

HEGEL  
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Infinity is itself the other of the empty being-other  
- Hegel, *Science of Logic*

The Hegelian ontological impasse ultimately rests upon maintaining that there is a being of the One; or more precisely: that presentation generates structure, that the pure multiple holds in itself the "counting as one." One can also say that Hegel never ceases to write the in-difference of the other and of the Other. In so doing, he renounces that thing for which the ontological can be a situation. This presents itself through two consequences which are tantamount to proof:

- Since it is infinity which articulates the other, the rule, and the Other, it is predictable that the impasse explodes with respect to this concept. The disjunction between the other and the Other - which Hegel seeks to eliminate - reappears in his text in the form of two developments, which are at the same time disjunctive and identical (quality and quantity).

- Since it is mathematics that constitutes the ontological situation, it is necessary for Hegel to debase it. Also, the chapter on quantitative infinity is followed by a gigantic "remark" on mathematical infinity, where Hegel proposes to establish that, in regards to the concept, mathematics represents a state of thought "defective in and of itself" and that its "procedure is unscientific."

#### THE MATHEME OF INFINITY REVISITED

The Hegelian matrix of the concept of infinity states: "concerning qualitative and quantitative infinity, it is essential to note that the finite is not surpassed by a third party, but that it is determinacy, in as much as it is dissolving itself, that surpasses itself."

The notions which architecturally construct the concept are thus determinacy [*Bestimmtheit*], the starting point of the whole dialectic, and the surpassing [*hinausgehen über*]. One easily recognizes here, on the one hand, the initial point of being, and on the other, the itinerary of the dialectical movement which is that which I have also called the "already" [*déjà*] and the "yet" [*encore*]. It is not an exaggeration to say that all of Hegel rests in this: that the

"yet" is immanent to the "already," that everything that is, is already still.

"Something" - a pure term of presentation - is only determinate for Hegel in as much as it can be thought as other than an other. "The exteriority of otherness is in the something's own inwardness."<sup>1</sup> This signifies that the law of the "counting-as-one" is that the counted term possesses *in itself* the marking-other [*la marque-autre*] of its being. Or again: the one can only be said of being insofar as being is its own non-being - is that which it is not. For Hegel, there is an identity in becoming of the "there is," [*il y a*] (pure presentation) and of "there-is-one" [*il y a de l'un*] (structure), of which *the mediation is the interiority of the negative*. Hegel posits that the "something" must retain the mark of its identity. From this, every point of being is "between" itself and its mark. Determinacy is that which, in order to found the Same, requires that the Other be in the other. There is the origin of infinity.

The analytic is very fine here. If the one of the point of being (the counting-as-one of a presented term) - that is to say, its limit, or that which it discerns, results from the fact that it detains the marking-other in interiority (that it is what it is not), the being of that point (inasmuch as one-thing [*une-chose*]) is to overstep the limit: "the limit which constitutes the determination of the something but in a way that it is determinate at the same time as its non-being is limitation."<sup>2</sup>

The passage of the pure limit [*Grenze*] to the limitation [*Schranke*] is the force of an infinity that is directly required by the point of being.

To say that one thing is marked in itself as one has two meanings, because the thing becomes at the same time the gap [*l'écart*] between its being and the one-of-its-being. On one of the sides of this gap, it is actually the thing which is one, thus limited by what it is not. We have here the stationary result of marking, *Grenze*, the limit. But on the other side of this gap, the one of the thing is not its being. The thing is, in itself, other than itself. This is *Schranke*, its limitation. But the limitation is a dynamic result of marking, since the thing, in all necessity, supersedes its limitation. For limitation is the non-being by which the limit occurs. Yet the thing *is*. Its being is accomplished through the franchisement of non-being (that is to say, through the supersession<sup>3</sup> of the limit). The profound root of the movement is that the one - if it marks being *in-itself* - is superseded by the being which it marks. Hegel has a profound sense that the counting-as-one is a law. But since he wants this law to be, at all costs, a law *of being*, he transforms law into an ought. The being of the one consists in the fact that it is *imperative* to supersede the limitation. The thing is determinate as the "ought-to-be" of that which it is, while not being it. "The being in-itself of determinacy, in its relation to the limit, to itself as limitation, is the *ought-to-be*."<sup>4</sup>

The one, insofar as it is, is the supersession of its non-being. Thus, being one (determinacy) is accomplished as the franchisement of limitation. But at large, it is pure ought-to-be: its being is the imperative of the supersession of its one. The supersession of itself and therefore the dialectic of the finite and the infinite results directly from the fact that the point of being, always discernible, possesses in itself the one. "In the ought-to-be, the transcendence of finitude, that is, infinity begins.

The ought-to-be is that which, in the further development, exhibits itself in accordance with the said impossibility as the progress to infinity."<sup>5</sup>

The essence of the Hegelian thesis on infinity, at this stage, is that the point of being (because always intrinsically discernible) *generates* from itself the operator of infinity, in other words, the supersession, which combines, as any operator of that type, the step on [*le pas-en-plus*] (the yet) - here, the limitation - and the automatism of repetition - (here, the ought-to-be).

In a subtractive ontology one tolerates (even, one demands) that there is the extrinsic, since the counting-as-one cannot be inferred from the inconsistent presentation. In the Hegelian doctrine (which is a generative ontology), all is intrinsic, since the being other is the one-of-being, and all retains a mark of identity in the form of the interiority of non-being. This results in what, for the subtractive ontology of infinity, is a *decision* (of the ontology), while for Hegel, it is a *law*. The fact that the one-essence [*essence-une*] of being is to be infinite follows in the Hegelian analysis from the fact that the being of the one is interior to being in general.

With a special genius, Hegel attempts to co-engender the finite and the infinite only from the point of being. The infinite becomes a reason internal to finitude itself, a simple attribute of experience in general, because it is a consequence of the regime of the one, of the gap between [*de l'entre-deux*] where the thing lies at the suture of its being-one and its being. Being *ought* to be infinite: "the finite, is itself, therefore, that sublation [*relève*] of itself, the fact of being infinite."

UMBR(a)

#### HOW CAN THERE BE A BAD INFINITY?

However, what infinity do we have at our disposal? The split limit/limitation founds the insistence of the finite to supersede itself, its ought-to-be. This ought-to-be results from the fact that the operator of the itinerary (the supersession) derives directly from the point of being (determinacy). But is there exclusively only an infinity? Is there not only *repetition* of the finite under the law of the one? In that which I have called the *matheme* of infinity, the repetition of the term self/other is not yet the infinite. For infinity to be, it is necessary that the *place*: Other [*le lieu Autre*] exists - or that the other insists. I have called this requisite the second existential seal, through which the initial point of being is summoned to inscribe its repetition in the place of the Other. That *second* existence alone merits the name of infinity. Now one sees very well

how Hegel (under the hypothesis of an identity that is fixed and internal to "something") engenders the operator of the itinerary. But how could he *leap* up to the recollection of a completed itinerary?

The difficulty is evidently conscious. The ought-to-be, or progress to the infinite is, for Hegel, nothing but a mediocre transition which he calls (a striking symptom) the bad infinity. For as soon as the supersession is a law internal to the point of being, the infinite which results from it has no other being than at this point. At the same time, it is no longer the finite which is infinite; it is rather the infinite which is finite. Or precisely - a very strong description - the infinite is only the void where the representation of the finite operates. Every step too many [*chaque pas-de-plus*] summons the void where it can repeat itself: "In the void beyond the finite, what arrives? . . . [T]his new limit is itself only something which has to be sublated or superseded. And so again there arises the void, the nothing, in which similarly the said determinateness, a new limit, is encountered - *and so on to infinity.*"<sup>6</sup>

We thus have only the pure alternation of the limit and the void, where the statements "finite is infinite" and "infinite is finite" succeed each other, in the ought-to-be, as the "perpetual repetition of one and the same content, one and the same tedium, alternation."<sup>7</sup> This tedium is the tedium of the bad infinity. It demands an even greater obligation: that the supersession, in other words, be *superseded*, that the law of repetition be affirmed *globally*. Briefly, the Other occurs [*advienne*].

But the task this time is of the greatest difficulty. The bad infinity, after all, is bad by that which makes it Hegelianly good: of not interrupting the ontological immanence of the better one deriving from it. Its character of being limited, or finite, stems from the fact that it is only locally defined by the "yet" of the "already" which is determinacy. However, the local status assures the hold of the one, since it is always locally that one term is counted or discerned. The passage to the global, that to the good infinity, does it not impose a disjunctive decision where the being of the one is going to lack? The Hegelian artifice is here at its peak.

#### THE TURNING AND THE NOMINATION

Since it is necessary to resolve the problem without disjoining the dialectical continuity, we ourselves turn once again, with Hegel, towards the "something." Besides its being, its being one, its limit, its limitation, and finally the ought-to-be where it insists, what resources are at its disposal which would authorize us, by superseding the supersession, to conquer the un-empty plenitude of global infinity? The stroke of genius in Hegel (if it is not a supreme talent) is abruptly to turn towards pure presentation (towards the inconstant as such) and to declare that what constitutes the good infinity is the *presence* of the bad. That the bad infinity can be *effective* is what its badness cannot account for. Besides repeating itself, the something detains the essential and presentable capacity which exceeds that repetition to repeat itself.

The objective, or bad, infinity, is the repetitive beating, the tedious encounter of finitude in the ought-to-be and of the empty infinity. The true infinity is subjective insofar as it is the virtuality contained in the pure presence of the finite. The objectivity of objective repetition is, in this way, an affirmative infinite. A presence. "The unity of the finite and the infinite . . . is itself *present*." Considered as presence of the repetitive process, the "something," has broken its external relation to the other, from where it holds its determination. It is now in a relation to self, pure immanence, since the other has become effective *in the mode of empty infinity where something repeats itself*. The good infinity is finally the repeating of the repetition as far as it is other than the void. "The infinite is . . . as if other to the empty being-other . . . return to self and relation to self."

That subjective infinite, or "for-itself," which is the good presence of the bad operation, is no longer representable, for what represents it is the repetition of the finite. What one repetition cannot repeat is its proper presence - there, it repeats itself without repetition. One can see here that a line is drawn, a line of division between:

- the bad infinity: objective process, transcendence (the ought-to-be), representation,
- the good infinity: subjective virtuality, immanence, unrepresentable.

The second term is like the doubling of the first. And it is striking that in order for Hegel to think it, he returns to the foundational categories of ontology: pure presence and the void.

It remains to be asked why it is here that presence, or virtuality, persists in being called "infinity" even in the mode of the *good* infinity. One easily sees the bad infinity's connection to the matheme: one recognizes the initial point of being (determinacy) and the operator of repetition (the supersession). But the good?

In reality, this nomination is itself the result of the whole procedure, which can be summarized in six stages:

- a. The something is posited as one from an external difference (it is other than the other).
- b. But as it must be intrinsically discernible, it is necessary to think that it has this marking-other of its one in itself. Introjecting the exterior difference, it *empties* the other something, which

becomes no longer *one* other term, but an empty space, an other void.

- c. Having its non-being in itself, the something which is, sees that its limit is also a limitation that its whole being is to supersede (being as the ought-to-be).
- d. The supersession, as the result of point b, occurs in the void. There is an alteration of that void and of that repetition of something (which re-deploys its limit, then secondly, supersedes it as limitation). It is the bad infinity.
- e. This repetition is present. The pure presence of something potentially retains presence and the law of repetition. It is the global of that which - in every beating alternating finite (determinacy)/infinite (void) - is the local.
- f. To name this virtuality, I ought to *draw up the name of that void*, since the pure presence, as relation to itself, is, at the point where we are, the void itself. And since the void is the trans-finite polarity of the bad infinity, it is necessary that the name be: infinity, the good infinity.

The infinite is thus the virtual contraction of the repetition in the presence of that which repeats itself: a contraction named "infinity" from the void where it exhausts repetition. The good infinity is the name of that which happens to the repeatable of the bad, a name to draw from the void which borders upon a certainly tedious process, but which to treat as presence one also knows to have to declare subjectively infinite.

It seems that the dialectic of infinity is perfectly completed. How it is that it recommences?

#### THE MYSTERIES OF THE QUANTUM

The infinite was split into good and bad. But here it splits anew into qualitative infinity (of which we have just studied the principle) and quantitative infinity.

The key to this turnstile resides in the equivocations of the One. If it is necessary to take up the question of infinity, it is because the being-of-the-one does not operate in the same manner in the quantitative as in the qualitative. Or better: "the point of being - determinacy - is quantitatively constructed as the inverse in regards to its qualitative structure."

I have already indicated that at the end of the first dialectic the something has only a relation to itself. In the good infinity, being is for-itself, it has "emptied" its other. How can it retain the mark of the one that it is? The qualitative "something" is, on the one hand, discernible in that it has its other in itself. On the other hand, the quantitative "something" is without other and, in consequence, its *determinacy is indifferent*. We understand that the quantitative One is the being of the pure One, which differs from nothing. This does not mean that it is indiscernible: *it is discernible among all, being the indiscernible of the One*.

What founds the quantum, what discerns it, is properly the indifference of difference, the anonymous One. But if the qualitative being-one is without difference, it is inevitable that its limit is not one, because the whole limit, we saw, results from the introjection of an other. Hegel will speak of "determinacy which has become indifferent to being, a limit which is also not one." Only a limit that is not a limit is porous. The quantitative One, the indifferent One, which is number, is just as well many ones, since its indifference is also the means that causes the proliferation of the self-same outside itself. The One whose limit is immediately a non-limit is realized "in the multiplicity exterior to itself which has for its principle or unity the indifferent One."

One grasps therefore the difference of the movements where the qualitative and the quantitative infinity are respectively engendered. If the essential time of something qualitative is the *introjection of alterity* (the limit here becoming limitation), the essential time of something quantitative is the *exteriority of identity*. In the first case, the one plays with being, the gap between [*l'entre-deux*] where the ought is the supersession of the limitation. In the second case, the One is turned into multiple Ones, a unity whose repose is the spreading out of itself. Quality is infinity according to a dialectic of *identification*, where the one proceeds from the other. Quantity is infinity according to a dialectic of *proliferation* where the same proceeds from the One.

The exterior of number is thus not the void where repetition insists. The exterior of number is itself as multiple proliferation. One can also say that the operators are not the same in quality and in quantity. The operator of qualitative infinity is supersession. The quantitative operator is duplication. The one reposes the something (yet); the other imposes it (always). In quality, what is repeated is that the other be that interior which ought to franchise its limit. In quantity, what is repeated is that the same be that exterior which ought to spread itself out.

A major consequence of these differences is that the good qualitative infinity cannot be pure presence, the virtual interior, the subjective. For in itself, the same of the quantitative One proliferates too. If, in the exterior of self, the qualitative infinity is incessantly number (the infinitely big) in the interior, it remains exterior: it is the infinitely small. The dissemination of the One-in-itself balances its proliferation. There is no presence in the interiority of the quantitative. Everywhere the same is at the disposition of the limit, since it is indifferent. Number, agency of the quantitative infinity, appears to be univer-

sally bad.

Confronted at this impasse of presence (and it is for us a joy to see how number imposes the danger of subtraction, of non-presence), Hegel proposes the following line of resolution: to think that the indifferent limit finally produces real difference. The true quantitative - or good - infinity will be *the putting into difference of indifference*. One can, for example, think that the infinity of number, beyond the One which proliferates and composes this or that number, is being a number. The quantitative infinity is quantity as quantity, (the proliferating of proliferation, that is to say, quite simply, the quality of quantity) insofar as it is discerned qualitatively from any other determination.

But to my mind, it doesn't work. What does not work? It is the nomination. That there is a qualitative essence of quantity, I can easily see, but why name it "infinity"? The name suits the qualitative infinite *because it was drawn from the void*, and because the void was the trans-finite polarity of the process. In the numerical proliferation, there is no void, since the exterior of the One is its interior, the pure law which institutes its spreading of the same-as-the-One. The radical absence of the other, indifference, does not legitimize declaring that the essence of the finite number, its numericality, is infinity.

Stated otherwise, *Hegel fails to intervene in number*. He fails because the nominal equivalence which he proposes between the pure presence of the supersession in the void (good qualitative infinity) and the qualitative concept of quantity (good quantitative infinity) is a trick of the eye, an illusory scene of speculative theater. There is no symmetry between the same and the other, between proliferation and identification. However heroic this effort might be, it is in fact *interrupted* by the exteriority of the pure multiple itself. The mathematical comes here, then, as the discontinuity in the dialectic. It is this lesson which Hegel wants to mask in suturing by the same term - infinity - two discursive, disjointed orders.

UMBR(a)

#### THE DISJUNCTION

The Hegelian enterprise meets here, as its real, the impossibility of the pure disjunction. Departing from Hegel's own premises, one ought to note that the repetition of the One in number does not allow itself to be sublated [*relever*] by the interiority of the negative. What Hegel cannot think is that the difference of the same to the same is the pure position of two letters. In the qualitative, everything originates from this impurity which wishes that the other marks the point of being with one. In the quantitative, the expression of the One is not markable, in such a way that all number is at once disjointed from every other and composed of the same. Nothing here can be preserved if one wants infinity from a decision which, through a single strike, disjoins the place of the Other from all insistence of the others themselves. In wanting to hold the dialectical continuity in the equivocations of the pure multiple, and to make it proceed from the single point of being, Hegel cannot return to infinity. One cannot always get rid of the second existential seal.

Dismissed from representation and experience, the disjointing decision returns in the same

text, through a re-splitting between two dialectics so alike - quality and quantity - that only a fragile verbal footbridge, thrown from the one to the other, provides a sounding of the abyss of their twinhood and finds there the paradox of their incongruity. This footbridge is pronounced: infinity.

The quantitative "good infinity" is in fact a Hegelian hallucination. It is a whole other psychosis, where God in-consists [*inconsiste*], from which Cantor had to draw that by which he could legitimately name infinite multiplication, at the cost, however, of keeping there the proliferation of which Hegel imagined that, being bad, it was reduced by the artifice of its differentiable indifference.

- translated by marcus coelen and sam gillespie

- 1 A.V. Miller's translation of *Hegel's Science of Logic* (Atlantic Highlands, NJ: Humanities, 1969) 131.
- 2 The distinction is made here between "la limite" and "la borne" [*Grenze* and *Schranke*] which we follow Miller in translating as "limit" and "limitation" - Tr.
- 3 "*Outrepassement*." Lacan's translator, Alan Sheridan, translates this term as supersession. It should be noted that in Miller's translation of Hegel, the term is variously translated as "passing over" and "transcended" - Tr.
- 4 Hegel, 132.
- 5 Hegel, 134.
- 6 Hegel, 141. To maintain the consistency of our translation, we have elected to change Miller's translation of *oultrepasser* from "transcended" to "superseded" - Tr.
- 7 Hegel, 142.