interweaving of non-repeatable facts [genesis] and repeatable essences [structure].

Reflection, or "historical intuition," entails that the reactivation of sense should in principle precede and condition empirical determination of fact [have to have prior identification of sense of X in order to determine Y as a fact of the history of X]. We will shortly see, however, the interweaving of fact and essence, rather than this privilege of essence.

Historicity and historical reflection have "common conditions" [27], which become interesting in the case of science, which produces unchanging truths. What we will see is the need to rethink the "sense" of history so that its phenomenological sense [its meaning, its essence] will merge with its teleological sense [its direction, its telos as what orients its development as that which is sent from its arche]. This is what JD will call "sending": the origin sends forth the sense as infinite task; but this is only visible by working back from the constituted sense we have received at the end of the tradition.

OG will be both an example and an exemplar of this connection of historicity and historical reflection, of sending [historicity] revealed by zigzag [historical reflection].

JD'S METHODOLOGY

Derrida's "sole ambition" is to "recognize and situate one stage of Husserl's thought" [27]. However, he also specifies a two-fold orientation: to be both "eidetic" and to follow the "pole of this infinite task." In other words, he will follow both Husserl's eidetic descriptions and the way the principles guiding Husserl point beyond Husserl's factual accomplishment in OG. Thus, since he hasn't developed his own methodological reflection on "deconstruction," Derrida simply remarks that following H's intentions may involve us in certain "difficulties" [27].

THE MATHEMATICAL OBJECT

The ideal mathematical object is H's privileged example; it has already reduced any empiricity to phenomenal sense, so that its being is to be an object for a pure cness [27]. Its sense does not include any reference to worldly spatio-temporal existence; in fact, its sense is precisely to be non-worldly; it announces its non-worldliness right up front. As with the question of the name in SP and FM, Derrida will ask how this example orients Husserl's analysis of sense away from poetic language, that which does not present an object.

Husserl's interest in the mathematical object goes back to the beginning of his career, to Philosophy of Arithmetic. There we see something interesting, though, for despite the non-worldly character of the mathematical object, Husserl is interested in describing its subjective genesis. So even though H quite quickly gave up any psychologistic language in describing this genesis, the basic reliance of math objects on subjective genesis was announced at the beginning. However, H has not yet thematized history; it remains bracketed along with psychology in the move to transcendental phenomenology, and within that, in the move from analyses of static to genetic constitution.

When history is finally discussed in the Crisis, though, phenomenology's access to history--historicity and historical reflection--is never problematized.
2. HUSSERL'S METHODOLOGY

STRUCTURE: Five topics: a) three necessities for a phenomenology of history [30]; b) zigzag: history and phenomenology [31-34]; c) Section II Husserl's methodological precautions [34-38]; d) the overlapping of history and phenomenology [38]; e) Husserl and Kant [38-42]; f) the reduction of factual history [42-45]

REQUIREMENTS OF A PHENOMENOLOGY OF HISTORY

[30] Even though not thematized, any phenomenology of history must show three things: a) empirical historiography, like all empirical sciences, depends on phenomenology to reveal its essential presuppositions [what its objects are, what its evidence is, etc.]; b) that history, whose objects are in their very sense marked by singularity, can lend itself to imaginative variation and eidetic intuition [history can yield essential structures: e.g., what any "first time" must be or what any tradition must be, etc.]; c) that eidetic content [e.g., truths of geometry] had been produced whose historicality can be read.

ZIGZAG: HISTORY AND PHENOMENOLOGY

[30-34] But if this third point is true, and if geometry is exemplary, then all essences have been produced historically, and their historicality must be taken account of, so that "history in general no less completely engages phenomenology."

Thus, while OG might be seen as a preface to Formal and Transcendental Logic [31], and geometry merely as a material ontology to be investigated only after the investigation of formal ontology [32], Husserl also notes that "other paths are possible" [33]--that is, that the particular might have to be investigated before the general. In our case, that geometry, a particular science, might yield the clue to the historicality of science, and to the universal historicality of sense. This is called by Derrida a "mouvement en vrille" or spiral, or tendril; this is the "major find of the text" [33]. This movement means non-linearity is the sense [meaning and direction] of historicity and historical reflection.

HUSSERL'S METHODOLOGICAL PRECAUTIONS

[34-38] The first part of section II continues Derrida's exploration of Husserl's methodological precautions. Historical reflection is the "repeating of an origin" [34], so we must avoid the attitude of a geometer or of a "classical epistemologist" both of whom rely upon an already completed--sent and received--science. But leaving horizontality for verticality [35] presents us with three confusions to avoid:

a) psychology or history of cognition, as would be the case in thinking what Galileo thought, even though he revolutionized ancient, received geometry, and thus sent us [Husserl] the restricted [no longer Greek \{but also not yet Gödelian\}] sense of our [Husserl's] modern geometry [35-37] [NB: the question of Galileo's modern infinitization of nature recurs later at 130-31];

b) search for factually first contents of geometry, the first constituted objects (this is insufficient because we search for the constitution of those objects) [37];

c) search for factually first acts, experiences, geometers, for we are after the sense of the origin of geometry (what it means/meant and where it was sent) [37-38].

OVERLAPPING OF HISTORY AND PHENOMENOLOGY

[38] At this point, Derrida is able to announce a key point: the overlapping of history and phenomenology. We have seen the necessity of reducing factual history. However, despite the three-fold reduction of the factuality of
the constituted tradition of geometry, the reduction needed something to reduce! "But this reduction needs as its starting point the constituted result it neutralizes. There must always already have been the fact of a history of geometry, so that the reduction can be performed. I must already have a naive knowledge of geometry and must not begin at its origin" [38]. This factual necessity enabling the reduction to the sense of the origin of geometry means fact and sense are mutually interdependent, for we recall that we must have had a prior identification of the sense of geometry in order to determine what counts as a fact of the history of geometry. Thus Derrida says in an important, but not highlighted, sentence: "Here the method's juridical necessity overlaps history's factual necessity" [38]. De jure and de facto overlap.

HUSSERL AND KANT

[38-42] The next pages follow Derrida's staging of a confrontation of Husserl and Kant on mathematical constitution. Kant is picked as a parallel because of his transcendental approach, which shares with Husserl "the necessity to proceed from the fact of constituted science and the regression toward the nonempirical origin" [38]. Briefly, for Kant, the mathematical object is "constructed," which means an "explication of an already constituted concept" [40]; while for Husserl it is "produced" or created. Thus for Kant, there is no transcendental historicity of sense; for him "all history can only be empirical" [41]. For Husserl, the transcendental historicity of sense is what we're after.

REDUCTION OF FACTUAL HISTORY

[42-45] Derrida now returns to the reduction of factual history in Husserl. In static analyses, fiction or hallucination reveals truth. But with historical analyses, since Platonism is to be avoided, "an original history" is to be elucidated so geometry's origin can be seen in the "protoidealizations based on the substrate of an actually perceived real world" [45].

However, this original history is not one of facts [contra Tran Duc Thao's wishes: 46n], as we see as we follow the first major move of ITOG, to the structure of genesis, the "essence of the first time."

3. THE STRUCTURE OF GENESIS

STRUCTURE: three topics: a) invariance of the fact of the first act [46]; b) the sense of the inseparability of fact and sense [47-48]; c) three-fold structure of genesis of origin of geometry [48-51].

First, Derrida points out that "history as institutive" is the place where the irreplaceable instituting fact of origin (that which can never be repeated) can have its invariance repeated (one can repeat the sense of irreplaceability, of singular irrepeatability). In this case, "sense is indissociable from being, ... the de facto is indissociable from the de jure" [46]. We know there must, necessarily, essentially, de jure, have been a factual, singular, first time.

Now this "inseparability of fact and sense" has itself a sense, the sense of "indissociability" [47]. This is revealed as we move from the eidetic reduction of static phenomenology, which iterates a constituted noema, to the historical reduction, which is reactivating and noetic. Historical reduction is the reactivation of the noetic constitution of sense, the reactivation of the original sending act which is hidden under the sedimentations of the object that we have received—geometry as it now exists [48].

The reactivation of the original [fact] and originary [essential sending] act reveals a three-fold structure to the genesis of the origin of geometry. a) Erstmaligkeit; b) origin out of pregeometry; c) sending sense.

a). Erstmaligkeit, the "essence of the first time," is the sense of fact. This is probably, Derrida thinks, something like the "eidetic singularities" of Ideas I, which are "ultimate material essences" excluding only the "tode ti of brute existence" [48-49]. In other words, an essence covering the smallest possible extension. But since in historical reflection the fact to be essentialized is absent, the essence of the first time must find its place in a
notion of tradition. Tradition allows Husserl to say that an origin took place and that it was such a sending origin; but again, this insight is only possible after the fact [49].

b). geometry must have come from pre-geometrical experience [cf. IX and X].

c). the original sense of geometry had to be the very sense of it we now have. This means we must--a necessity that is also an accident--start with geometry as we have received it from its original sending and then question back--thanks to [essence] and despite [accident/fact] sedimentation--to that original sending sense. Derrida writes of the "postal and epistolary reference or resonance of a communication from a distance" [50]. [bibliographic references: "Signature  Event Context" for communication; The Post Card for postal principle; "Sending: On Representation" for Heidegger's history of being.]

So the postal sending of historicity entail that historical reflection be a zigzag, or circle, from established fact [but recognized as such by essential determination] to essential origin [the sense of the fact of origin]. The conflict of zigzag and circle is important; Derrida comes to be on the lookout for circles and to counterpose other graphics to them: trace, margin, etc.

Derrida closes II by reminding us of what is at stake: a history that would avoid both empiricity and ahistorical rationalism, both of which are "philosophical nonsense" [51].

4. GENERALITIES

STRUCTURE: Section III is concerned with three "generalities" inherent in the notion of questioning back: a) the unity of geometry's sense as a tradition [52-56]; b) the example/exemplar oscillation of geometry as cultural activity [56-60]; c) the communal nature of tradition [60-62].

Generality 1 [52-56]: the question of the unity of geometry as a tradition. The question then is to grant to the origin of geometry a sending that could encompass all possible geometries. The answer is to have the ground be infinite: the world as "the infinite totality of possible experiences in space in general" [52]. Geometry must be sent with a sense that includes not just the axioms of a particular experience of space, a particular form of geometry [e.g., Euclidean], but any possible space. Its meaning must be aimed in the widest possible angle to encompass all geometries; its sense must be "infinitely open to all its own revolutions" [52]--the revolutions must produce a geometry recognizable as a geometry, as included in the infinite scope of the original and originary sending. The origin-sending must have an "infinite horizon" [56]; geometry's sending is that of mathematical determinability in general.

This point is important because, as it turns out, as Derrida reminds us at 52-53, Husserl had a restricted sense of geometry. Husserl's notion of geometry was based on decidability, but at this time Gödel is proving the incompleteness of axiomatic systems: statements can be produced that would have no decidable truth value within the system--they would be neither true nor false. Nonetheless, such undecidability is a mathematical concept, and as such belongs to a origin-sending that is "vaster than the project of definiteness itself" [53]. If that is the case, if revolutions must be seen as revolutions within the same tradition--even a revolution as radical as that between decidability and undecidability--then the origin-sending must have been infinite. An infinite sending means that any possible revolution can be recognized; with such an infinitely plastic tradition, its "unity is still to come on the basis of what is announced in its origin" [53]. [NB: the "to come" = à venir, which has a strong futural ring to it.] Here we see the zigzag method of historical reflection determined by the sending structure of historicity: we must always delay the final determination of the essence, and hence unity, of a tradition, for that unity is to come; it is only on the basis of that always delayed, always futural unity that one could determine what the origin-sending was.

Two notes here: First, the Aristotelian to ti én einai includes an imperfect that has always exercised scholars: "that which it was to be" is the essence of X. Now ousia has various candidates, among which is to ti én einai,
even as Metaphysics 7-10 moves along to finally settle on *ousia* read in terms of *dynamis/energeia*. A great project would be to read the temporality of the imperfect *én* in terms of sending and delayed retrospection. Second, "the democracy to come" becomes Derrida's slogan in the thematically political works of the 1980s and 90s. The same delay in determining an essence and hence the same infinite openness we see here in *ITOG* would need to be rigorously articulated in any reading of Derrida's politics.

Generality 2: [56-60] geometry is a cultural activity.

Derrida now moves to discuss the example/exemplar oscillation of geometry and science in general with regard to culture. Sometimes geometry and science are only one form among many of cultural activity, sharing with them the characteristics of being a "human production," referring to "spiritual acts" [56], and of not being a causal process [57].

Here a very important passage occurs. In the context of explicating Husserl's critique of Dilthey, Derrida investigates the LP [57-58]. Tradition is analogous to internal time-coness; this means our being related to the sedimented sense passed on by others is the same relation as we have to our past. Just as in tradition there is smooth transfer from others to us, in internal time-coness there is a continuity across different selves; conesses with different content inhabit the same form. Thus the present is not a rupture, but the retention of a past Present in the present LP. The retained past P has itself a retentive moment; that is, it itself--the past P--retains a P with a retentive moment, and so on. Now since retention is finite, it retains senses as sedimentations, without constantly going back for reactivation. Thus traditional sedimentation transmits sense beyond individual finite cness; it allows meaning to accrue without each of us always having to go back to reactivate sources. Now the possibility of retention and retention of sedimented sense also structures protention; we pretend or anticipate a future P that will have a retentive as well as protentive moment. Thus the LP is the "maintenance" of the "dialectic" of retention and protention; it is the "now" that "holds in hand," the form. The LP is now described by Derrida in auto-affective terms, which by now should be familiar to us from our reading of *SP*: "extraordinary absolute alteration," "always renewed originality of an absolute primordiality." What is important for us to note is that the LP is the ground of history: of historicity and historical reflection. Any experience, and thus historical experience, has the form of the LP. This entails, to return to the Dilthey debate, that any cultural form, like science, is historically coded in terms of a past that it inhabits and a project that motivates it. This project of a culture has an ideal structure and can be called a world-view or *Weltanschauung*.

But such historicism horrified Husserl, and he retaliated by describing science not just as an example of culture, but as the "unique and archetypal" form of culture, as the exemplar of what culture should be like, or what culture at its best is like. Science's exemplarity is that it breaks with any determined culture; it doesn't not produce culturally-specific "truths" but universally valid truth, the only kind worthy of the name. Having broken with any one culture, but still being cultural, science expresses the essence of "culturality," which is at the same time what culture aims at, its completed state or telos. Thus concludes Derrida, science is ""exemplary' in the double sense of this word, eidetic and teleological" [58].

This confluence of eidos and telos in the move from example to exemplar has always been worrisome to Derrida. He will take it up again at 80 in describing Husserl's privilege of adult normality in the linguistic community. The hierarchizing political implications of reading the essence of humanity from a restricted set of examples who then become exemplars should be obvious; it is to avoid such privileging and its concomitant denigration that the openness of the democracy to come is Derrida's slogan.

The problem with *Weltanschauung*, then, is its cramped, finite, project, its desire merely to realize a good life based on cultural values; science, on the other hand, is an infinite task of achieving universal, omnitemporal truths which it puts into a circulation so open that anyone at any time can reactivate any of its deposits, any of its sedimented meanings.
Now, Derrida is not satisfied with such scientistic ideology. He shows the zigzag complication of de facto culture and the ideal scientific project: a) science is the highest possibility of culture; but b) it is only possible as the reduction of empirical culture. Science is an infinite task, but this infinite task had to have irrupted within a finite culture. The way truth circulates in the infinite pure culture of science implies a "paradoxical historicity" [59]. Truth can seem ahistorical, but Husserl wants to show that it is the "most profound and purest history" [59]. Truths remain the same and hence seem not to be affected by historical change, but precisely that "remaining the same" across vast cultural changes means that the transmission of scientific truth is the purest form of historical tradition, a "continuous synthesis in which all acquisitions maintain their validity" [60: Derrida quoting Husserl {OG 159}]. Thus tradition is clearly seen here as a repetition or reactivation, and as such a "historical present" [58], a concretion of the LP.

Generality 3: [60-62]: Derrida's next move is to discuss community, for this continuous synthesis that keeps a scientific tradition alive is far beyond the scope any one individual. Thus we see the payoff for the discussion of the LP at 57-58, which we remember was introduced as "analogous" to cultural transmission. I can relate to contemporaneous others in a communal project of reactivation of the sense of acts of still others in the past only if my own self is constituted by a reference to alterity, as we have seen Derrida detail in SP.

Now this "total subjectivity" is the "common place of all egological subjectivities" [60]. Derrida uses "place" here because he must describe an omnitemporality of all possible subjectivities, "past, present, or future" [60]. The deep spatiality of form is apparent here, as well as the opening to exteriority in general of the spacing of the LP. Form is the opening of a space of possibilities beyond temporal succession, an exteriority that is not to be confused with raw space, and to which we have access only through the spacing that opens the innermost sanctum of the LP to exteriority in general. We can conceive of a space beyond time--we can constitute a form--only because our temporal consciousness is spaced, our timing is opened out to a spacing.

Husserl describes this common place as a unified horizon. This horizon thus not only ties all possible scientist together in a community, it also constitutes the subjectivity of each scientist. Thus, because Husserl is committed to concrete description, the ego must be in an odd relation to the we of the community: as a scientist, the ego is part of the we, is formed as a scientist by having the same structure as the we, by being the we, and yet, as the most fundamental structure of phenomenology, the ego must contain the we, must constitute the other and thus the intersubjective community. Derrida notes at 61n55, with some coolness, the "formidable difficulties" of the 5th CM, which he tackles a year later in "Violence and Metaphysics."

"In any case," Derrida writes, ducking the problems, a history of truth is only this "concrete implication and reciprocal envelopment of totalities and absolutes" [61]. In other words, scientific culture, the transmission of truth through the reactivation of the sense of the origin-sending buried under the sedimented sense of received sciences in crisis, is just this interplay of individual and community, of concrete temporal subject, temporal form of the LP, and the "common place" of all possible subjectivities. Both sides are needed, for history is a mediation of arche and telos. The total sense of geometry could not have been present as constituted at the origin, for then geometry would only be explication à la Kant; rather the sense of the origin of geometry is an origin-sending, an infinite horizon of idealization, the project of mathematical determinability that can only be deciphered in a zigzag from the received sense of actual geometry. Thus history is neither Platonic/Kantian explication nor is it the converse, a mere empirical aggregate stumbling along, "one damn thing after another." Indeed, writes Derrida, "neither pure diachrony nor pure synchrony make a history" [61]. [NB: as we will see as well, neither pure univocity nor pure equivocity will do either.]