

## Transitions Into, With, and From Hegel's *Science of Logic*

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## Jan 07, 2016: From general (formal) to transcendental logic: Kant and Fichte

Kant's Metaphysical Deduction KdrV, A66/B91 – A83/B116

M. Stange, "Justifying the Self-Evident"

R. Pippin, Chapters Two, Three, Hegel's Idealism; Self-Consciousness

### Three parts today:

(1) Kant's Metaphysical Deduction, (2) Kant's Transcendental Deduction, (3) Logical Antinomies and Fichte's Doctrine of Science.

These are **preparations** for Hegel's SoL, designed to make the idea of a **non-formal logic** somewhat more intuitive than it may seem at first glance.

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### Ad (1): Kant's Metaphysical Deduction

"Deduction" is a term of art from the legal practice in the **Holy Roman Empire**. The imperial estates (duchies, counties, bishoprics, free imperial cities, imperial knights) were not allowed to wage war against each other, when quarrelling about sinecures, benefices etc., but rather to appeal to the Imperial Chamber Court and write **deductions**. Deductions started from the nearest point in history which was not moot. (Of course, one could make use of logical deductions within juridico-historical ones, if it seemed helpful.)

For **Kant**, writing a deduction made things easier. He works with that massive juridical metaphors anyway (Critique: *kritês* is the judge, etc.). In a **deduction** one need not to go back as far as possible, it alleviated the burdens of proof etc. (no storytelling about the origins of logic or self-consciousness etc.).

What was the quasi-judicial **situation** Kant thought philosophy was in? We do in fact **possess**, i.e. operate with certain **concepts** in everyday usage, science and metaphysics, viz. the **categories**, whose contents cannot be determined and justified by appeal to patterns of sensory evidence, as witness **Hume**. Kant wanted to show that we were nevertheless **entitled** to that actual possession, at least to a certain degree and with regard to a certain set of pure concepts yet to be defined.

So, he had to go back (and start from) a point not moot between two **idealized** philosophical standpoints: dogmatic rationalism und empiricist skepticism. He chose general, i.e. formal, **logic**, in particular **sylogistics**, i.e. the Aristotelian doctrine of **inferences of reason**. (There are inferences of judgment and inferences of the understanding as well; but the latter are rather trivial, and the former are not formal.) Sylogistics was not and is not moot (today it is smoothly embedded in Fregean predicate logic).

A **judgment** (see S. Rödl and R. Pippin), according to Kant, is not a quasi-receptive grasping of some given intellectual content, a Fregean sense (or thought), but an **act of thinking**. But Kant must not **smuggle in** his own position right at the start of a deduction. So, let's say (for the time being) that a judgment is a sentence or statement **regimented** to qualify as a premise or a conclusion of an **inference of reason** (a syllogism).

A **sylogism** has two premises (major and minor) and one conclusion. In **categorical** syllogisms:

Major:	Major term (O) predicated of middle term (M)	O of M: "M is O"
Minor:	Middle term (M) predicated of minor term (U)	M of U: "U is M"
Conclusion:	Major term (O) predicated of minor term (U)	O of U: "U is O"

Syllogisms may be **categorical** or **hypothetical** or **disjunctive**, according to how the two main elements of the **major** are **related**: either as subject and predicate (categorical) or as

antecedent and consequent (hypothetical) or as subject and a disjunction of predicates (disjunctive). This yields **three** forms of judgment under the heading of

### Relation.

The conclusion is **demonstrated** relative to the premises, i.e. it is valid **apodictically** relative to them. The premises as such are asserted (stated as valid **assertorically**), and the elementary parts of hypothetical and disjunctive judgments are put forward only **problematically**. These three forms of the **validity** of judgment fare under the heading of

### Modality.

Next, categorical judgments are **quantified**: universal, particular, singular. And they (i.e. their copulae) are **qualified**: affirmative, negative, infinite. This gives

**Quantity**      and  
**Quality.**

So we have  $4 \times 3 = 12$  basic forms of judgments. Each judgment is characterized according to one character in each rubric. (Hegel will tell a different story using pretty much the same structuring. i.e.  $4 \times 3$ .)

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Now comes the **metaphysical deduction** of the pure **concepts** of the understanding. Concepts or terms do not belong to logic (identity being a likely exception). General logic is general or formal in being topic neutral. There is no room for specifically logical concepts, or so it seemed up to Kant. But then **Hume** showed that the concepts of substantiality and causality could not be determined and justified by appeal to patterns of sensory evidence. Perhaps he looked in the wrong place! Might not those concepts be purely **logical** concepts after all?

The **forms of judgment** may either be seen as formal aspects of contents to be grasped (Frege) or as logical aspects of thinking (“functions of thought”, Kant). In the latter case, i.e. Kant’s case, we need a **non-psychological** theory of thinking, and that is in fact what Kant offers: a transcendental logic. But for the sake of the deduction we may go on remaining neutral between Frege and Kant.

So, we will not yet decide whether the forms of judgment are aspects of **contents** to be grasped or aspects of **thinking** (or, in fact, both at a time, as Kant endeavored to show in the transcendental deduction). Anyway, they get expressed not by **terms**, but by logical **particles** (“or”, “if – then”, “all”, “some”, “not”, “necessarily” etc.) and by **syntactical** form. These are what Russell called **logical constants**.

That is, they are expressed **syncategorematically**, while concepts are expressed by terms, i.e. **categorically**.

Concepts or terms	categoric items
Logical constants (connectives, quantifiers, ...)	syncategorematical items

Now what, if one could **transpose** the purely logical “contents” (or functions of thinking) from the syncategorematical into the categoric **key** (from logically *C major* to logically *A minor*, so to speak)? Without any claims of **priority** for either key. – That was Kant’s idea; and it worked!

He abstracted from what he, in a later chapter, introduced as **transcendental schematism**. That is, he didn’t ask **how** exactly a function of thinking can be turned into a term, a purely logical concept. Consider hypothetical judgment. It hints at a possible concept of “iffiness”, but without hinting at some rough and ready **application conditions** for that concept.

So we may think of him as comparing a long **list of candidate categories** (Aristotelians put in their ten candidates, Humeans put in substance and cause, though in a skeptical mood etc.) *and* the **table of the forms of judgment** and checking whether a candidate category has a close analogue on the table of judgment. If it has, it will be accepted as a category.

**Main result:** Our possession of categories is not **surreptitious**, obtained by devious sensory means (plus imagination and habit), as Hume thought. Rather the categories are part of the basic endowment of **reason**. Hume had looked in the wrong place.

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Now, finally, comes **Kant's** specific conception of **logic** and of **thinking**. But it doesn't come as a help, it comes as a **problem**. Logic is the transcendental doctrine of thinking (or so Kant thinks), not a very general theory about the basic structure of world. Its rules are **constituting rules of thinking**, and until further notice they not constitutive principles of **being**.

**Three distinctions:**

Constitutive vs. regulative principles (of being)	Kant
Constituting vs. regulating rules (of an activity)	everybody
Rules of criticism vs. rules of action	Sellars

**Constitutive** principles are objectively valid (as Kant will try to show of the categories), **regulative** principles are valid only for thinking (for reason).

**Constituting** rules bring into being what they regulate (cf. chess), **regulating** rules only regiment what exists already (a river is being regimented, human eating behavior is regimented by manners etc.).

Rules of **criticism** are ought-to-be's: "It ought to be that p". Rules of **action** are ought-to-do's: "I ought to do A". Persons in charge will derive ought-to-do's from ought-to-be's. For example, from "Clocks ought to chime regularly" clock makers will derive the ought-to-do: "I ought to do what is necessary and possible for me in order that clocks chime regularly".

**Thinking**, at least according to Sellars whom I follow on that point, is a spontaneous activity that cannot be done **intentionally**. It's rather the other way round: Intentional action presupposes the spontaneous actuality of thinking. So, the rules of thinking (rules of logic) are essentially rules of **criticism**.

More specifically, the **rules of logic** are **constituting rules of criticism**, but until further notice only **regulative principles** of objective being.

Anyway, if logical rules are **constituting** rules, then one would expect that it were impossible to **violate** the logical rules in thinking. Thinking contrary to logical rules seems to be thinking only in that sense in which counterfeit money is money, viz. not at all. But the matter is very **tricky** – and very **important** (especially for Fichte and Hegel).

Thinking is **compositional**. If we are able to think **that ~p**, then we must (e.g.) be able to think **that p**. Therefore, if we are able to think **tautologies**, we must be able to think **contradictions** (though, of course, not truly). **Wittgenstein** thus was at least *consistent* to say that both, tautologies *and* contradictions, were senseless. But that is hard to believe, because there are many sentences of which we do not (yet) know whether they are tautologies or not (or, for that matter, contradictions or not). – And anyway, it might well be that the logical rules themselves lead us into **inconsistency**. (That is the topic of part three today.)

One important **result** hitherto in other words: There might be a nasty **dualism of thinking** and objective **being**. The categories might well be part of our **rational** lore, but nevertheless they might fall short of **objective** validity. Therefore a **transcendental deduction** is called for.

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## Ad (2): Kant's Transcendental Deduction

Again, Kant has to start from a point that is not moot. This time it's an **analytic sentence**: "The '*I think*' must be capable of accompanying all my representations". (Otherwise they wouldn't be *my representations*, compare the famous sentence about bachelors.)

Analytic sentences are **trivially true**, but not **trivially meaningful**. In order to be a meaningful sentence the bachelor sentence presupposes the institution of **marriage**; and in order to be meaningful the sentence about the transcendental apperception presupposes the activity of **synthesis**. --- But first some **remarks** about the 'I think', i.e. transcendental apperception.

**First**, judging is **reflexive** (S. Rödl, R. Pippin). That means judging that p includes knowing that one judges that p. These are not **two** acts of thinking, but only one. The 'I think that p' is **included** in the judgment that p. Therefore, we have an **inference license** to make the inclusion explicit by actually self-ascribing the judgment and saying: "I am thinking that p".

**Second**, the 'I think' is used here assertorically, but it may also be used problematically (as witness Kant himself, KrV B 406).

The 'I think' taken assertorically: "I judge"

The 'I think' taken problematically: "Cogito" in the sense of "it seems to me"

The 'I think' taken problematically is an **operator** prima facie of *epoché*, but on closer inspection of **de-objectivation**. And at the same time it can be used to self-ascribe, not a judgment (this time), but a belief-independent **seeming** ("shining": *Scheinen*).

Thus, 'I think that p' may be analyzed in two equally legitimate ways:

I think that // p	Operator of de-objectification; the internal structure turned off.
I // think that p	Subject-predicate sentence (self-ascription); structure turned on.

**Descartes'** ingenious trick against the **skeptic**: "Gimme an 'I think' (in the sense of de-objectivation)". The skeptic yields (he likes de-objectivation). But the 'I think' **essentially oscillates** between operator and self-ascription, and so Descartes has his "sum" ("I exist").

Why does the 'I think' **oscillate**? Because it is logically equivalent to its own **iteration**. (Kant says the 'I think' cannot be accompanied further – i.e. logically, it can of course be accompanied grammatically – by any additional representation, not even by itself.)

I think that p ↔ I think that I think that p

The 'I think' thus occurs within and without of its own **scope**!

**Third**, the 'I think' behaves like a (general) **concept** and in fact *is* a concept or, according to Hegel, the one, singular concept (see R. Pippin). More strictly speaking, *the* concept according to Hegel is the purely **logical basis** of the 'I think' which, of course, is a topic for the philosophy of spirit, not for the logic.

Why is the 'I think' **concept-like**? A concept, says Kant, is an analytic unity that presupposes a synthetic unity. "Red" is the analytic unity of all red items. What unites all representations of red items is a certain sensory trait, a phenomenal quality.

What unites *all my* representations is their **mine-ness** (meishness). But that is not a sensory trait (as witness **Hume**) nor a substantial **focus** (as Descartes thought), not something given, but something to be done: **synthesis**. (So here we are again.)

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“Synthesis” is **Aristotle’s** term of art for what is going on in **judgment**. Judgment is objectification (or objectivation). Not *all* judgment is (see aesthetic judgments), but our basic judgments are. (Basic) judgment therefore is the locus of **bivalence** (says Aristotle), i.e. of possible falsehood, thus of possible error, thus of objectivity. (“True” is a generic term, Sellars says. It’s even more general than merely generic: a transcendental term in the classical, pre-Kantian sense: “omne ens est unum, verum, bonum.”)

In the **first step** of the second edition TD (§§ 16-20), especially in §§ 17-18, Kant wants to show that synthesis is necessary and sufficient for objectivation and that judgment is the locus of objectivation (§ 19). But then the forms of judgment (functions of thinking) are forms of objectivation and the corresponding concepts (the categories, § 10) are objectively valid, as far as objectivation goes. But objectivation has wide scope: it reaches as far as the ‘I think’ (§ 16). So the categories are valid for **all** my representations.

I am not going to talk about the **second step** that brings in **space** and **time** plus pure imagination (thus the schemata, though not yet under that name). With that second step comes an essential **limitation** of the transcendental deduction: Kant (a bit like Gödel with regard to arithmetic) proves that the objective validity of the categories cannot be proved of things beyond space and time. The functions of thinking are turned into concepts only with the help of pure temporal **schemata**. If we then abstract from those schemata, we may think of non-temporal beings according to the categories, but we will never be in a position to acquire knowledge of them.

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The gist of the TD thus is the following: We have to project categorial structure onto reality in a **conservative projection** (cf. reading). This conservative projection is akin to what **Hegel** calls “determining reflection” at the beginning of the logic of essence (though we are there within the logic, while Kant talks about human understanding).

Positing reflection (only subjectively “valid”, creates “shine”)  
 Presupposing reflection (positing as not posited: as objectively there), leads to:  
 Exterior (outer) reflection (but how can that be objectively valid?)  
 Determining reflection (exterior reflection qua objectively valid, i.e. qua internal)

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**Two** last remaining points regarding Kant’s TD.

**First**, the dualism of thinking and (objective) being according to Kant is overcome by a conservative projection (i.e. by determining reflection), but not in the *Tractarian* way! We do not get an **ontology of facts**.

Facts are ‘Lagadonian’ (D. Lewis), i.e. world-like, predicate-free **elementary sentences**; objects are Lagadonian **names**. According to Kant, logical form splits into **two versions**: on the part of judgment it is or becomes **propositional** form (qua functions of thinking, not qua form of something to be grasped), and on the part of objective being it is or becomes **categorial** form.

No claims of **priority** here! (Hegel in the logic proceeds from categorial to propositional form, the latter being more basic. But Kant does not touch the issue of priority.)

**Second**, if Kant achieves what he wants, why should **Fichte** or **Hegel** want to do more than he did? Just out of nasty curiosity? No, one can show that general logic, though without alternative in our ways of thinking, tends to be inconsistent. It can be rocked from within and must therefore be fixed from within. That is what Fichte wants to do in his *Doctrine of Science*.

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### Ad (3): Logical Antinomies and Fichte's Doctrine of Science

There is (as far as I am concerned, at least) no possible alternative to classical logic. Wouldn't we have to be talked into a candidate alternative by classical means, after all? How can that be? And even if we follow **Descartes** and **Quine** and say (as James Conant pointed out in „The Search for Logically Alien Thought: Descartes, Kant, Frege, and the *Tractatus*“, *Philosophical Topics* 20, 115-180, p. 124) that God or future science are not restricted to classical logic, then that very same Quine will show us that still – pragmatically speaking – classical logic has no competitor (it's too **elegant** and **simple**, and there are complete **proof procedures** for it).

So let us **stick with** classical logic. The problem is that it makes it difficult to stick with it. See Mike Stange: “Justifying the Self-Evident?” There would not be any **need** to justify logic (as it is indeed self-evident), if logic did not itself generate that need. And of course, it is strictly **impossible** to justify logic *from without*. But as the need comes from within, so the justification too may be accomplished from within.

The problem is the basic and elementary operation of **negation**. Parmenides, seeing clearly, wanted to exclude it from logical space, therefore. But without negation thinking would collapse into **indifference** (as Parmenides saw as well). So we had better include negation into logical space.

To see the problematic, let's start with propositional and predicate logic. What can be negated are sentences, **either** closed sentences **or** open sentences, i.e. sentence functions or predicates.

$$\begin{array}{l} p // \sim p, \quad [ Fa // \sim Fa, \quad (\exists x)(Fx) // \sim(\exists x)(Fx) ] \\ F(x) // \sim F(x) \end{array}$$

That is the **first** disjunction here; but there is a **further** disjunction in the neighborhood: We can look **either** at language (i.e. propositions and propositional functions in the Fregean sense) **or** at thinking (in the spirit of Kant).

A **third** disjunction is the one between **intensions** and **extensions**, which applies to sentence functions (predicates) in the first place (not so much to closed sentences for whom only two extensions would be in line: *the True* and *the False*). In sum:

propositions OR predicates (propositional functions)  
 language (sentences, general terms) OR thinking (thought contents, concepts)  
 intensions (contents) OR extensions (sets)

Let's start with **extensions** of general **terms** (language) and **concepts** (thinking). Some extensions are empty (cf. “mile high tree”), some even necessarily so (“round square”). But it seems clear that every term or concept must have *some* extension, empty or not.

Not so the term “set that is **not** a member of itself”, though! As witness Russell's paradox (first discovered by Zermelo in 1900, then rediscovered and published by Russell in 1901):

$$\begin{array}{l} \text{Let:} \quad R = \{x \mid x \notin x\} \\ \text{Then:} \quad R \in R \leftrightarrow R \notin R. \end{array}$$

Mathematicians took that to be a negative **existence proof** of R. But the situation is bizarre nonetheless: a concept without extension (not: with an empty extension) is weird!

Next, **intensions** of general **terms** (predicates). Take the predicate “heterological” and you get Kurt Grelling's paradox (or antinomy):

“heterological” is heterological iff not.

Third, **intensions** of **concepts**. Some concepts (in fact, most concepts) do not instantiate themselves. The concept *horse* isn't a horse, after all. So we have the concept: **non-self-**

**instantiating concept.** Does it instantiate itself? It does iff it does not. This is the conceptual analogue of Grelling's language related antinomy.

Fourth, **intensions of sentences**, i.e. propositions. We all know the antinomy of the *Liar*:

(L) Sentence (L) is not true.

Needless to protest that (L) be senseless. Take e.g.:

(S) Sentence (S) is senseless.

If (S) is senseless, (S) is true, thus not senseless, thus false and meaningful. And so it is. But then (L) ought to be meaningful as well, which means that (L) is true iff not true.

We can even get rid of the singular reference in (L) by switching to a version by **Quine**:

(Q) 'yields a falsehood, when appended to its own quotation' yields a falsehood when appended to its own quotation.

Fifth and last: **intensions of judgments**. (We'll have opportunities to come back to this point again and again. So I'll be rather short on the present occasion.)

In Peter **Aczel's** non-well-founded set theory, which is provably consistent if standard set theory (ZFC) is, there exist sets which are **not well-founded**, i.e. which have infinite descending membership chains. A case in point is the set  $\Omega$  which is its own unit set:

$$\Omega = \{\Omega\} = \{\{\Omega\}\} = \dots = \{\{\{\dots\}\}\}$$

By parity of reasoning, if we understand what is meant by " $\Omega$ ", we ought to understand as well what is meant by the following line:

$$v \leftrightarrow \sim(v) \leftrightarrow \sim(\sim(v)) \leftrightarrow \dots \leftrightarrow \sim(\sim(\sim(\dots)))$$

We can skip the brackets, because the scopes of the various negation signs are obvious:

$$v \leftrightarrow \sim v \leftrightarrow \sim\sim v \leftrightarrow \dots \leftrightarrow \sim\sim\sim\dots$$

So we are left with the empty operation of negation, a logical snowball with a hollow core: negation turned upon itself.

And we begin to see that the Liar is just negation-of-itself formulated in our finite language by means of **semantic ascent**. It's a purely **logical**, not a semantical **antinomy**.

What is specific about self-negation is that we are caught in it, because we cannot reject it by negating it, as we can in the case of a **normal contradiction**. Self-negation is already its own negation. Therefore, if we try to negate it, we join it and endorse it.

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Now, what Mike **Stange** showed on behalf of Fichte, is that the antinomy of negation is **central** to our thinking, not just a funny outgrowth at its margin.

Fichte starts with the **law of identity**: ' $x = x$ ', which is indeed an axiom of the logic of identity (if we care to axiomatise predicate logic with identity). Next, Stange joins the law of identity to the law of non-contradiction via the identity of indiscernibles: ' $\sim(\exists f)(fx \wedge \sim fy) \rightarrow (x=y)$ '.

If  $x \neq y$ , then  $(\exists f)(fx \wedge \sim fy)$

If  $x \neq x$ , then  $(\exists f)(fx \wedge \sim fx)$  vs. ' $p \wedge \sim p$ ' (law of non-contradiction)

So the **law of identity** is firmly linked to the law of non-contradiction and seems to belong right in the center of logic.

So, everything is identical to itself (on pain of contradiction). Therefore we have the concepts (a) of what is identical to itself and (b) of what is not identical to itself.



Take the latter concept: *that which is not identical to itself*. According to the law of identity, that concept is necessarily empty, nothing falls under it, not even itself. So it is a **non-self-instantiating concept**. But we saw that this latter concept leads us straight into an antinomy: it instantiates itself iff it doesn't. --- But then it is not identical to itself and thus a counterexample to the **law of identity** after all.

Logic begins to falter! Here is, where Fichte enters the scene. Logic has to fixed and secured: by a heroic **fiat** through which **reason** institutes itself and posits and opens up logical space. This original positing is reflexive and may therefore be called *the I*. If we think of it as active, it is **reason**; if we think of it as posited, it is **logical space**.

But of course, we can think of logical space only, if we contrast it with what is **not** logical space, but rather the logical chaos that surrounds logical space. This is the *Non-I*, which is posited by the I as well. And of course, everything is posited within logical space; so even the Non-I, i.e. that which is outside logical space, falls within it.

Fichte's **Doctrine of Science** – trying to save logic by a mighty fiat, a heroic self-institution of reason as the basic paradigm case of the law of identity – runs into inconsistency itself. But as in Hegel, that **inconsistency** proves to be the **motor** of theoretical development. A mitigating **synthesis** of the contradictory sides has to be found, and it has to be found as something irreducibly new. In the end, we need synthesis after synthesis, and the whole theory finally turns **practical**: It is **we**, by acting according to the moral law, who secure **logic**! But that turns out to be a never ending task, thus a case of bad infinity according to Hegel.

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## Transitions Into, With, and From Hegel's *Science of Logic*

### 2 Jan 14: From the *Phenomenology* into the *Logic*: pure being

**Four parts today:** First part: Fichte, logical space, readability thesis  
 Second part: The program of Hegel's PhS  
 Third part: Sense certainty as an example of how the PhS works  
 Fourth (small) part: The starting point of the Logic

#### First part: Fichte, logical space, readability thesis

We didn't quite make it to **Fichte** last week. So I shall start (A) with some very short remarks on his Doctrine of Science and, as I will use the term "**logical space**" in that context, I shall add (B) remarks on the use I want to make of that term in my interpretation of **Hegel's SoL**. Third (C), I will relate my use of "logical space" to Sellars's dualism of logical spaces.

#### A: Fichte's Doctrine of Science

Allegedly, Mike **Stange** showed on behalf of Fichte, that the antinomy of negation is **central** to our thinking, not just a funny outgrowth at its margin. The law of identity, ' $x=x$ ', may be connected to the law of non-contradiction, ' $\sim(p \wedge \sim p)$ ', via the identity of indiscernibles, ' $\sim(\exists f)(fx \wedge \sim fy) \rightarrow (x=y)$ '; and reflections on these matters show that we are in possession of the concept of *what is self-identical* and the complementary concept of *what is not self-identical*, the latter being paradoxical and in fact a counter-instance to the law of identity.

Here **Fichte** enters the scene. Logic has been placed in jeopardy from within and has to be fixed and secured from within: by a heroic **fiat** through which **reason** institutes itself, posits and opens up logical space, and offers itself as the basic paradigm example of the validity of the law of identity. This original positing is reflexive (reflective, self-conscious) and may therefore be called *the I*. If we think of it as active, it is **reason**; if we think of it as posited, it is **logical space**: the totality of what can be the case or exist and what can be thought of.

Of course, we can think of logical space only, if we contrast it with what is **not** logical space, but rather illogical chaos which we may (e.g.) think of as surrounding logical space. (Cf. **Plato** who conceived of logical space as the **cosmos of forms**, surrounded by the logical demi-monde of becoming and sense-perception, and further out, perhaps by unused *chôra*.)

Logical chaos outside logical space is the **Non-I**, which is posited by the I as well. But of course, everything which is posited is posited **within** logical space; so even the Non-I, i.e. that which is outside logical space, is posited as falling within it.

Fichte's **Doctrine of Science** – trying to save logic by a mighty fiat, a heroic self-institution of reason as the basic paradigm case of the law of identity – therefore runs into inconsistency itself. But as in Hegel, that **inconsistency** proves to be the **motor** of theoretical development.

A mitigating **synthesis** of the contradictory sides has to be found, and it has to be found as something irreducibly new. In the end, we need synthesis after synthesis, and the whole theory finally turns **practical**: It is **we**, by acting according to the moral law, who secure **logic**! But that turns out to be a **never ending task**, thus a case of bad infinity according to Hegel.

#### B: Logical space

**Logical space** is the totality of what can be the case or exist and of what can be thought of. For more detailed accounts see **metaphysics**! Metaphysics is the attempt to **map** logical space. To **Parmenides** it was homogeneous being, to **Plato** the realm of forms, to **Aristotle** the totality of substances (the sublunary hylomorphic ones and the immaterial forms above the moon), to **Spinoza** the singular infinite substance, to **Lewis** the set of (possible) worlds. Etc.

**Standard metaphysics** has developed competing pictures of logical space, conceived of statically. **Hegel's** non-standard metaphysics (his *Logic*), as we shall see, presents an **evolutionary** picture of logical space: Logical space arises from Parmenidean pure being by a logical **big bang**, called *becoming*, and runs through a succession of alternative shapes none of which is the true and final one. (“They execute the sentence upon one another [...] in conformity with the ordinance of [logical] Time”, says **Anaximander**.)

The **final** stage of logical space will turn out to be not one particular shape – the final winner, so to speak. That would turn Hegel's *Logic* into another variant of standard metaphysics. Instead, the final stage, called *the absolute idea* by Hegel, **encompasses** the whole logical process – and on the other hand sets free pure being again, this time as the trans-logical manifold of **physical** space and **physical** time.

### C. Two logical spaces?

We will talk about that in due course. For the time being, let me contrast logical space qua metaphysical **singularetantum** with a well known **dualism** of logical spaces, introduced by Wilfrid **Sellars**: the logical space of **reasons** and the logical space of **nature** (descriptions and causal explanations). This is not just a **homonymy**, so here is a conceptual road from Sellars's **dualism** of spaces to **monism**:

**Fichte** had these **equations**:                      The I = reason = logical space.

Qua I, reason was self-conscious; qua logical space, it was all of reality (including nature). No dualism of logical spaces! Sellars contended himself with dualism (a conceptual, not an ontological dualism). But he had nearly all conceptual resources at hand to proceed to monism. He could have advocated a **readability thesis**, i.e. he could have said, with Hegel, that “all things are a judgment” (EL § 167), viz. readable as Lagadonian, cartographic, predicate-free (“Jumblese”) elementary sentences and at the same time translatable into our ordinary predicate languages. But he didn't.

**Jumblese**, **Cartographic** (map language), **Lagadonian** (D. Lewis, OPW 145) are dependent (parasitical) extensions of predicate language, consisting only of elementary sentences that answer to certain constraints (they are all predicate-free, for instance).

**Jumblese**: Names are modified not by addition of predicates, by directly, by style. We have: One name (in non-neutral style) – one sentence, e.g. “Socrates” in capitals, thus: “SOCRATES”, meaning the same as “Socrates is wise”.

**Cartographic**: One name (in non-neutral style) – many sentences, e.g. “Socrates” in capitals, boldface and italics, thus: “**SOCRATES**”, meaning the same as (a) “Socrates is wise” plus (b) “Socrates sits” plus (c) “Socrates eats”.

**Lagadonian**: Things are treated as eigennames (i.e. as the ur-tokens of their own name-types). Inconvenient for communication, as witness Gulliver in the Academy of Lagadonia, but good for devising Carnapian state descriptions (says Lewis, loc. cit.).

**Sellars** went as far as to Cartographic in his **picture theory** of elementary sentences. But given, **first**, that in language acquisition observation reports are conditioned on sensory states (“language entry transitions”) he could and should have acknowledged that (via language acquisition) language entry transitions acquire quasi-inferential status and sensory states acquire the status of Cartographic sentences. (We learn to think in qualia.)

Given, **second**, that qualia (the contents of sensory states) “ain't in the head” (A. Byrne, M. Tye), one could and should conceive of manifest things with their phenomenal qualities as Lagadonian, Cartographic sentences.

We may then **oscillate** between **two ways** of looking at *things*: (1) Things qua Lagadonian names are **objects** (“object” is material mode of speech for “urtoken of a name type”). (2) Things qua complexes of Lagadonian sentences are complexes of elementary **facts** (“elementary fact” is material mode of speech for “Lagadonian predicate-free sentence”).

Things qua **objects** (Lagadonian names) are **prior ontically**, and things qua **facts** (Lagadonian sentences) are **prior epistemically**. Things qua facts (i.e. Lagadonian sentences) can be reasons, then. (Cf. Hegel’s logic of the concept: The real as Platonic forms, then as facts, then as non-atomic (inferential) facts, then as objects.)

The logical space of reasons is extended to embed the logical space of nature. Perceptual judgments are acts of **reading** things and **translating** them into predicate language. (John McDowell should be very satisfied with that **readability thesis**.) The age-old metaphor of the book of nature loses its metaphorical character and is turned into plaintext.

According to the **readability thesis**, when we first enter the logical space of reasons by acquiring our mother tongue, we at the same time extend the space of reasons to include natural phenomena. The quest for an **interface** between the logical space of reasons and the logical space of nature may thus come to a happy end.

### Second part: Hegel’s Programme in the *Phenomenology of Spirit*

Hegel faces the challenge of **Pyrrhonian scepticism** that had become prominent in the aftermath of Kant (and Reinhold). So he has to proceed in ways which are **immune to scepticism**. In fact, he claims that the PhSp is **scepticism** brought to its full **accomplishment** (vollbracht, consummated, cf. Enc § 78) – We always have to remain aware of this fact in order to understand what is going on in his philosophy.

E.g. we must **not** permit him any strong metaphysical (let alone empirical) **premises!** Never! So, let us forget everything we heard about the D-word (**dialectic**) and let us understand by “Hegel’s method” something quite **elementary** and **simple**: the way he proceeds (in theory building) in the face of philosophical scepticism.

Hegel **proposes** to the sceptic to join him in a thoroughgoing examination of our knowledge claims or, more precisely, an examination of our **philosophical** knowledge claims or, still *more* precisely, of our **basic claim** that in our **states of consciousness** (our mental acts and states) we are related to objective reality. This claim is **made explicit** in philosophy, but of course it is implicit in our pre-philosophical daily ways of thinking and acting.

**Traditional philosophy** has made explicit and tried to work out and justify this basic claim to objectivity in various **competing** categorial forms (cf. the competing ontologies of Aristotle and Spinoza, to mention but two examples of traditional metaphysical conceptions).

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In the *Phenomenology of Spirit* (1806/07) Hegel examines our claims to knowledge or, more precisely, the various **categorial forms** our general claim can take that in our states of consciousness we are related to what is real. So the examination is directed at **philosophical** or **categorial truth claims**, which need not be put into doubt artificially and held in doubt by some mental gymnastics like the Cartesian fiction of an evil **demon**, but which have in fact been moot ever since.

What Hegel means by ‘consciousness’ is, very roughly speaking, perceptually informed intentionality as organized around our general claim to objective knowledge. That claim expresses our **pre-theoretical** (implicitly philosophical) conviction that the passing show is objectively real, and it has, in metaphysical theory building, taken on different categorial forms.

Now, Hegel does not want to do any **botanizing** with respect to the history of philosophy; what he wants to do is to deduce systematically all categorial conceptions from next to nothing so that the **sceptic** may go along with him. For that reason he proposes the following procedure to the sceptic.

**First**, look for a superlatively simple categorial conception of the passing show to start with, i.e. in Hegel's terminology, look for a superlatively simple *Ansich*, or *in-itself*. Hegel, in the first chapter of the *Phenomenology*, starts supernominalistically, with the passing show conceived as a manifold of distinct individual entities as such.

**Next**, think of the **general structure** of consciousness. In our knowledge claims we hold that the real is epistemically accessible to us. That means we all pre-theoretically hold the following implicitly philosophical view (which Hegel does not endorse, but wants to **examine**):

What is objectively real and thus **independent** of our various beliefs is nonetheless essentially **related** to our beliefs and thus in a way **dependent** upon them. This view, which is close to **inconsistency**, is the kernel of (finite) **consciousness**. Consciousness thus is essentially a (proto-philosophical) view or a theory, and a latently inconsistent one at that. Its general, abstract structure might therefore as well be called the *contrast* or *opposition* of consciousness (der Gegensatz des Bewusstseins). In the introduction to the *Phenomenology* Hegel characterizes it in the following way:

[Consciousness qua cognizing subject] *distinguishes* [...] something from itself [the object] to which it *refers* [or *relates* itself] at the same time, or, as this is usually expressed, something is *for it* [for consciousness]; and the determined [i.e. dependent, co-variable] aspect of the *referring* or of the being of something *for a consciousness* is *knowledge* [or, in the case of failure, the mere claim to knowledge]. But from this being for something other [the being of an object for consciousness, the epistemic accessibility of the object] we do distinguish the *being in itself*; what is [essentially] related to knowledge is at the same time distinguished from knowledge and is posited as *being* as well apart from the relation [to knowledge]. The side [or aspect] of this in-itself is called *truth* [or we could say *reality*, if we preferred to reserve the word 'truth' for statements and beliefs; reality is so to speak truth in rebus, the self-understood truth of Lagadonian sentences].<sup>1</sup>

Dressed in philosophical **jargon** this statement might look fraught with moot **presuppositions**. But in fact Hegel here is trying to **get rid of** philosophical presuppositions and to ally with the sceptic in saying something quite elementary. He just mentions and describes, but does **not endorse**, the basic claim of consciousness, according to which the *Ansich* (the in-itself) of what is real determines the *Für-es* (the for-consciousness) of what is real.

The *Ansich* is a categorial conception of *the real as it is in itself*, thus an implicit **proto-ontology** produced by consciousness. The *Für-es* is a categorial conception of *the real as it is epistemically accessible*, thus an implicit **proto-epistemology** produced by consciousness. And consciousness, at its most basic, is the claim that the *Für-es* is (or at least ought to be) fully determined by the *Ansich*.

Should, for example, the real *in itself* consist of many distinct particulars but be present *for consciousness* as a plurality of universals, then consciousness – in that specific form – would be **categorially false**, i.e. a piece of false (pre-theoretical, naïve) philosophy. But if that is so, then poor consciousness! Its full **success** is bound to be its **end**, for as soon as the *Für-es* takes on the categorial conception of the *Ansich*, there will be nothing left to **ground the difference** of role between the *Ansich* and the *Für-es* which is of the essence of consciousness.

Consciousness, we begin to see, in its self-opposition or inconsistency (in its subtle and unerasable mauvaise foi), will have to sublimate itself into some epistemic state beyond itself, a

state which Hegel calls **absolute knowing**. But I am getting ahead of my story and must now come back to the testing procedure that Hegel proposes to the sceptic.

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Up to now, Hegel has offered us a superlatively simple

**starting ontology**: (the spatiotemporal passing show as) **distinct individuals**  
plus the

**abstract structure of consciousness**,

i.e. the difference of role between the *Ansich* and the *Für-es*. That abstract structure, Hegel thinks, functions like an **input/output device** for ontologies and epistemologies, or like a **recursive function** with the *Ansich* or **proto-ontology** as the **independent** variable and the *Für-es* or **proto-epistemology** as the **dependent** variable.

The structure may thus be put to service as a device for ‘**computing**’ a *Für-es* given a certain *Ansich*. You put in a categorial conception as the *Ansich* (an ontology), and the device puts out a categorial conception as the co-ordinated *Für-es* (an epistemology), a conception which ought to be, but by no means always is, the same categorial conception as the *Ansich*.

$$\text{Ansich (proto-ontology)} \quad \Rightarrow \quad \square \quad \Rightarrow \quad \text{Für-es (proto-epistemology)}$$

abstract structure of consciousness

Thus Hegel (or we) need not evaluate a given proto-ontology from our **external point of view**, by comparing it with our own favourite ontology. That would be **dogmatism**, and the **sceptic** would be right to protest against such a testing procedure.

Instead consciousness itself is a kind of **theory** or, better still, a **theoretician** (it’s people like us after all) and can at least **falsify**, if not verify, its own claims. For consciousness is defined by the claim that the *Ansich* determines the *Für-es* according to its own categorial form.

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We will get to an **example** of how the ‘computing device’ works, when we come to talk about the first chapter of the *Phenomenology*. For the time being suffice it to say that in that chapter Hegel shows that if you start the device by putting in a **supernominalistic ontology** of distinct individuals, the device will deliver as output a **Platonist epistemology** of universals – so that this first form or shape of consciousness, *sense-certainty*, is falsified. But how, from there, is the testing procedure to **go on**?

Viewed from the **internal** standpoint of sense-certainty, it is the Platonist *Für-es* which is **discredited** by the nominalist *Ansich*. But viewed from our **external** standpoint the failure must be blamed on the independent variable, i.e. on the *Ansich*. It was the input of the nominalist *Ansich* that produced the output of a Platonist *Für-es*. Therefore the nominalist *Ansich* is **discredited** as well. We need a new *Ansich* as a new source and criterion for a new *Für-es*.

In Hegel’s words:

It thus occurs to consciousness that what it formerly took to be the *in-itself* is not in itself, or that it was in itself only *for it* [for consciousness]. So, when consciousness inspects its object and finds that its knowledge does not correspond to the object, the object itself does not stand the test either; or the criterion of the examination changes, when that which was to be tested by it does not stand the examination; and the examination is not only an examination of knowledge, but also of the criterion for testing.<sup>ii</sup>

Hence, the **testing proceeds** like this: We let consciousness choose an *Ansich* (an ontology) and then wait and see what *Für-es* (what epistemology) is thereby determined. If the *Für-es* consciousness comes up which differs categorially from the *Ansich*, then the operative shape of consciousness is **falsified**, and consciousness must correct itself.

So, we let it choose a **new *Ansich***. But we have to be careful not to fall into philosophical **botanizing** at this point. What is needed is a **unique candidate *Ansich***. And a unique candidate *Ansich* is what we have got, for consciousness has produced exactly one deviating categorial conception in the role of the *Für-es*. It can thus try the old *Für-es* as the new *Ansich*.

Hegel calls this **change of role** of the previous *Für-es* a ‘**reversal of consciousness**’.<sup>iii</sup> Our first input into the abstract structure of consciousness was an ontology of distinct individuals, and the output was an epistemology of general traits. In a second attempt we must therefore put into the structure an **ontology of general traits** (given the passing spatiotemporal show), and the structure will yield some new epistemology.

Hegel expects that consciousness will falsify itself in this procedure over and over again and will thereby systematically **generate and reject** all possible ontologies and epistemologies, until in the end it reaches a **fixed point** where input and output are **identical**. This fixed point Hegel calls *absolute knowing*.

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Suppose that Hegel is right and that the input/output procedure does lead to a fixed point in the event. Still, there might be launched at least **two sceptical objections**.

**First**, the testing procedure could have left out some categorial forms, and, **second**, the fixed point as a shape of consciousness would still not be verified, but only not falsified. The first problem is the **problem of completeness**, the second one is the **problem of verification**.

Ad (1). The problem of **completeness** will lose much of its bite, if in the course of the examination of consciousness it turns out that all categorial conceptions of the real which have been developed in the history of philosophy are taken care of, up to the latest philosophy of Hegel’s (or our) day. The exposition of the successive self-correction of consciousness should turn out as an idealized reconstruction of the **history of thought**; and Hegel thinks that indeed it does.

The **burden of proof** then lies with the **sceptic** who would have to come up with some categorial conception, either from the history of philosophy or of his own making, and show that it was not taken care of in Hegel’s theory. (Perhaps we from our present vantage point could cite **Frege** and the methodological idea propagated by some Post-Fregeans: to let a priori semantics play the role of a first philosophy, as something new that Hegel did not foresee.)

Ad (2). The problem of **verification**, may be posed thus. The exact correspondence of the *Für-es* and the *Ansich* in the fixed point is only a **necessary**, not a **sufficient** condition of the **truth** of consciousness. For even the last *Ansich* in the series is but a categorial conception devised by consciousness. And how are we to find out, whether it is the **objectively correct** conception? Wouldn’t we have to know quite independently what the true *Ansich* was?

Hegel answers that the process of consciousness is **self-fulfilling** or, literally, ‘**self-fulbringing**’ scepticism (‘**vollbringen**’ means *to consummate*).<sup>iv</sup> This holds in **two respects**.

(a) **First**, each shape of consciousness occasions a specific sceptical doubt which forces the process to go on and leave that shape behind. In this way philosophy-directed scepticism is embedded in the *Phenomenology of Spirit*.

(b) **Second**, the categorial base of scepticism as such (i.e. as directed against knowledge claims whatsoever, including ordinary ones) is itself generated, criticised and left behind as one particular shape of consciousness in the process of examination.<sup>v</sup> So at the fixed point our knowledge will have to be informed by **reality**, if only for lack of viable alternatives. (And again the burden of proof would lie with the **sceptic**.)

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What happens at the **fixed point**? Being-in-itself and being-for-consciousness take on the **same categorial form** there. So they do not differ intrinsically any longer; only the abstract difference of their **roles** is meant to last.

But this is **impossible**, an untenable postulate from the external standpoint of the theoretician. Viewed from the **inside**, there is nothing left to ground any difference of role. The duality of the *Ansich* and the *Für-es* **collapses** at the fixed point, and so does the related duality of that which was to be in itself, viz. the **object**, and that **for which** it was to be the **subject**.

**In-itself** and **for-consciousness**, **object** and **subject**, all **collapse** into indifference. The structure of consciousness itself is lost in indifference and immediacy.

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So far, then, it seems that Hegel's immediate predecessor, **Schelling**, qua philosopher of immediacy and intellectual intuition, is **vindicated**. But Hegel does not want to wind up in complete **immediacy**, the **night** in which all cows are black. So he must claim that something is different between his and Schelling's philosophy.

The fixed point is **immune to scepticism**, because it is no **particular** shape of consciousness any more. As soon as *Für-es* and *Ansich* are congruent, consciousness is transformed into **intellectual self-intuition**. But this transformation can be looked upon in **two different ways**.

- (a) On the **one hand**, absolute knowing is intellectual self-intuition, an inarticulate point which marks the boundary between the *Phenomenology* and the *Science of Logic*.
- (b) But if, on the **other hand**, absolute knowing marks this boundary, it will receive a rich content from what is **separated** and at the same time **linked** by it. In this new perspective absolute knowing isn't just a limiting **point**, but the encompassing **unity** of all previous shapes of consciousness.

All categorial forms are in it **degraded** to **fluid** moments of an evolving and ongoing totality. Hegel tries to illustrate this by comparison with the **organic** process of a plant **whose** successive forms – bud, blossom, fruit – as he says

do not only differ, but also displace each other as incompatible with one another. But their fluid nature at the same time turns them into moments of the organic unity in which they not only do not militate against each other, but are one as necessary as the other; and only this equal necessity constitutes the life of the whole.<sup>vi</sup>

The **actual whole**, we read some lines later, is 'the result together with its coming about'; while 'the bare result is the corpse which has left the guiding tendency behind it'.<sup>vii</sup>

That means Hegel does not want to supplant **traditional metaphysics** with a new one; his new metaphysics – if it can be called that – consists in acknowledging the **game** of competing metaphysical theories as the nature of our consciousness as well as of reality.

### **Third part: Sense-Certainty**

To give an example of how consciousness works as an **input/output device** for categorial forms, let me make some remarks on the **first chapter** of the *Phenomenology*.

The **simplest ontology**, given the passing show, would seem to be an ontology of distinct **individuals** spread out in space and time, and the **simplest epistemology** an epistemology of **immediate** presence to consciousness. Hence, the **nominalist ontology** of distinct individuals would go together well with an **empiricist epistemology** of sense impressions; in fact, ontology and epistemology would coincide, for the impressions just *would be* the distinct individuals. That is the opening stage in the process of consciousness. Hegel calls it *sense-certainty*.



Given: a nominalist ontology of distinct individuals  
 Wanted: an empiricist epistemology of sense impressions

Now, thinking and saying have **propositional form**: We **refer** to something and **predicate** something of it. But if the individuals of sense-certainty are really **distinct** and don't have **any common traits** (*things with common traits* would involve introducing a different, much more elaborate ontology), then all we can say about each of them is that **it is or exists** (has veridical or existential being).

**Referring** to an individual, as Peter Strawson has shown, **presupposes** that we know some individuating fact about it;<sup>viii</sup> but in the scenario of sense-certainty there are **no individuating facts**, because each individual just *is* or *exists*, and this is all we can say. So we, acting for **sense-certainty**, cannot refer to any one of the many individuals, since we cannot **individuate** them in thought or in speech.

But if we cannot individuate them by **description**, maybe we can do so by **ostension**. Under normal conditions of course we can. But under normal conditions our **indexicals** are suitably backed up by **descriptions** ('*here*, in this room', '*now*, while it is raining', '*I*, the man who is presently raising his hand' etc.).

In the **stage of sense-certainty** on the other hand we would have nothing with which to back up our use of indexicals. Therefore, at that stage, we could not refer to individuals in thought or in speech: we could only '**mean**' them in a very special sense of this word, in which Hegel uses it to signify a cognitive attitude towards **logically private objects**, the very idea of which was attacked by **Wittgenstein** in his **private language argument**.

The individuals of sense-certainty would indeed be such logically private objects, they would be logically *mine*, if they did exist – an insight Hegel expresses by the pun: What is *mine*, I can only *mean*. ["Was **mein** ist, kann ich nur **meinen**."]

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This, so far, is the scenario of sense-certainty as described from the **external standpoint** of the **philosopher** or **theoretician**. Hegel next asks how the scenario would present itself from within, i.e. from the **internal standpoint of sense-certainty**, and then goes on to consider **three variants** of sense-certainty, one **realistic**, the next **idealistic** and the last a kind of **neutral monism**.

He has **four terms** to work with: *Ansich*, *Für-es*, object, subject. These allow for a **combinatorial** approach in which the 'es' of the *Für-es* is always to be identified with the subject, but in which the *Ansich* may be associated either, **realistically** and most naturally, with the **object**, or, if that should fail, again with the **subject**, in the spirit of **idealism**. If that won't work either, the last resort will be to **fuse object and subject** in the spirit of **neutral monism**.

Four terms: *Ansich* (A); *Für-es*; subject (= es) (S); object (O).

- |               |    |
|---------------|----|
| (1) A = O     | R  |
| (2) A = S     | I  |
| (3) A = S = O | NM |

But let us proceed step by step. **First** then let us put the object into the position of what is in itself, and let us ask, whether it can occur in the subject's knowledge just like it is in itself. It is posited to be one distinct individual among many in space and time, immediately given to the subject. So it must be referred to by **pure indexicals** like '**here**' and '**now**'.

Therefore, it will exist for the subject as **something here and now**. But what are the **senses** associated with these indexicals? Hegel antedates **R. Chisholm, H.-N. Castañeda, J. Perry** and others by claiming that the sense of an indexical **cannot be reduced** to a description.<sup>ix</sup>

To show this he invites us to perform a little **experiment**. Take any old candidate reduction for the sense of ‘now’. Maybe it is night at the moment and you come up with the candidate ‘**at night**’. But you might as well have offered any other description you liked. Next, **write down** your reduction thesis. If the thesis is true, it won’t lose its truth by being written down.

But notice that this holds only for **eternal, non-indexical** sentences. If you write down an **indexical** sentence, (occasion sentence) that sentence might well **change** its truth value in the course of things. So make sure you don’t write down an indexical sentence like

‘Now it is night’.

Write down a **semantical** or **conceptual thesis** instead, something like

The indexical ‘now’ means *at night*. – Or:

The sense of ‘now’ is the night. – Or, as Hegel briefly puts it:

The now is the night.

This **eternal sentence** cannot change its truth value. But some hours later the night has gone, the day has dawned, the sun also rises, and eventually it is high noon.

Now look at your sentence again: ‘The indexical “now” means *at night*’ – Are you still willing to believe it in the glittering sun? Of course not. But then, if you now think that the sentence is false, it must have been false all along, being an **eternal sentence**.

The **point** of this little thought experiment is that, no matter how hard you try, you won’t find a **description** which will do the job of the indexical ‘now’. If you want to grasp the sense of ‘now’, you must **abstract away from** night and day, morning and evening, winter and summer etc. You must **negate** all these **determinations**, just to retain something completely **general** or **universal**; and the same holds true, *mutatis mutandis*, of the spatial adverb ‘here’.

So the **object of sense-certainty**, which was meant to be a **distinct individual** and nothing but a distinct individual among many, turns out to be *for consciousness* not as an individual, given immediately, but as something **mediated by negation and abstraction** (‘not night, not day, ...’, ‘not in Chicago, not in Heidelberg, ...’) and **completely general**.

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But sense certainty has yet another card to play and moves on to its **second stage**. If the **object fails** in the role of what is *in itself*, **skip it** and put the **subject** in its place. So, now, what is real is *me*, the subject, the details of the passing show being floating accidents of mine.

But now the problematic of the first stage **reoccurs** in a different shape. For in sense-certainty I am present to myself only through the sense of the **pure indexical ‘I’**, whose sense is as much mediated by negation and as general as the senses of ‘here’ and ‘now’.

This leads to the **third and final stage** of sense-certainty, in which the **whole** of it, not just the object or the subject, is supposed to be what is in itself and given immediately.<sup>x</sup> The difference between subject and object is now *well lost*, and so are all remnants of **discursiveness, propositionality**, and of the possibility of **falsehood** and **error**.

We finally have arrived at a **pre-propositional level** of thinking or intuiting, where immediacy really reigns. At that level consciousness doesn’t **have impressions**, but **is an impression**: a **quale** whose cognitive horizon does not extend beyond itself. So there is no room for any form of generality any more. Immediacy and individuality seem to be reached at last.

But if this scenario is still to count as a form of **consciousness**, the **difference of role** of the *Ansich* and the *Für-es* and thus the semantic duality of reference and predication must somehow be preserved even in this meagre context.

By *fiat* then let an impression as such have **proto-propositional form** and let it **refer** to what is here and now, where *here* and *now* are defined by the impression itself, and let it **predicate** immediate being of itself. This strange construction is the last resort in the attempt to vindicate sense-certainty.

But it is **all in vain** because of the **continuous** nature of **space** and **time**. There exists nothing logically atomic in space and time; each real bit of spatio-temporal reality is extended and thus a **one in many**. But then the problem of how to individuate each of the many parts of a given bit of space-time, recurs and with it the problematic of the first stage of sense-certainty.

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The **options** for conceiving the real as a manifold of immediately given distinct individuals are **exhausted** then and sense-certainty is definitely **falsified**. Its objects would be epistemically accessible not immediately and not as individuals, but via negation and as universals.

In the **successor shape of consciousness**, which Hegel calls **perception**, therefore the passing show is now conceived as being in itself a manifold of perceptible **universal traits**. This will lead to a dialectic of things as bare particulars and as bundles of properties, in the **second** chapter. (But we shall now leave the PhSp.)

#### Fourth (little) part: The starting point of the Logic

So much for the *Phenomenology*. Hegel's **programme** in the *Logic* may be viewed either in light of the *Phenomenology* or in its own self-sufficient light.

The *Phenomenology* offers as a **starting point** and as **subject matter** for the *Logic* its bare **result**, i.e. **absolute knowing** in the inarticulate and immediate version. But it does **not** supply a **method**, the phenomenological method with its dependence on the duality of an *Ansich* and a *Für-es* being exhausted, nor any results to serve as **axioms** for the logical enterprise.

So, to come into the *Logic*, we may as well, instead of accomplishing scepticism painstakingly in the manner of the *Phenomenology*, just **postulate** that scepticism be accomplished, i.e. that everything (philosophical) be put into **doubt**. We will thereby achieve complete **presuppositionlessness** in the short way, by nothing more than our free decision to get into pure thinking. (For the *decision to think purely* cf. what Hegel says in § 78 of the *Encyclopedia*.)

The *Logic* then may be defined as **the (unique) presuppositionless theory**; and the **working hypothesis** that there is such a thing as the presuppositionless theory is, to put it mildly, so strong – in fact on the very edge of **inconsistency** – that it becomes surprisingly easy to formulate requirements that individuate the theory (step by step).

If we **spurn** the phenomenological **guarantee** that starting with absolute knowing qua immediate identity of thinking and reality will provide us with some subject matter – and we may readily spurn that guarantee, because the *Phenomenology* doesn't tell us how to treat that subject matter anyway – then the *Logic* will have to find its subject matter all on its own.

## Transitions Into, With, and From Hegel's *Science of Logic*

### 3 Jan 21: First steps within the *Logic*: From being to the operation of negation

- Today:**
- I. Methods of philosophical exegesis
  - II. H.-P. Falk's approach to the SoL as an example
  - III. Another approach and the beginning with pure being
    1. Pure being
    2. Hegel about being
    3. Indeterminacy and immediacy. Excursus: Ur-states-of-affairs
    4. Incomparability, emptiness, thinking and intuiting
  - IV. The operation of negation and logical time (and indexicality)
  - V. Becoming and Being-there
  - VI. Return to three open tasks

#### First part: Methods of philosophical exegesis

Possible ambitions and methods for the interpretation of philosophical works (cf. Christian Martin, *Ontologie der Selbstbestimmung. Eine operationale Rekonstruktion der WdL*, Tü 2012):

commentary (historically and philologically ambitious),  
 paraphrase (doxographical),  
 argumentative reconstruction (may amend the interpreted theory),  
 ... (etc.)

An argumentative (or inferential) reconstruction may either start **from the text** or start **from the rules of the game** that the author of the text laid down.

The rules of the game for the SoL are particularly simple:

Let's construct *pure thinking* or *the singular presuppositionless theory* (PLT)

In our **background thinking** we must avoid metaphysical or any other moot hypotheses, e.g. about thinking or about theories. "Thinking" connotes spontaneity, e.g. acts of judging; "theory" connotes theorems, propositions, something fixed on paper. Our attitude: Only time will tell, what pure thinking or the PLT amount to (perhaps to nothing much; our working hypothesis may lead to shipwreck – if not for the promise of the PhSp).

**Foreground thinking** is the PLT or pure thinking itself (our object theory, object logic).

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Back to **exegetical method**. Personally, I was on a loss when I tried to understand the *Logic* starting with its own text. It took my acquaintance with a book by H.-P. Falk, *Das Wissen in Hegel's WdL*, 1983, to convince me that there was a chance left for me, if I tried to understand Hegel by just following the simple rule of his game.

One can then start developing one's own suggestion at pure thinking and then compare it with Hegel's text and correct either side (and keep on going to and fro between one's own findings and Hegel's text). This will make for terminological independence, by the way. But of course the aim is to completely understand the use that Hegel makes of his own terms.

#### Second part: Falk's approach as an example

There may be different **equivalent** ways to construct the PLT (or pure thinking), but they should lead to the same result: coincide with Hegel's text or amend the text consensually.

**Invitation:** Try your own way (perhaps in a seminar paper)!

**Falk's approach:** There is a simple, skeletal background text for all of the *Logic*; it is inconsistent, which is desirable though, (1) because our companion, the Pyrrhonian sceptic, will always derive ' $\sim p$ ' from any given ' $p$ ' anyway and (2) because this leads to a sequence of measures to steer and control the inconsistency.

The skeletal background text must not contain any non-logical constant terms, only variables plus the (singular) primitive term of predicate logic (with identity): " $=$ ". It must specify something, a structure to serve as its **model**. But " $x=y$ " is true in every structure. If one lowers the number of models down, one will wind up beyond target though: with a text that does have no model at all because of inconsistency:

$$\{“x=y”, “x\neq y”\}$$

The counterlogical structure that serves as “model” of that set may be dubbed “**becoming**”. The values of the variables, ‘x’ and ‘y’ – counterlogical aspects of becoming – may be dubbed “**being**” and “**nothing**” respectively (or “blabla” and “blublu”). As far as  $x=y$ , we have only being, as far as  $x\neq y$ , we have being as well as becoming.

This strict inconsistency, of course, is intolerable, so we must do something about it. Falk creates an asymmetry between the two open sentences, viz. takes the identity as basic (describing a substrate: “**being-there**”) and the non-identity as secondary, describing two aspects of being-there: **reality** and **negation** (i.e. *sterêsis*, *privatio*).

Etc. - It did not really convince me in the end. The idea seems to have been that throughout the logic of being and of essence the inconsistency was continually minimized, but would not vanish, so that all “models” remained counterlogical. (The *Logic* here remained a **critical exposition** of metaphysics.) But at the end of the logic of essence one “alternativeless” extra-logical interpretation suggested itself as the intended model: **transcendental subjectivity**. In the logic of concept then Hegel joined Kant and Fichte to form a philosophical triumvirate.

### Third part: Another approach and the beginning with pure being

#### III.1. Pure being

Our strong **working hypothesis** (WH) in our (otherwise) weak **background logic** (BL):

Pure thinking is possible: we can construct *the* (**unique**) **presuppositionless theory**.

The *foreground* or **object logic** (OL) qua presuppositionless does not presuppose

any doctrines,  
any terminology (conceptual resources),  
a method,  
a subject matter.

OL will have to find or to create its subject matter all on its own and step by step.

What about **BL**? BL presupposes (1) no philosophical doctrines, (2) only a provisional terminology: “OL”, “pure thinking”, “PLT” – but we do not yet know definitely what amounts to –, (3) no particular method, just: “minimize presuppositions”, (4) OL (= pure thinking = PLT) as subject matter – but we do not yet know what shape it will take.

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What could be the first **act** and/or **content** of OL? WH makes us posit something completely **neutral**, immune to scepticism; something that cannot (at least not effectively) be denied;

something *Tractarian*: ‘that which *all* propositions, according to their nature, have in common with one another’, ‘the general form of proposition’ (*Tractatus*, 5.47).

Wittgenstein calls it ‘the one logical constant’ and says that it ‘is the essence of proposition’ as well as ‘the essence of the world’ (5.471, 5.4711). Again, he identifies the *essence of proposition and the world* with the *logical form of picturing* and with the *form of actuality* (2.18).

For our **Hegelian** purposes it is that which is uniformly **co-claimed** in any particular truth-claim whatsoever and thus cannot be denied, or denied only on pain of pragmatic inconsistency: veridical (veritative, alethic) being as such, i.e. **being-the-case as such**, *to on auto* – or however you want to call it. Hegel calls it: **(pure) being**.

### Two warnings:

**First:** We must not draw any inferences from the way we call it though, but only from its theoretical job (according to WH)!

**Second:** We do **not know** whether there is any such thing like an alethic being common to the contents of all truth claims; we just must **postulate** it for the sake of WH! So, let’s postulate it and see **what it will be like**.

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### III.2. Hegel about being

If all goes well, we’ll come up with what **Hegel** says about (pure) being. So what does he say?

He starts with the one word sentence “Being” as a (tentative) **formulation** of the theorem:

(0) “Being” is designed to *state* (mean) *being*.

Then he leans back and says quite a lot of things about being by way of what he later calls “**external reflection**” (SoL, transl. Miller, p. 110). External reflection comes in different grades, i.e. it can be more or less external: it may concern “the nature of the Notion itself” or be “an external comparison” (ibid.). Either way it is to be contrasted with “that which is posited in a notion” and *belongs in the developmental consideration of that notion, to its content*.

Now, it seems that strictly **nothing** is posited yet in **pure being** so that everything we can say about it belongs to our external reflection. Otherwise Hegel would be paradigmatically inconsistent in what he says about being. Let’s make a little list:

Being, as (0) tentatively expressed by the one word sentence “Being”, is:

- (1) indeterminate,
- (2) immediate,
- (3) incomparable (equal only to itself, not unequal relatively to another), homogeneous
- (4) emptiness
- (5) pure (i.e. empty) intuiting,
- (6) pure (i.e. empty) thinking,
- (7) nothing.

An impressive list of strong claims about being – by way of **external reflection**, for, if being is indeterminate and empty, you must not at the same time try to determine it by 7 theorems.

So, obviously, Hegel makes a distinction between what being is like

- (a) for pure, presuppositionless thinking,
- (b) for us (our background thinking).

These two levels are, again, our (a) **object logic** (OL) and (b) **background logic** (BL). OL is pure thinking itself, the presuppositionless theory we are looking for. BL is our theory of how a presuppositionless theory might be possible and how it would have to look like.

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### III.3. Indeterminacy and immediacy. Excursus: *ur-states-of-affairs*

Let us now step back from Hegel's text and see, if we can **independently** develop and justify what he is doing and saying.

The distinction of levels (OL and BL) is an immediate consequence of WH. As players of the **game** of giving and asking for **reasons** we are not able to propose a presuppositionless theory, at least not on our own account. Whatever we propose is open to possible doubt or negation, and quite trivially so: Whatever content we propose is **propositional** and thus subject to **bivalence**: It is proposed as **true** and may ipso facto be **false**. Such is the way of objective truth claims, i.e. of *consciousness* as investigated in the PhSp:

The way of (finite) consciousness, i.e. our practice of raising (objective) truth claims, the game of giving and asking for reasons:

Objectivity *entails* independence of claimed fact from act of claiming, *entails* possibility of error, *entails* bivalence of judgment (T / F) *entails* propositional (S-P-) structure.

We are here all standing on the standpoint of consciousness, i.e. the game of reasons. From that BL-standpoint we want to construe a perhaps counterfactual (or even counterpossible?) standpoint: an imaginary **theoretician** existing in a **non-standard** epistemic context who can entertain such an extreme "theory" as OL.

To repeat Hegel's own words, OL is the **internal development** of the Notion itself, while BL is our "**external reflection**". But BL must not be **too** external, if it is to qualify as the logical background theory. It is the background *theory*, only if "it concerns the nature of the Notion itself" and is not just "an external comparison" (SoL 110). (Hegel's "remarks" to the main text are mostly such external comparisons, e.g. with Parmenides, SoL 83, or Kant etc.).

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Now from here it is a short path to our points (0) through (7), especially to point (0).

If OL starts with a '**theorem**' which cannot be denied effectively, then it cannot start with a theorem at all, because theorems have propositional form and are thus bivalent (true or false) and can be denied, doubted, negated. For **any theorem whatsoever** the possibility of error has been provided for (to use a Wittgensteinian turn of phrase, from the *Blue Book*).

Thus the first content of the object logic cannot be propositional, but must rather be **pre-propositional**, like a Humean sense **impression**, though of course not **sensory**, but **intellectual**.

The **one word sentence** "Being" therefore is an inadequate attempt to say, what cannot be said, but only "intuited" (viz. by intellectual intuition). So, we have justified **point (0)**.

We have at the same time already made a step towards the justification of **points (5) and (6)**, where being is equated with pure intuition and pure thinking respectively. But in due order!

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**Point (1): indeterminacy.** Pure *being* has to be indeterminate (undetermined), because we abstracted away from all determinations of specific truth claims in order to retain nothing but the common factor of all of them, which must be extremely neutral and thus completely indeterminate. As soon as we said something determinate, we would make a choice and our saying what we said would not have been strictly without alternative and without presupposition. So, this is **point (1)** then.

**Point (2): Immediacy.** In claiming immediacy we appeal to what Sellars called the **framework of givenness**. Philosophers of all predilections have thought that some items must to be

given immediately, in a *knowledge not by description*, but *by acquaintance* (Russell). Hegel seems to join them here; but not without a convincing reason.

For what remains after abstracting from all determinations of truth claims (the *one logical constant*, Wittgenstein) **must** be taken up by thinking as something **given**. We saw – point (1) – that this content doesn't have **propositional form**. It's a **pre-propositional thought content** (if such there be), i.e. a thought content we can only know of by Russellian "**acquaintance**", i.e. immediately.

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**Excursus on pre-propositional contents.** I call those pre-propositional thought contents "**ur-states-of-affairs**" ("Ur-Sachverhalte"), "**urstates**" for short.

A propositional state of affairs (in short: a **proposition**) has propositional and thereby logical form. An urstate need not have any logical form.

In the **history** of philosophy philosophers have appealed to two kinds of urstates: **intelligible** urstates like e.g. **Platonic forms** and **sensible** (sensory) urstates like e.g. **Humean impressions**. Forms and impressions are 'given' to thinking and perceiving subjects. Subjects know them **by acquaintance**, if they know them at all.

Knowledge by acquaintance is supposed to be **immediate** and **immune to error** (the subject is infallible in it). If you believe a proposition you may always be wrong. This is a purely **logical** point. You may be wrong, because for every proposition there is another proposition which is its **negation**, and that negation may instead be true.

In the realm of propositions, **bivalence** rules. You always have the choice between "p" and "not p", and in that sense (if no stronger one) you may always be mistaken. But in the realm of urstates you just are confronted with a given urstate, e.g. an impression of red. There does not seem to be any negation of that urstate around as a possible alternative.

Indeterminate and immediate **being** then is an urstate, an intelligible or logical urstate. It has no internal structure. It just fills logical space (or *is* all of logical space), without any possible alternative.

But the framework of givenness or immediacy, though it has played important roles in the history of philosophy (from Parmenides and Plato to Hume and Russell), is logically or conceptually unstable. Hegel takes the framework seriously – he has to, given the working hypothesis – and starts with one **singular superlative urstate** for (non-discursive, intuitive) thinking, which he calls "(pure) being". The logical instability and inconsistency of positing such an urstate is what drives his theory to further (ur-)states. So much for the immediacy of being.

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#### 4. Incomparability, emptiness, thinking and intuiting

**Point (3):** Being is **incomparable** (equal only to itself, not unequal relatively another) and **homogeneous**. This is easy enough. The one singular urstate: *being*, in order to be without alternative for thinking, has to be identical to the whole of logical space. But then it is incomparable. And logical space cannot be in any way differentiated at this early stage of thinking. It must be homogeneous (for lack of all determinations).

**Point (4): Emptiness.** If *being* is logical space qua (still) devoid of determinations, it is an empty logical space: "pure indeterminateness and emptiness".

There is nothing to be intuited in it and nothing to be thought in it – which brings us to points **(5) and (6)** and their respective identifications:



Being = pure intuiting itself = empty thinking.

With **urstates**, three important distinctions are undercut:

- (a) the distinction between **intuiting** and **thinking** (because *discursive* thinking is associated with propositionality),
- (b) the distinction between **object** and **subject** (because objectivity is associated with the possibility of error and therefore also with propositionality), and
- (c) the difference **between** act and **content** (because the act would have to belong to the subject and the content to the object).

**Consequence:** Our BL seemed to be **one step remote** from being, because being seemed to be the subject matter of the OL, while OL seemed to be the subject matter of BL. But now it turns out that being and pure thinking (OL) just coincide. So, BL is the theory of both: of pure being and *ipso facto* of pure thinking. Both are one and the same (at the beginning of SoL).

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#### IV. The operation of negation and logical time (and indexicality)

**Point (7): Being is nothing.** Taken in isolation, this may come as no surprise, after all that has been said about being. What makes it non-trivial and challenging is that Hegel will go on to say that being and nothing are “absolutely distinct” as well.

What Hegel wants to convey with (7) seems to be the thought that pure being is **contaminated** with **negativity** right from the start. Why should that be so?

I will sketch **two** independent attempts to show why (you are invited to devise further attempts), beginning with the rather external, text-independent **way of truth-functional negation**.

There is **more** to logical space than just **pure being** (or emptiness). Even if everything else is an illusion (Parmenides), then in the mode of seeming there still “are” (seem to be) a lot of distinctions and determinations. Even Parmenides acknowledges a “passing show”, albeit in the mode of illusion (*doxa*).

Therefore it is **trivial** and thus **no** substantive **presupposition** to “postulate” a kind of operation on pure being that will lead to somewhere else.

We found pure being by reflecting on truth claims: as the minimal neutral ingredient of each and every truth claim, considered itself as a superlative truth claim. So what we need is a **(one-place) truth operation** or truth function. Exhaustion of possibilities yields four one-place truth functions:

$\begin{array}{c} p \\ \hline T \\ F \end{array}$	$\begin{array}{c} f(p) \\ \hline T \\ T \end{array}$	$\begin{array}{c} p \\ \hline T \\ F \end{array}$	$\begin{array}{c} g(p) \\ \hline T \\ F \end{array}$	$\begin{array}{c} p \\ \hline T \\ F \end{array}$	$\begin{array}{c} h(p) \\ \hline F \\ T \end{array}$	$\begin{array}{c} p \\ \hline T \\ F \end{array}$	$\begin{array}{c} i(p) \\ \hline F \\ F \end{array}$
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If ‘Being!’ is the first ‘theorem’ of OL, then we are now looking for a second ‘theorem’. But a theorem is a **truth claim**. So we cannot work with the truth function “i( )”, because it is the **false-maker-function** and we do not intend to let OL say something false.

We cannot work with function “g( )” either, because it is the **identity truth function** which leads us nowhere else and leaves everything as it is.

We cannot work with function “f( )” either, because it is the **truth-maker-function**, and we have already claimed “Being!” to be true. (In fact, one could view the situation as the result of having worked with the truth maker already, for in order to say something which is beyond possible doubt one has to do exactly this: apply the truth-maker to an arbitrary truth claim.)

So, the only candidate that survives (without viable alternative) is “h( )”, i.e. **negation**.

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But we cannot apply propositional negation to pure being right away. We have first to **re-tailor** it to suit **urstates**. But let us ignore this problematic for a while and pretend that we are working with propositional **theorems** and propositional **negation**.

If we apply negation to our first theorem “Being”, we get something like “Not(being)” – and a **problem** (in fact at least **two** problems):

**OL**

(0) Being!

(1) Not(being)!

The **first** problem is this: Theorem (1) contradicts theorem (0); so OL is **inconsistent**.

To which we might **reply**: “So, let OL be inconsistent. *Our* theory is BL.” But then our project, hardly begun, would be in ruins. – So, we’d better took care of OL.

A sentence and its negation (its contradictory opposite) can both be true, only if they are **indexical** sentences, i.e. sentences with **varying truth value**. Basically, in the sphere of “Vorstellung”, i.e. in space and time, there are **spatially** and **temporally** indexical sentences, cf. “It is raining” (viz. here and now).

But we are in the *Logic*. What about **logical space** and **logical time**? Logical space is just pure being, up till now, and there is yet nothing like logical “time” (logical succession, cf. arithmetical succession). But as soon as we take (1) “Not(being)!” as indexical, we initiate a logical succession:

At logical time 0, “Being!” is true; at logical time 1, “Not(being)!” is true.

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## V. Becoming and Being-there

One problem seems solved, but there is another one: The content of “Being!” is the minimal common content of whatever truth claim, thus even of its supposed contradictory opposite “Not (being)!”

That means that “Being!” is a **logically eternal sentence** (a sentence with constant truth value) after all and that “Not(being)!” is **self-contradictory** and **self-falsifying**. It explicitly reads “Not(being)!” and like any statement entails “Being!”

Can it nonetheless be **true in some sense** and for a “while”, albeit an extremely short one?

Yes, if we conceive it on the analogy of a certain **subclass** of temporally indexical sentences, which might be called *infinitesimally short term indexical sentences* or just **infinitesimal sentences**. An example of a temporally infinitesimal sentence is: “The goal keeper **catches** the ball”, for as soon as he catches it, he will have caught it and be no longer catching it. By contrast, “The goal keeper **holds** the ball” is temporally indexical, but not infinitesimal.

Not only that. The act of catching is exactly of the **desired logical form**, at least if we idealize and think of the very moment, when the ball hits the surface of the gloves) of the goal keeper. The ball then, for an infinitesimal moment of time, **does and does not** touch the skin of the goal keeper. (Cf. Graham Priest’s **dialetheism**.)

The **principle of non-contradiction** can be salvaged, if we restrict it to (alethic) **being** and give it up for (alethic) **becoming**, i.e. for the very **moment of change**.

So, we have in OL is the following:

- (0) “Being!” – A logically eternal sentence, expressing (pure) being.  
 (1) “Not(being)!” – A logically infinitesimal sentence, turning false instantaneously.

Therefore we get as a third OL-theorem:

- (2) “Not(not(being))!”, equivalent to “Being!”, but as a logically **indexical** sentence.

What do (1) and (2) express? (1) entails being and explicitly expresses the contradictory opposite thereof. It thus expresses a “mixture” of being and its negative: **becoming**.

(2) then expresses the contradictory opposite of becoming, and again **being**, but now it does so as a logically indexical sentence, i.e. it explicitly expresses **non-eternal** (but relatively stable) **being**. (Implicitly it entails, like any sentence, eternal being.) This relatively stable, but non-eternal being is called “**Dasein**” by Hegel (in Miller’s translation: **determinate being**).

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Now, theorem (0) drops out of the logical series and doesn’t compete with the others any more; it is implicit in all successor theorems, but cannot be stated (as a logically indexical sentence) on its own.

The **first theorem of OL** thus turns out to be (1), the theorem of **becoming**. It expresses the **big logical bang** with which logical space comes into existence and begins its **evolution**. Its first relatively stable state is **being-there** (Dasein, determinate being), expressed by (2).

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## VI. Return to three open tasks

**First**, we have not yet said how the operation of negation is to work with urstates.

**Second**, we have now reconstructed BL propositions (1)–(6) about **being** and have introduced a second **urstate** called “**becoming**” (a mixture of being and negativity). But we have so far have nothing about **nothing** (negativity), i.e. nothing about BL proposition (7).

**Third**, closely related to that problematic is the task of sketching a second way to negativity, one that is less external than via truth-functional negation and closer the Hegel’s text.

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**Ad (1)**. It is of the essence of **propositions** (propositional states of affairs) that their **obtaining** is not identical to their **existence**. Any existing proposition may be grasped, e.g. the proposition that Chicago is the capital of California. But not every existing proposition need obtain, as witness our example. If we grasp a proposition that does not obtain, we err.

If a proposition does **not** obtain there is always a related proposition which does: its **negation** (contradictory opposite). So, as Aristotle noted, propositions come in (contradictory) **pairs**, **both** members of which will **exist** (in whatever non-basic sense that propositions may be said to exist) and exactly **one** member of which will **obtain**.

This makes it easy, in fact trivial, for non-obtaining states of affairs to be “**sublated**” or to be “ideally there”, in the realm of propositions: You can always think, consider, plan, imagine, what is not the case.

It is different with **urstates**. For them obtaining and existence are identical. So there cannot be (until further notice; but Hegel will work hard to change this situation) negative urstates (negations of urstates, contradictory opposites of urstates). **To negate an urstate is** (until further notice) **to annihilate it**, to erase it from **logical space**.

Immediate **consequence**: As soon as we allow for the negation of urstates, **logical space** itself must be conceived of as **subject to change**. So, we can independently see that we need **logically indexical contents**, as soon as negation of urstates is admitted as a logical operation.

A logic of urstates will have to be an **evolution theory of logical space**. And so is Hegel's SoL.

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**Ad (2)**. From our standpoint pure negativity has to be **interpolated** between *pure being* and *becoming* as that which is responsible for the logical big bang of becoming given pure being. But as the **evolution** of logical space **starts** with becoming, negativity cannot have been added to pure being as a second principle at some logical 'time'; it must have been there right from the start, together with and separable from pure being. So pure being itself must have been contaminated with negativity, contrary to what we may have thought and intended, when we first postulated pure being.

Hegel famously puts the contamination of being with nothing in a **contradiction**:

- (a) Pure being and pure nothing are the same.
- (b) Pure being and pure nothing are absolutely distinct.

As the contradiction between (a) and (b) shows, there cannot be such things as pure being and pure nothing. So, the Logic really starts with **becoming**. Pure being and pure nothing have to be relegated to the status of imaginary basic urstates which however cannot be grasped by pure thinking. There can only be "meant", as Hegel says, not grasped, not thought.

Pure being and nothing are projections behind (i.e. before) the logical big bang of becoming.

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**Ad (3)**. How does Hegel get from *pure being* first to *nothing* and then to *becoming*? Unfortunately, he does not say much that is helpful. To say: "Being is empty, therefore the same as nothing", would not do. Something empty is something, not nothing, as witness Hegel himself on the empty logical space of the **one** (chapter "Being-for-self"): "There is *nothing* in it" (p. 165). "This nothing, then, posited as *in the one*, is the nothing as the *void*." (Ibid.)

What about this thought? The **early Wittgenstein** was confident about a defining common trait of all propositions: the one logical constant, Hegel's pure being. The **later Wittgenstein** was sceptical about defining common traits and pointed to family resemblances instead.

We were confident (or our WH made us so) that our abstraction from all specifics of different truth claims would leave over something universal and neutral: alethic being as such. What if abstraction left over literally nothing (because there was no common trait of all truth claims)?

This, of course, would then be nothing with a **lower-case "n"**, just an indefinite pronoun, not a noun, in German: "nichts", not "(das) Nichts". But nothing, hypostasized into pure being, could perhaps be called *the nothing* (*das Nichts*).

Hegel might have thought that radical abstraction left something over by fiat and stipulation: *pure being*, but left nothing over apart from stipulation.

I am not sure what exactly to make of considerations like these. Therefore I am grateful for our external reflection that brought negativity into the game via truth-functional negation.

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## Transitions Into, With, and From Hegel's *Science of Logic*

### 4 Jan 28: Negation turned upon itself (1): the logical quale as other-of-itself

- Today:**
- I. Absolute negativity
  - II. The irreducibility of becoming
  - III. Being-there as the logical quale
  - IV. The structure of being-there
  - V. Something
  - VI. Finitude: The bifurcation of logical space: something and other
  - VII. The other of itself

#### First part: Absolute negativity

The scaffold of **external reasoning** (i.e. of our background logic) that we erected last week makes it possible to get closer to Hegel's text, if we use the scaffold as formulating constraints on what is going on within pure thinking (i.e. the object logic). So, let us pretend to be pure thinking. What would we see (i.e. think)?

First, something like **pure being**, it seems. But no, the second step, **becoming** will always have already occurred – and passed away at the same logical instant. The genuinely first step then is the thinking of **being-there** (Dasein).

Still, **becoming**, though infinitesimal, is interesting in its own right, as step 0 of pure thinking proper. Why was pure being not graspable, taken in isolation? Because it must have been contaminated with **negativity** right from the start. Otherwise becoming would not have occurred “always already”, so to speak.

Pure being is an **inconsistent** thought content then, and it **inherits** its inconsistency from pure and **absolute negativity**. If pure being were possible, then we in our BL would run into inconsistency, because we would have to say that being is *identical to* and at the same time (absolutely) *different from* negativity. (Hegel in fact says so; see his text.)

Ex post we get a **reason** to say that what was left untouched by our **radical abstraction** was (1) the one logical constant = being, and (2) at the same time *nothing* (lower case ‘n’). But nothing qua identical to being can be hypostasized as Nothing, if we insist that being **is** the one logical **constant** after all.

**Nothing** (capitalized) is the first and totally abstract, immediate and bare form of **absolute negativity** to be found within the Logic. (Cf. Dieter Henrich's diagnosis of *autonomous negation*.) The most advanced and concrete form of absolute negativity will be **the concept; essence** will be a less advanced form with the absoluteness of negation not yet brought out fully. Still less advanced qua self-applied negation is the **other of itself**.

The other of itself:	Self-denial contaminated with immediate being
Essence:	Self-denial without immediate core
Concept:	Self-denial as absolute self-determination

In **discursive**, propositional thinking, the **Liar** is as close as one can get to self-denial. It there corresponds to self-denial without immediate core, i.e. to essential self-denial. We will talk about that later.

Let us note, for further reference, a **first row of candidate pure thoughts**, the first two of which just are *only* candidates (they cannot be thought, but only “meant”):

[Pure being / nothing]	becoming	being-there
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## Second part: The irreducibility of becoming

Becoming is **irreducible** to being, because the **infinitesimal** moment of change is.

Karl Weierstrass (1815-1897) finally provided a logically correct foundation of **analysis**. But he did not explain or analyse the concept of the **infinitesimal**; he showed how to circumvent it by mathematical machinery (real numbers, infinite sequences – things like that). In short, he gave us a mathematical **quid pro quo**.

Concrete phenomenal **becoming** (like the modes and arrow of time, qualia, intentionality, etc.) escapes mathematical thinking and thus escapes modern **physics**. Mathematical physics just changes the subject in order to cope with (not to understand) phenomena like becoming.

The **watershed** between being and becoming in Hegel's logic of being is the **Law of Non-Contradiction**: That law is supposed to be valid for being, but not equally for becoming (and again not equally for “shine”/illusion, see the beginning of the logic of essence).

Setting apart becoming (from being) has a venerable history: **Parmenides** (becoming is not part of logical space), **Plato** (becoming belongs to “outer” logical space only), **Aristotle** (becoming is second class *energeia* only).

**Aristotle** is particularly interesting here. To distinguish between actuality or activity, i.e. *energeia* (1<sup>st</sup> class *energeia*), and change, *kinêsis* (2<sup>nd</sup> class *energeia*), he offers his **perfect tense test**:

“I am x-ing and have been x-ing” (Met. Theta 6, 1048b23-34).

If that conjunction is true, then x-ing is an *energeia* (like going for a walk, viewing, thinking); if not, then x-ing is a *kinêsis* (like slimming, building a house). Then he defines change, *kinesis*, as:

*hê tou dynamei ontos entelecheia hê; toiouton*

“the perfection (consummation, actual activity) of that which is potential

(“is according to potentiality”) as something such“ (Phys. III 1, 201a10f.).

That is: **Change is the actuality of the possible qua possible.**

Now to **Hegel's Logic**: Becoming is being plus negativity (like in Plato). But being and negativity are no independent **elements** of becoming, but dependent **moments**: Becoming is becoming all the way down. Being in becoming is becoming (ceasing-to-be), and negativity in becoming is again becoming (coming-into-being). In becoming everything is becoming:

	<b>becoming</b>	
being= <b>becoming</b>		nothing= <b>becoming</b>
being= <b>bec</b>	nothing= <b>bec</b>	being= <b>bec</b> nothing= <b>bec</b>
	etc. (all the infinite way down)	

## Third part: Being-there as the logical quale

**Chapter 2** on being-there is divided in three sub-chapters (or passages):

- A. Being-there as such
- B. Something and other, finitude
- C. Qualitative infinity

The first passage is again divided in three sub-passages:

- a. Being-there in general
- b. Quality
- c. Something

The various **categorial titles** recur at different levels. Not only does “being-there” recur at three levels (chapter, passage, sub-passage), but “quality” too is not only the title of sub-passage 2.A.b, but also of the whole *section one* of the logic of being: “Determinateness (Quality)”. In any case, **being-there** and **quality** go closely together (even though **being-for-self** in chapter 3 also falls under the heading “quality” still). We’ll have to be aware of this fact in what follows.

Now remember our three OL-“theorems”:

(0) Being!	(Log.) eternal thought	pure being
(1) Not(being)!	(Log.) infinitesimally indexical th.	becoming
(2) Not(not(being))!	(Log.) regularly indexical th.	being-there

The *being* that is expressed by (2) “Not(not(being))!” is **determinate** in that it is one of exactly **two** items which determine each other: **becoming** as the logical predecessor of being-there and **being-there** as the logical successor of becoming. Becoming negates (annihilates) itself and is *ipso facto* negated, annihilated and succeeded by being-there.

But we must distinguish **between OL and BL**. In OL, i.e. in **pure thinking proper**, we have first only becoming, which instantaneously annihilates itself, and that’s it. Thereby pure thinking stumbles into a new logical urstate, without noticing the transition. Pure thinking itself was becoming and is now being-there. We in BL know that being-there is the successor of becoming, but in OL becoming has vanished and being-there is like the starter, **immediate**.

For us, being-there is the other, the contradictory opposite (or the negative), of becoming. More specifically, it is the **victorious** urstate in the opposition of both urstates. But the “**loser**”, becoming (negated/annihilated by being-there), takes revenge, so to speak, by at **determining** the winner. So:

**determinateness is the inverse of “negatedness”.**

This determinateness is as such **invisible** in OL, but *de facto* being-there as seen in OL is determinate, even though OL does not yet provide the possibility of making a distinction between being-there and its determinacy. Therefore the determinacy of being-there is its **quality**, with which being-there (at that early stage) in OL is **identical**. It is therefore what philosophers nowadays use to call a **quale**, though not one among many possible sensory qualia, but **the unique logical quale**.

Normally an object, x, **has** a certain quality, Q, and may lose it and get another quality, Q’. A green tomato may turn red, while ripening. But a **quale** cannot lose its defining quality; it does not *have* but *is* its quality; when the quality vanishes, so does the quale itself. This holds for sensory qualia, and it holds as well for the **purely logical quale** being-there, which is the first relatively stable state of **logical space**.

### Forth part: The structure of being-there

We in BL see that becoming is **sublated** in being-there: being-there would not be the logical urstate it is, if it weren’t the victorious annihilator of becoming. For us therefore being-there shows a trace of becoming. Becoming is what makes being-there **determinate** and what defines it as the unique logical quale that it is. But this is not yet **posited** (*set* or *put*: “gesetzt”), i.e. not yet visible at the OL level.

At the **OL level** being-there appears “as a first, as a starting-point for the ensuing development. It is first” – Hegel goes on to say – “in the one-sided determination of *being*; the other determination, *nothing*, will likewise display itself and in contrast to it [i.e. to the first one].” (Miller, p. 109 bottom)

So, this will be the **development** of being-there: its negativity, at first hidden at the OL level, i.e. not yet posited, will make its presence more and more felt at the OL level, gradually and step by step. But the argument must not proceed in the short way! We must not reason like this: “We know more about being-there than is visible at the OL level; so let’s enrich the OL level”. We have to **wait and see** if the OL level catches up all on its own.

What we know at the BL level is that pure thinking at the OL level will have **two variants of being-there** and at the same time and by the same token of its **determinateness** or **quality**, without being able to distinguish between them.

Being-there+ / being-there- =determinateness  
quality+ (reality) / quality- (negation)

Pure thinking will either sink into variant “plus” (being-there+ = quality+ = reality) and, sunk in A, know nothing of variant B (determinateness, negation), or vice versa.

But then the two variants are one and the same for pure thinking (it can make no difference between them); there is only one seemingly affirmative and **immediate** urstate **being-there for pure thinking**, though, in fact (and *for us*), there are two variants of that urstate, one **affirmative** and the other **negative**.

Being-there is the unique logical **quale**. Its variants therefore affect its quality, which is why one of them is positive and the other negative, one is **reality** and the other **negation** (in the sense of privation, *sterêsis*). In Hegel’s words (SoL 111):

Quality, taken in the distinct character of *being*, is *reality*, as burdened [or afflicted: “behaftet”] with a negative [with a case of negating, “Verneinung”] it is *negation* in general, likewise a quality, but one which counts as a deficiency, and which further on is determined as limit [“Grenze”], limitation [“Schranke”].

So we have the following logical structure: **being-there**, identical with (its) **determinacy**, which therefore is (its) **quality** and which in this identity is **reality**.

As long as identity reigns, we thus have, what was called “variant Plus” (above):

being-there = quality = reality.

But we in BL know that **identity** (and immediacy, being) is not the only logical force here. There is **negativity** (difference) there as well. And when negativity reigns, we will get a distinction between *being-there* and *determinacy* and *ipso facto* (!) a distinction within *quality* between *reality* (positive quality) and *negation* (negative quality):

Being-there ≠ determinacy;  
quality (*qua* reality) ≠ negation.

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This is an elementary logical structure, arguably detected already by **Empedocles**. Empedocles countenances (a) **four material** and (b) **two kinetic principles** of the universe:

- (a) earth, water, air, fire [the four elements]
- (b) love (*philia*) and hate/strife (*neikos*)

The kinetic principles operate on the material ones, bringing them **together** (love) and **asunder** (hate) periodically. The cosmic process is therefore **cyclic** or **periodic**, a succession of periods of love (where unity is growing) and periods of hate (where diversity is growing).

But love and hate affect **their own relationship** as well. When **love** is at its peak, we have complete unity and perfect harmony, so there is nothing left to unite, which makes love collapse (or at least weaken) so that hate can grow again. When **hate** is at its peak on the other



hand, love and hate must be in a perfect equilibrium, i.e. equally strong, and then the balance tips to the other side again (the one of love).

So we get a somewhat **paradoxical result**: When love wins, there is nothing but love (and at the same time neither love nor hate any more); and when hate wins, love is exactly as strong as hate. So, love is in a way the “monarchic” and hate the “democratic” principle. (Cf. the well-known “paradox” that in a democracy the foes of democracy must have equal rights, and esp. the right to express and defend their views.)

More **abstractly**, one can talk of **identity** and **difference** (non-identity) instead of love and hate, and say the following: When identity reigns, identity and non-identity are identical; when non-identity reigns, they are non-identical. This is true in a way of **being-there** as well:

When **being-there reigns**, it and determinacy (and at the same time reality and negation) are one affirmative quale. When **determinacy reigns**, being-there and determinacy (and at the same time reality and negation) negatively fall apart in difference.

### Fifth part: Something

In “a. Determinate Being in General” Hegel had portrayed being-there as unitary and affirmative: as “in the form of being” (110). In “b. Quality” (111) Hegel had stressed the side of negativity, difference: the articulation of being-there. In “c. Something” he stresses the side of identity and unity again.

This order is supposed to represent what is happening at the level of pure thinking: **being-there splits and reunites**. Qua reunited it is called *a being-there* (“Daseiendes”) and *something* (“Etwas”).

#### Why should that be so?

We saw in BL that **pure being** is no possible content of thought, not even a possible urstate, because it just cannot be purified from its original contamination with negativity. The first thing to happen in the evolution of logical space is therefore **becoming** and the first thing to *be there* is (as one would suppose) **being-there** (Dasein).

But if we have to relegate the supposed logical **start** with **pure being** and its **transition**, via nothing, to becoming to a fictitious logical **pre-history**, then the affirmative being which we have to project retrospectively beyond the infinitesimal becoming **was** already **being-there**. No form of being can in effect be more basic.

And as the conflict of the opposing standpoints was solved by infinitesimal **becoming** in the fictitious **pre-history**, so it will be solved in the real **history** of the evolution of logical space by another form of becoming: alteration (of pure thinking and ipso facto logical space).

Since the **negative** variety of being-there is as **original** as the **affirmative** one, this latter one can always be seen as the outcome of a **becoming** that took place with respect to being-there. Becoming, as a transition *from* being-there *to* being-there, is what is called “**alteration**”, and its two sides or terms are called *something* (*a* “Daseiendes”) and the *other*.

So instead of the our **first row** (see above)

[pure being / nothing]	becoming	being-there
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we now have the **new row**

being-there/determinateness	becoming/alteration	being-there <sub>2</sub> , <i>a</i> being-th, something
Or: Being-there/distinction in it	sublation of dist. (115)	sublatedness: a (new) being-there

**Note** how peculiar becoming qua **alteration** is: it leads from being-there to being-there, i.e. from A to A (not from A to non-A).

Remember: Being-there **is** its quality. **Alteration** is change of **quality**. But there is nothing there to change (like the tomato, from green to red), no *hypokeimenon* (substrate) that could remain identical while changing. Alteration thus goes all the way down. There is nothing there to compare: no prior state A of a substrate with a posterior state Non-A. **In pure thinking** alteration is **pure** alteration. In pure alteration nothing (no thing) remains the same. And so nothing (no thing) changes either.

This accounts for a **new scenario**: The sublatedness of the distinction is the *own* determinateness of being-there; “it is thus *being-within-self*” (115) [“Insichsein”, “esse in se”, cf. Spinoza: “substantia est, quod in se est et per se concipitur”]; “das Dasein ist *Daseiendes, Etwas.*”

“Something is the *first negation of negation*, as simple self-relation in the form of being.” (115, middle) Not yet: **negation-of-itself**, but **double negation** (cf. „Not (not (being))!“). The double negation in being-there at first was only virtual for lack of pure being: There had been nothing there to get doubly negated. Now, this double negation has finally become explicit.

*Something* is double negation not only **for us** (as was *being-there in general*), but also **for pure thinking**. In *something* “self-mediation is present” and “*posited*” (116, top), therefore its esse is “in se esse”, it is therefore “the beginning of the subject” (115, bottom), i.e. of self-individualization. (In grasping the content *something*, pure thinking has to mediate itself.)

We have got a new, a **third row** now:

[pure being / nothing]	becoming	being-there
Being-there/distinction in it	sublation of dist. (115)	sublatedness: a (new) being-there
Something	alteration	[something] other] --- <b>fixed point!</b>

**Note**: In *something*, mediation with self is *posited*” (116, top) vs. “[something] is not yet *posited* as mediating and mediated” (116, bottom). (It will be posited as such in the *other itself*.)

In more detail (and in Hegel’s words): “But to begin with, something alters only in its Notion [Concept]; it is not yet *posited* as mediating and mediated” [through alteration and the sublation of alterity].

In its **Notion** (Concept): in its **BL definition**. When an OL urstate will have further developed so that it (i.e. its successor) now contains what its BL definition contained, then it has altered and is not the same urstate any more, but a new one with a new BL definition (“Notion”). So the logical urstates are always running behind their respective Notions (BL definitions).

Only in *the* Notion or *the* Concept itself will what is posited have caught up with the BL definition. (The Notion is, at the same time, its *own* Notion, cf. 578 t., 582, ll. 13ff.)

### Sixth part: Finitude. The bifurcation of logical space

With *something* qua fixed point being-there has begun to **dissociate** from logical space; and with *something and an other*, logical space has **split**. (But pure thinking does not see the splitting yet; it is either sunk into the one side or into the other. It is **bifurcated** itself in the splitting of logical space. With the category of **limit**, though, pure thinking will catch up to our vantage point. But then the splitting will be internalized to the finite something.)

What further **categories** are here developed? We already have:

(being, nothing,) becoming, being-there, determinateness, quality, reality, negation, something (= *a* being-there), being-within-self, alteration, other.

We shall further get (as the categories of **finitude**):

The other (of) itself, self-identical something, being-for-other, being-in-itself, determination, constitution, limit, finite (= finite something), limitation (= transcended, negated limit), ought (= negatively affected in-itself or determination)

**Remember:** These categories are here not developed as some basic *general concepts*, true of things (as e.g. in Kant), but in and for pure thinking: as pure entities on their own account, logical urstates.

### Seventh part: The other of itself

Short survey of Hegel's text:

- (a) **Something and an Other** (117-122) [Finitude *for us*, in BL]  
 The **other of itself** (118) as **self-identical something** (119 t.); **being-for-other** (119), **being-in-itself** (119) [not: being-within-self, cf. 115; Ansichsein vs. Insichsein]

1.1 Something and other are both somethings.

1.2 Each is equally an other (the other's other, so to speak).

1.3 The other is ("therefore", 118) to be taken as isolated, abstractly, as the *other of itself*. The **other (of) itself** comes in two variants: (i) it negates itself, *alters* itself" (118 bottom), and (ii) it is "posited as reflected into itself with sublation of the otherness", as the "with-itself-identical something" (119 top). (And **now** the something is *posited* as "mediating and mediated", 116 bottom).

According to (i) the *other of itself* is a variant of the urstate  $v$  [with:  $v \leftrightarrow \sim(v)$ ]. And (ii) portrays one of two results of the self-negation of  $v$ , the **affirmative** one. (We can represent the affirmative one as resulting from a trick: If we put the negation signs together in pairs, then the unfounded negation will turn into the unfounded affirmation:  $\sim \sim(\sim \sim(\sim \sim(\dots)))$ ). But the trick shows at the same time its own one-sidedness, because the number of infinite negation signs is not even. (We'll talk about that soon.)

2. "Being-for-other and being-in-itself constitute the two moments of the something. There are here present *two pairs* of determinations: 1. Something and other, 2. Being-for-other and being in-itself." (119) [Logical space is divided between two inhabitants, and each of them has being-in-itself from its own standpoint and mere being-for-other from the other's standpoint.]

3. Something's **being-in-itself** as identical with its being-for-other is its **determination**.

Let us look at the way from the first, **simple** something to the **self-identical** something (next week: and then to the **finite** something, or finite, for short).

For the **simple** something, the other was completely invisible. The new, **self-identical** something (the affirmative result of the other of itself) is at least **negatively** related to the other. It may be compared to a **Cartesian solipsist** (CS), if this is a person who has read and now believes the first two *Meditations*, but not the four following ones.

CS says to his other: "I think, therefore I exist and am possessing being-in-itself as a thinking substance; you instead are only a content of my representations, and your being is only being-for-other, viz. being for me." [But we in BL see that the other is a CS as well.]

The **simple something** was (in OL, for itself, i.e. for pure thinking, not for BL) the whole of logical space. The **identical something**, CS, is (for himself, i.e. in OL, not in BL) the **soloist** filling all of logical space. (We in BL know s/he is not a soloist; we know there are two pretenders in perfect symmetry.) That is a **first step** on the way to recognizing the other, a step characterized by the distinction between being-in-itself and being-for-other.

In the **second step** (to be studied next week), the pretender vacates a bit of logical space as irrelevant for herself/himself. This step is characterized by the pair of terms “determination” and “constitution”. The region in logical space that the pretender left free s/he deems irrelevant for themselves. S/he thinks s/he is related to this region only externally, through their constitution. And the other pretender does the same.

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The operative thought content at the present stage of the evolution of logical space is the **other (of) itself**: not only a double, but a self-applying negation. A propositional variant of it would be the Liar, i.e. a sentence that denies itself via semantic ascent. To get clearer about what is going on, we should study some fundamental ideas of a nonstandard set theory:

### Excursus:

**Peter Aczel, *Non-Well-Founded Sets*. CSLI Lecture Notes 14. [Stanford] 1988.**

The set theoretic axioms AFA<sub>1</sub>, AFA<sub>2</sub> and AFA were introduced by Peter Aczel in his work on non-well-founded sets. Aczel represents sets by **accessible pointed graphs (APGs)**. A **graph** consists of **nodes** and **edges**, where an edge is an ordered pair of nodes:

•→•

The posterior node is called a **child** of the anterior node. A **path** is a finite or infinite sequence of nodes which are related by edges:

•→•→•→•→•→•→ ...

A graph is **pointed**, if it has a special node called its **point** (a first or foremost node, intuitively speaking). A pointed graph is **accessible**, if for each of its nodes there is a path leading to it from its point. A **decoration** is an assignment of sets to nodes such that the children of a node are assigned the members of the set that is assigned to the node. A **picture** of a set is an APG with a decoration in which the point of the APG is assigned the (pictured) set. A **well-founded** graph, finally, has no infinite path.<sup>1</sup>

Aczel first shows that each well-founded graph has a unique decoration and that therefore each well-founded APG is the picture of a unique set. The simplest APG, e.g., consists of a node without children and is the picture of the empty set:

•      ∅

An APG consisting of a single edge (i.e. two nodes) is the picture of the unit set of the empty set (and so on):

•→•      {∅}  
•→•→•      {{∅}}

It can further be shown that every set has a picture (which presupposes, of course, that many paths, in fact infinitely and even non-denumerably many paths may spring from a single node). Since there are non-well-founded graphs, an axiom is motivated by all this which Aczel calls the **anti-foundation axiom, AFA** for short:

AFA: Every graph has a unique decoration

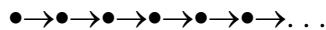
So, by that axiom, if a graph is an **APG** (i.e. accessible and pointed), then it is the picture of a unique, well-defined set. And if an APG is not well-founded, then so is the set, whose picture it is.<sup>2</sup> From AFA therefore it follows that there are non-well-founded sets. The simplest example of the picture of a non-well-founded set would be an APG whose sole edge leads from its point back to the point:

•↪

<sup>1</sup> Aczel, loc. cit., p. 4.

<sup>2</sup> Ibid., p. 5f.

This APG is a picture of the set  $\Omega$  for which the following holds:  $\Omega = (\bigcap x)(x=\{x\})$ , i.e. for which holds:  $\Omega=\{\Omega\}$ . That this APG has an infinite path is shown by its expansion to an infinite *tree*:



Aczel points out that an analogous expansion of the equation ' $\Omega = \{\Omega\}$ ' would issue in an ill-defined infinite expression:<sup>3</sup>

$$\Omega = \{\{\{\dots\}\}\}$$

This is the analogue of the infinite expression ' $\sim(\sim(\sim(\dots)))$ ' which would be an ill-formed formulation of the Liar.

Non-well-founded sets are excluded from the set theoretic universe by the **foundation axiom**, **FA**, which is usually added to the set theoretic axiom system of **Zermelo** and **Fraenkel**, **ZF**, or to this axiom system plus the **axiom of choice** (AC), **ZFC** (=ZF + AC). This addition provides us with the "regular" axiom system **ZFFC** (ZF + FA + AC).

The foundation axiom says that **all sets are [well-]founded**. (I ignore differences between foundedness and well-foundedness for reasons of simplicity here.) A set is [well-]founded, if each of its non-empty subsets has at least one member such that the intersection of that member with the subset is empty:<sup>4</sup>

$$x \text{ is [well-]founded} \leftrightarrow (\forall y)(y \neq \emptyset \wedge y \subset x \rightarrow (\exists u)(u \in y \wedge y \cap u = \emptyset)).$$

Obviously,  $\Omega$  is non-[well-]founded, for the only non-empty subset of  $\Omega$  is  $\Omega$  itself, and the only member of this subset, i.e.  $\Omega$ , is such that its intersection with  $\Omega$  is not empty but is  $\Omega$  once again.

Since Peter Aczel has given a **relative consistency prove** for AFA, (i.e. has proved that AFA is consistent, if ZFFC is), the question whether there are non-well-founded sets must be decided by other means, e.g. by recourse to our deep set theoretic intuitions (if such there be) or by recourse to the utility of ZFFC or AFA respectively within or without mathematics.

FA privileges certain APGs over some others: those that are well-founded. Only well-founded APGs are to have unique decorations, only they are to be pictures of sets. AFA on the other hand is totally egalitarian in spirit:

Every graph has a unique decoration,

from which it follows that every APG is the unique picture of a set and that there are non-well-founded sets.<sup>5</sup>

We need not bother with questions of the existence of certain sets, for we are not intrinsically interested in set theory here. We may just note that neither the claim that there are unit-sets-of-themselves nor the stronger claim that exactly one such unit-set-of-itself,  $\Omega$ , exists, is inconsistent or absurd.

The difference between those two claims is important. AFA may be expressed as the conjunction of two claims:

AFA<sub>1</sub>: Every graph has at least one decoration.

AFA<sub>2</sub>: every graph has at most one decoration.<sup>6</sup>

<sup>3</sup> Ibid., p. 6.

<sup>4</sup> Cf. Heinz-Dieter Ebbinghaus, *Einführung in die Mengenlehre*, Darmstadt: Wissenschaftliche Buchgesellschaft, 1979 (second edition), p. 77 and pp. 127f.

<sup>5</sup> Aczel, loc. cit., pp. 4-6.

<sup>6</sup> Ibid. p. 19.

AFA<sub>1</sub> leaves it open that there might be different unit-sets-of-themselves so that one might have a set  $x$  and a set  $y$  with:  $x=\{x\}$ ,  $y=\{y\}$  and  $x\neq y$ . AFA, on the other hand, permits us to define:  $\Omega =_{df} (\lambda x)(x=\{x\})$ . Given AFA,  $\Omega$  is *the* unit-set-of-itself.

Of course, even then  $\Omega$  cannot be defined as *the* non-well-founded unit set; for the unit set  $\{\emptyset^*\}$  is non-well-founded too. Only if we limit our universe to unit sets in the first place (i.e. to graphs whose nodes have at most one child each), will  $\Omega$  be the only non-well-founded (unit) set. – This is of some interest, because propositional negation is a one-place operation. For if we want to make use of the set theoretic analogy for the SoL, then we may indeed limit our attention to unit sets (at least until further notice). And if we side with AFA, then we may say that the thought content that gets expressed in the Liar is *the* negation-of-itself and *the* unfounded (or not-well-founded) negation.

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Next, the **application** to **(self)-negation**. We can again use APGs to represent the situation. Remember: Circular or infinite paths are but graphic variants of each other. (This is interesting, by the way, as well for causality: an infinite causal regress comes to much the same thing as a *causa sui*!)

## Transitions Into, With, and From Hegel's *Science of Logic*

### 5 Feb 04: From finitude via infinity and being-for-itself to quantity

- Today:**
- I. Taking stock (plus some general remarks)
  - II. Finitude
  - III. Infinity
  - IV. Being-for-self
  - V. A glimpse towards quantity

#### First part. Taking stock (plus some general remarks):

Let's take stock. Hegel's SoL is an attempt to fully **delineate** our **pure** ("divine") **thinking** as such; and its **method** is to transform pure thinking from the background of our minds to the focus of philosophical attention systematically and step by step by pretending that we are into the business of creating the one strictly **presuppositionless theory**. In this process nothing of importance will be left out.

The process of delineating pure thinking will stop and be consummated, when a **fixed point** is reached, i.e. a point where no threatening logical catastrophe (no inconsistency) needs to be managed any longer. Hegel calls that point the **absolute idea**. – From there, the further philosophical development is **free**: The absolute idea may freely "resolve [...] to determine itself as external Idea" – and as we all know it did: We live in a material spatiotemporal system. Therefore philosophy can go on as the a priori theory of what exists in space and time.

But that won't be a delineation of divine thinking any longer, but just philosophy of nature and philosophy of spirit.

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The "theorems" of the presuppositionless theory are the acts/contents of pure thinking proper, purely logical acts/contents, which are **theorem-valid** ("satzwertig": sentence-valid, judgment-valid, proposition-valid), but **not theorem-like** ("satzartig").

They are theorem-valid in so far as they are complete acts/contents of thought, thus true and proper candidates for alethic evaluation. They are theorem-unlike in that they do not have propositional structure. They are pre-propositional states of affairs, **urstates** for short, whose **alethic being** and **existential being** are one (at least in the most simple and initial cases).

Qua alethic contents they may be **negated**, but negation in their case (at least initially) is their annihilation (*alethic* and *existential being* still being the same here): They get wiped out from logical space and cannot be grasped any longer. Thus, negation *changes* logical space. Logical space thus **evolves**, and the SoL is the theory of its evolution.

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Urstates are neither judgments (propositions), nor predicates (propositional functions), nor objects (candidate arguments for propositional functions). But they can easily be transposed into a "predicative key", so to speak, i.e. turned into **categories** (ontological predicates). Therefore the logical contents are normally treated as categories (in the logic of being) or "reflexive" predicates (in the logic of essence) in Hegel scholarship.

This is not a mistake if one is aware of what one does. Hegel himself in the EL says that the logical constants may be treated as **predicates of the absolute**, thus: "The absolute is becoming", then: "... quality", then: "... qualitative infinity" etc.

I would translate Hegel's dictum into: "The logical contents may be treated as the successive states of logical space in its evolution."

Hegel warns us, though, that **finite** contents must *not* be treated as predicates of the absolute. Which translates into “Finite contents (like something and other, limit and finitude, limitation and ought) must not be treated as states of logical space as a whole, but as (finite) positions *within* logical space at certain stages of its development.”

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According to **Kant**, the transposition of logical contents into **predicates** (categories) is dependent on transcendental schematization, i.e. on **time**. According to **Strawson** (père), it is dependent on **time** and **space** as the basic forms of particularity. After basic spatiotemporal particulars (things and persons) we model all other kinds of individuals, be they concrete or abstract, extensional or intensional. I admire Strawson’s ontological ordering of entities beginning with things and persons and fading away with abstract intensional entities that lack clear-cut identity conditions, and I admire his ontological liberalism. (That is, by the way, why I grant existential being to propositions: it’s a useful *fasson* [for lack of the cedille] *de parler*.)

In **Hegel** the transposition of logical contents into regular discursive predicates (and thus into categories of things) just as in Kant and Strawson is dependent on space and time as the defining and constituting principles of the sphere of *representation* (“*Vorstellung*”).

When the SoL is read as a **critical exposition of metaphysics** (as Marx’s *Capital* is meant as a critical exposition of political economy), then the transposition of logical contents into predicates (categories) is tacitly anticipated as consummated via the philosophy of nature.

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**Where have we arrived?** We saw **determinate negation** (qua annihilation of urstates) being operative in *becoming* and in *being-there*. We then saw **non-well-founded** (circular, autonomous? absolute?) **negation** being operative in the **other (of) itself** (*to heteron auto*).

We **modelled** determinate negation after propositional (truth-functional) negation and tailored it to suit urstates. We modelled non-well-founded negation

- (a) on non-well-founded sets, especially the unit set of itself,  $\Omega$ ,  
with:  $\Omega = \{\Omega\} = \{\{\Omega\}\} = \dots = \{\{\{\dots\}\}\}$ ,
- (b) on self-denial as in *liar sentences* (“yields a falsehood when appended to its own quotation’ yields a falsehood when appended to its own quotation”, W.V. Quine).

**Thus:**  $v \leftrightarrow \sim v \leftrightarrow \sim \sim v \leftrightarrow \dots \leftrightarrow \sim \sim \dots$

Self-denial is inconsistent, so we need some logical catastrophe-management to cope with it. According to Hegel, there is a **bifurcation in outcome** here. We start from the inconsistency of the other of itself which is perpetual becoming-an-other (perpetual alteration). As such the other of itself is “the absolute unequal within itself” (21.106).

Then comes our trick (in external reflection on  $v$ ): If we bracket the negation signs together pairwise in the infinite expansion of  $v$ , then we get non-well-founded affirmation out of it:

$\sim(\sim(\sim(\dots)))$ ,

which translates into the Truth Teller, via semantic ascent: “yields a truth when appended to its own quotation’ yields a truth when appended to its own quotation.”

Applied to the logical situation of the *other of itself*, the truth teller takes the shape of the **self-identical something** (a new and more elaborate variant of the *simple* something). Identity, which will (truth-tellingly) run free as a *determination of reflection* in the logic of essence, is here still tied to immediate being (immediate being-there).



But our trick was **one-sided** (euphemistically speaking), because there is no **even** number of infinitely many negation signs. We cure the one-sidedness by a complementary one (in order not to fall back into the initial inconsistency): We juxtapose the **negation** of the truth teller as a complementing alternative to the truth teller (we are now pretending that there is an odd number of infinitely many negation signs – we cure one cheating by another):

- |   |                              |
|---|------------------------------|
| (1) $\sim(\sim(\sim(\dots)))$                   | self-denial                  |
| (2) $\sim\sim(\sim\sim(\sim\sim(\dots)))$       | self-affirmation             |
| (3) $\sim[\sim\sim(\sim\sim(\sim\sim(\dots)))]$ | negation of self-affirmation |

Cf. the three sentences:

- |                                 |  |
|---------------------------------|--|
| (1') Sentence (1') is not true. | Liar (self-denial)                               |
| (2') Sentence (2') is true.     | Truth teller (self-affirmation)                  |
| (3') Sentence (2') is not true. | negation of the Truth teller (i.e. of self-aff.) |

(1) is inconsistent; (2) and (3) contradict each other but seem to be self-consistent each. Hegel takes (2) to express self-identity, either impurely, i.e. contaminated with immediate being-there (**self-identical something**) or purely: as (self-) **identity** qua *determination of reflection*. (2), accordingly, is the expression of the **other**, or of **difference**, respectively.

**Remember:** Contamination of unfounded negation with immediate being corresponds to  $AFA_1$  in non-well-founded set theory; unfounded negation uncontaminated corresponds to  $AFA$  (=  $AFA_1$ : “at least one decoration”, +  $AFA_2$ : “at most one decoration”).

So we have to **juxtapose** the self-identical something to its own negation, in the logical space of **being-there**. This cries for **logico-spatial indexicality**; and logico-spatial indexicality is what we have got with the division of logical space between *something* and *an other*. “**Here**” in logical space we have the *self-identical something*, and “**there**” we have its *other*.

(In the logic of essence the truth teller will take the shape of *identity* pure and simple und the negation of the truth teller will take the shape of *difference*.)

Our cheating compensation of our first cheating will of course not work in the long run: The inconsistency of finitude will shortly punish us. (And so will the inconsistency of *contradiction* in the logic of essence.)

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## Second part. Finitude

Pure thinking now does not grasp the whole stage of logical space as one singular urstate any longer, but is **orn** between two finite regions of it, two finite urstates: the self-identical (SI) something and its other. Both are pretty much the same, taken in isolation respectively. Neither the truth teller nor, therefore, its negation does make any determinate statement; what unites them and separates them at the same time is just that they are a contradictory pair.

Cf. **Hegel** (21.106): “2. The something *preserves* itself in its non-being; it is essentially [as regards its content] one with it, and essentially *not one* with it. [...] The otherness is at once contained in it and yet *separated* from it; it [viz. the otherness] is *being-for-other*.”

The otherness of the SI-something is its own *being-... (and yet:) ...for-other*: contained in it and yet separated from it. The own being *as contrasted with* the being-for-other is the being-in-itself (Ansichsein) of the SI-something.

We know this **duality** in a more elaborate form from the PhS: as the opposition of consciousness. But there the other (*for* which that which was also in itself *was*) was consciousness. Here we have two identical urstates dividing logical space between them, their negativity being that division, i.e. the mutual otherness. It is a completely symmetrical situation seen from

the outside (from our BL vantage point), though pure being is sunk and lost in one side only. But the logical development of **finitude** will soon lead to OL-symmetry as well.

“There are here *two pairs* of determinations: (1) *something* and *other*, (2) *being-for-other* and *being-in-itself*.” (21.107) – What something is in itself seems to be hidden to the other (i.e. to its symmetrical partner); things in themselves are like black wholes from which no information can escape: “empty abstractions void of truth” (21.109). But we know what the in-itself of the something is; for us (for our BL vantage point) the in-itself is “what something is in its concept”.

--- --- ---

We have to proceed with **seven-league boots** now. There is nothing in the something and in the other to ground a substantive difference between being-in-itself and being-for-other. They are one and the same: (something’s) **determination** (*horismos* and *telos*), a simple **quality** again. Determination is the determinateness of something’s *in-itself*.

The determination comprises the being-for-other. (Example: The determination of an acorn is to be(come) an oak tree. The acorn is an oak tree only in-itself, but when it reaches its determination it is so as well for others.)

But again the negative side (the successor of (i) negation (privation) and (ii) being-for other) comes up: *Beschaffenheit*, i.e. texture, character, condition, translated as (*outer*) **constitution**. It is the outside of determination (as witness the acorn which has grown into an oak tree).

Three steps:

1. Determination is the determinateness of something’s *in-itself*.
2. The in-itself divides into determination and (*outer*) **constitution**.
3. Determination and constitution reunite as the **limit** of something.

A **limit** between two regions in space does belong to neither one, and both. **Becoming** was the infinitesimal point of change in (logical) time. The limit is the infinitesimal line of contact between contradictory opposites in logical space. The Law of Non-contradiction is valid for being, but not for irreducible becoming. Neither is it valid for the **irreducible limit**.

That would be tolerable if we had something else beyond the limit, viz. two cases of affirmative being-there (something and its other). But *limit* threatens to take over all of the logical space of finite being-there:

( $\alpha$ ) “Limit is the mediation through which something and other each as well *is*, as *is not*.” (Miller 127 / 21.114) – ( $\beta$ ) “Limit is the *middle between*” something and the other (ibid.). – ( $\gamma$ ) “Something with its immanent limit, posited as the contradiction of itself [...], is the *finite*.” (129 / 21.116)

So the **finite**, *f*, is *posited* as its own contradictory opposite:  $f \leftrightarrow \sim f$ .

**Remember:** urstates are hybrids of propositions and objects. So “ $\leftrightarrow \sim$ ” can be expressed as non-identity as well. The finite thus is what it is not:  $f \neq f$ .

With the **finite**, OL has **caught up** with our **BL-diagnosis** of complete symmetry between the *SI-something* and its *other* in logical space. It’s the logical analogue of **Max Black’s** physical *two spheres world*: That world consists of two qualitatively identical spheres only. They are the same, and yet one is (supposed to be) not identical to the other.

And with symmetry, the strict **inconsistency** of self-denial is back again; the **palliative** effects of our trick have come to an **end**. – Finite things “*are*, but the truth of this being is their *end*.” (They are “end-ly”, “endlich”.) – “[...] the hour of their birth is the hour of their death.” (129)

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Our project of a presuppositionless theory seems to have reached its final (fin-al: end-ly) impasse. Our trick in coping with the other-of-itself only earned us a short despite. **Shipwreck?**

What is the crucial and fatal **difference** between becoming and the limit/the finite?

**Becoming** was contradictory (like “ $p \wedge \sim p$ ”) but not antinomistic (like “ $p \leftrightarrow \sim p$ ”). A contradiction can be effectively negated: “ $\sim(p \wedge \sim p)$ ”; an antinomy cannot. If something is its own negation (or logically equivalent to it), then to negate it has the effect of endorsing it (cf. the **Liar**).

The **finite** is antinomistic. It negates or denies (i.e. annihilates) itself, only to remain – for further, endless self-annihilation. ”The thought of the finitude brings this sadness with it because it is qualitative negation pushed to its extreme, and [...] there is no longer left to things an affirmative being *distinct* from their destiny to perish.” (129b.) Thus, “finitude is the negation as *fixed in itself*”, an imperishable perishing, self-destruction as “eternal”. There is no transition to an affirmative here, no “ceasing to be of the ceasing-to-be” (130f. / 21.117f.)

A **comparable** impasse will again be reached at the end of the **logic of being**. Here as there (if we do not suffer shipwreck altogether), we are in for some major **transition**: here for a transition from finitude to **infinity**, there for a transition from being to **essence**. But how is that transition accomplished?

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Logical space here does **not evolve** any further, but perseveres in eternal self-destruction of its finite content, or so it seems. Could that persisting logical space be the **encompassing infinite** in contrast to its finite content? If so, how could OL get to that solution?

The finite is self-negation contaminated with immediate being; its limit is its quality. When it – its quality – is negated, its limit is negated. Thus, the finite has as **moments** itself (its quality or limit) qua negated (then called **limitation**) and itself qua negating (called the **ought**).

It is highly peculiar and telling that Hegel here derives the central conceptual content of **deontic** (and **Kantian**) moral philosophy: the **ought** (“Sollen”). The antinomistic nature of the finite **degrades** the in-itself and determination to a *mere* ought, and the limit (“Grenze”) to a *mere* limitation (“Schranke”) – a limit that gets trespassed (transcended) over and over again.

So we get here a “**dialectic**” of **ought** and **limitation** that, by the way, logically grounds another essential aspect of **time**: the moving spotlight of the now. A present moment gets transcended instantaneously, but what results is not to last either: it is merely another moment that gets transcended instantaneously. So throughout an infinite process of upcoming candidates, the true *now* remains an *ought*, because every candidate gets transcended instantaneously.

And yet, the present has always already been there! The **achieved present** thus may serve as a temporal image of **qualitative infinity**.

What do we have? An infinite process of ought and limitation, i.e. an infinite sequence of identical finites, each the negation of its predecessor. In that sequence no single finite remains non-negated:

$$f_0, \sim f_0 (= f_1), \sim f_1 (= f_2), \sim f_2 (= f_3), \dots$$

We know negation as a **monadic** (one-place) operation. Dyadic (two-place) negation could be expressed by the **Quine dagger**: “ $p \downarrow q$ ” (“ $\sim p$  and  $\sim q$ ”). Wittgenstein uses **multigrade** negation (polyadic with variable “ $k$ ”) as the basic truth function in the *Tractatus*: “ $N_k(p_1, \dots, p_k)$ ”. To express the infinite sequence of *negated* finites, we need an **infinitely many place negation** for whose expression I shall use “ $\neg[\dots]$ ”, thus:

$\neg[f_0, f_1, f_2, \dots]$

The unitary, simple thought act/content expressed by that infinitely many place negation (imp-negation, for short) of finites is **the infinite**.

The simple **infinite** is the paradoxical process (the standing flow) in which each finite negates itself and thereby creates another self-negating finite: an infinite series of identical finites (of finite logical spaces). That (paradoxical) flow doesn't jerk, it is completely continuous, and so doesn't even flow either. (It's like a movie consisting of identical pictures.)

Therefore the infinite is "*being and becoming*" at the same time (137 / 21.124), in fact, it is posited as such, says Hegel). And it is self-relation (viz. originally the **finite's** self-relation: the finite itself becomes the infinite, by its own nature) and indeterminate (ibid.), there being nothing (else) to do the determining. Still, it is (qua affirmative) the negation of the finite as such (of all infinitely many particular finites at once, "now" and ipso facto in "eternity").

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### Third part. Infinity

We are back then to the *whole* of **logical space** (the infinite may again be used to coin a predicate of the **absolute**, as Hegel would say). But we do not yet understand imp-negation at the level of OL. How is " $\neg[f_0, f_1, f_2, \dots]$ " to be **interpreted** in OL? We can hitherto conceive of **three models** among which to choose (two of whom have already been operative before):

- (i) negation qua logical succession (sublation only in BL): "first ( ), then  $\sim$ ( )",
- (ii) synchronic negation (otherness), possibly with (mutual) sublation (in OL)
- (iii) negation as pure sublation (in OL).

But not (i): because the logical succession is already needed within the negated series itself.

(iii) would be fine; but we know sublation only in combination with (i) or (ii), i.e. **either** (i) as BL sublation (as e.g. becoming was BL sublated in being-there) **or** (ii) as sublation which is contaminated by otherness and thus by finitude: If A is sublated in B, then at the same time A persists in logical space as the other of B (and vice versa), in mutual "qualitative negation".

The remaining candidate, **(ii)**, is highly problematic, because with **otherness** the infinite would be *the other of the finite*, and both would again share logical space as did something and an other. So, we would be back in **finitude** after all.

What we need is **neither** qualitative, mutual sublatedness (*something* in the *other* and vice versa) **nor** successive or BL sublatedness (becoming in being-there) but **pure sublatedness**, non-successive and at the same time devoid of an accompanying qualitative negation. This pure sublatedness Hegel calls **ideality**. But we are still far from that.

On the contrary, we are stuck with the problematic candidate (ii), for imp-negation collects the finites into a **new urstate** – finitude as such – which gets negated in and by the infinite. Thus  $\neg$  turns into  $\sim$  (one place negation) back again; in Hegel's words: "[T]he *immediate being* of the infinite resuscitates the *being* of its negation, of the finite again which at first seemed to have vanished in the infinite" (138f.).

But note that this new urstate is there **only** as negated (by the outer " $\neg$ "), **never** and **nowhere** as self-subsistent, thus never as the **obtaining** urstate:

$[f_0, \sim f_0, \sim \sim f_0, \sim \sim \sim f_0, \dots]$ ,

– a fact which may be seen as a **BL hint** in the direction of pure sublatedness, i.e. **ideality**.

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Meanwhile, OL for lack of alternative **falls back** into finitude, thus lending some kind of self-subsistence to the new urstate  $[f_0, f_1, f_2, \dots]$ , after all. OL's logical space is then split between the infinite and the finite, the **limit** between the two being the negativity that separates them.

If we now fall back to the logic of otherness and get an infinite progress of negating items again, viz. the (now finite, one-sided) **infinite** and the **finite**, there will be a **difference**, however. In the case of the **finite** (and its dialectic of ought and limitation) there was no **real progressing** (to something new and other) in the sequence of finites, because in each progressive step the finite was reached again. Thus **continuity** reigned over **discretion**. But now we have an "alternating determination of the finite and the infinite" (138) and thus a real **progressing** (with discrete steps) **into infinity**:

...,  $f, i, f, i, f, i, \dots$

Of course, we get the **same pairs** over and over again. The continuity of the progress now lies in the two-way eternal recurrence of them. But then, this is equivalent to a simple **circle** of  $f$  and  $i$ . This circle provides for what Hegel calls the **true or genuine infinite**.

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**Hegel's text** on **infinity** has three passages, which he summarizes thus (137 / 21.124):

"The infinite is:

- (a) in its *simple determination*, affirmative as negation of the finite
- (b) but thus it is in *alternating determination* with the *finite*, and is the abstract, *one-sided infinite*
- (c) the self-sublation of this infinite and of the finite, as a *single* process – this is the *true or genuine infinite*."

We have talked about (a) and (b) and now just reached "(c) Affirmative Infinity" (143ff.).

**Remember:** We were looking for a **new type** of negation: negation as **pure sublation** – and that is exactly what we have got! In their narrow circle the one-sided infinite and the finite are mutually negated by each other, but not negated by a neutral third party (in the role of their victorious successor or of a true something). The circular movement is their pure sublation, and the circle is no new and third party, but only the **becoming** of the true infinite, or the **true infinite qua becoming**.

It turns out that the true infinite is **both**, becoming as well as being. As circular movement it is becoming. But as full circle, i.e. "as the consummated return to self, the relation of itself to itself, [the infinite] is *being*" (148 / 21.137). And it further turns out that the true infinite qua being is **being-for-(it)self**.

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#### **Fourth part. Being-for-(it)self**

Pure sublatedness, which Hegel terms **ideality**, is the quality of infinity (150/120) as well as of being-for-self. The transition from **infinity** qua becoming to **being-for-self** thus seems to be a transition just from instability to stability, without qualitative change of underlying urstate.

So, it is **all** already there; the **transition** needs only to be "indicated" (150), not to be argued for any more. With (a) **ideality** as the quality of the infinite (and being-for-self as well) and (b) infinity qua (transition to) **stable being**, we have already reached **being-for-self**, which is therefore nothing more and nothing less than **truly infinite being** (157/144, beg. of ch. 3).

But what exactly is **ideality** or **pure** sublatedness? Here are two forms of **impure** sublation: (1) **Diachronic** sublation: Becoming is BL-sublated (not OL-sublated) in its successor, being-there. (2) **Synchronic** sublation: The other is sublated in the SI-something, but exists/obtains

at the same time unsublated alongside the something. --- **Extra-logical example** of diachronic sublation: What happened yesterday is over, but still sublated in my memory; for synchronic sublation: I perceive a house; it's sublated in my perceptual state, but exists at the same time unsublated out there in front of me in physical space.

Arguably, there are **no extra-logical examples** of absolute sublation or pure sublatedness. Even pure fictions are built from materials that exist or existed unsublated, and even if a person hallucinates a dagger right in front of her, then there exists something (e.g. a certain brain state of hers) that she mistakes for a dagger.

And there is still **another aspect** of impure sublation that is worth mentioning: When *a* is sublated (impurely), then there must exist something else, *b*, wherein *a* is sublated, such that *b* exists unsublated. Perhaps there may be regresses of sublation: *a* sublated in *b*, *b* in *c*, etc. but they must be finite, i.e. well-founded.

Pure sublation is **non-well-founded** instead! It is a particular form of non-well-founded **negation**. If *a* is purely or absolutely sublated, then it does or did not exist/obtain unsublated, and there is nothing else, *b*, unsublated, in which *a* is sublated. This comes to an infinite regress or a circle (small or large) of sublation, like the circle of the finite and the one-sided infinite.

This then is (absolute) **ideality**: Sublatedness devoid of something substantial and unsublated. (**Fichte** in his later *Doctrines of Science* spoke of the absolute appearance which at the same time he declared to be the appearance of the absolute. If he were right, then that might be an extra-logical, though still highly philosophical example of pure sublation. **Shine**/illusory being, at the beginning of the logic of essence, will provide another, an intra-logical example.)

**Being-for-self** is sheer **ideality**, “the self-relation of the sublating” 163/150). In **being-for-self** there is no **hard** (real) fringe containing a **soft** (ideal) interior (e.g. a person of bones and flesh harbouring a mind), but it's all soft: The sublated is sublated not in an unsublated but in a sublated, viz. in itself. **Being-for-self** thus is absolute **ideality**, a first logical precursor not only of “**shine**”, but also, in a different way, of the **concept**.

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Two **notes** with an eye on Hegel's text:

- (1) The “genuine infinite” is “the fundamental concept of philosophy” (Enc. § 95, end).
- (2) “The proposition that the finite is ideal [*ideell*] constitutes idealism. [...] Every philosophy is essentially an idealism [...]” (154f./142) (Thus, there cannot be a genuine metaphysics of finitude, after all; or so Hegel says. What then about, e.g., Heidegger?)

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[The fourth and fifth parts will be turned into the first part of next week's seminar.]

## Transitions Into, With, and From Hegel's *Science of Logic*

### 6 Feb 11: Negation turned upon itself (2): from being to essence

- Today:**
- I. Left-over from last week
  - II. From *quantity* to *absolute indifference* through *measure*
  - III. A new start
  - IV. Positing, presupposing/external and determining reflection
  - V. Identity and Difference

#### First part. Left-over from last week

The chapter on **being-for-self** has three subsections, each of consisting of three passages:

- A. Being-for-self as such:
  - (a) Being-there and Being-for-self
  - (b) Being-for-one (echoing *Being-for-other*)
  - (c) The one (echoing *something*)
- B. The one and the many:
  - (a) The one in its own self
  - (b) The one and the void
  - (c) Many ones: repulsion
- C. Repulsion and attraction:
  - (a) Exclusion of the one
  - (b) The one One of attraction
  - (c) The relation of repulsion and attraction

**Section A** rehearses much of what we already know from the discussion of the **infinite**. Only in A(c) do we find a **new** step: a very smooth and easy transition to the **one**, which is related to being-for-self as the something was to being-there (and which accordingly is also called **a being-for-one**, in analogy to *a* being-there, an existent). Hegel points out that since there is only **one ideality** of being-for-self and its **only** moment (being-for-one), being-for-self “is the simple unity” of both. There is nothing in being-for-self to ground a duality of it and its moment. So it collapses into **immediacy**, the internal mediation breaks down. “Being-for-self is thus *a* being-for-self, and [...] the wholly abstract limit of itself – *the one*.” (163/151)

The **one** as **limit** is **abstract** and **self-related**, because it does not have concrete sides (like something and other) whose limit it could be. Thus, the “soft” ideality of being-for-self has turned into the hard “reality” of the one.

So, being-for-self takes on **two** interesting faces: first, absolute **ideality**, like Fichte's absolute appearance (or already the self-positing I of 1794), and second, abstract punctiform hard reality and **independence**, like Aristotle's *chôriston*: something *separable* and *independent* (*ousia*).

(There is as yet no OL-internal **standard** of comparison between being-for-self and “something other” compared to which being-for-self in its ideality is nullified. Exactly not so! It is all of logical space. With **shine**/appearance it will be different; it will be the **unessential** in relation to the **essential**.)

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That was the **easy part** of the chapter on being-for-self. Then the difficulties abound, as Hegel frankly announces. The **fundamental inconsistency** of being-for-self is its violation of the **identity of indiscernibles** (which is a theorem of second order predicate logic with identity):

$$(\text{Id.Ind.}) \quad (\forall F) (Fx \leftrightarrow Fy) \rightarrow x = y.$$

The opposite direction being unproblematic, we can strengthen (Id.Ind.) to **Leibniz's Law**:

$$(LL) \quad x = y \leftrightarrow (\forall F) (Fx \leftrightarrow Fy),$$

which can be used to **define** identity in second order predicate logic without (primitive) identity. (Identity and its ilk: difference, equality, diversity etc., **supervene** on ground floor predicates. Hegel will call them “determinations of reflection.”)

Now, when the original **ideality** of the logical space of being-for-self **collapses** into the **hard** and **punctiform** reality of the one, the resulting **one** is empty of determinations (like the one in the first hypothesis of Plato’s *Parmenides*). The one is **void**: empty logical space, and then reappears *in* empty logical space as constantly copying (duplicating) itself in an original self-repulsion.

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**First** it might seem, as if the one, by **repelling** itself from itself, **posited** and **generated** the many ones (as perfect clones of itself). But if what is putatively created in repulsion really is another indistinguishable one, then that new one repels itself from itself just like the first one.

Therefore, **secondly**, the repulsion is mutual or reciprocal between the many ones. It thus will turn out to be **exclusion**: each one **presupposes** the many ones and **excludes** them from itself. Hegel diagnoses that situation as the logical basis for **ancient atomism**.

But another hint at ancient philosophy seems to be appropriate (though Hegel does not give it). According to **Aristotle**, a **genus** is **differentiated** into species by a **differentia** (i.e. an otherness); and a **species** is “pluralized” into **individuals**, and these are two totally **different ways** of going from unity to diversity: (i) from something to an other, (ii) from one to many.

There *really* are – *pace* **Plato** – no genera according to **Aristotle** (they are abstractions only), but there are species and individuals, and both come pretty close to the same thing: **essential forms** (*eidê*). But then, we have a riddle of **individuation** which must be solved.

What is the **principle of individuation** in Aristotle’s metaphysics? **Matter**? No. – **Materia signata** (Thomas Aquinas)? No (that would amount to the subjectivity thesis, if taken seriously, and thus fine; but it’s not Aristotle). – **Form**? Yes, given matter (matter is a necessary condition, but form is the active principle of individuation):

The logic of being-for-self offers a way to see how form/species (qua *the one*) individuates itself: the form repels itself from itself to many individual forms and **collects** them **back** again into the unity of the species, when the individuals die: the (biological) **process** of the **species**.

The collecting back of the individuals into the species (i.e. death) can be seen as the biological manifestation of logical **attraction**: The many **ones**, being **one exactly like** the **others**, do **violate** Id.Ind. and (LL) and are thus forming an **illogical** and instable urstate. Id.Ind. so to speak calls the many ones back towards identity, i.e. into mutual **attraction**.

This eventually leads to “the **one One** of attraction”. This one of attraction is not empty or void anymore, “it does not absorb the attracted ones into itself as into a centre, that is, it does not sublimate them abstractly. Since it contains repulsion in its determination, this latter at the same time preserves the ones as many in it; through its attracting, so to speak, it acquires something for itself, obtains an extension or filling. There is thus in it the unity of repulsion and attraction in general.” (174/162)

The essential relation between the ones eventually is a repulsion that is at the same time attraction; repulsion and attraction neutralize and sublimate each other, they turn into the moments of pure **quantity**, viz. **discretion** (the basis of arithmetic) and **continuity** (the basis of Euclidean geometry).

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**Now a glimpse towards quantity.** In the *Encyclopedia Logic* the transition from being-for-self to **quantity** is particularly concise and short, cf. §§ 98-99:

“Thus repulsion is equally essentially *attraction*, and the excluding One or being-for-itself sublates itself. The qualitative determinacy that has reached in the One the determinacy in-and-for-itself has thus passed over into determinacy qua *sublated*, i.e. into being as *quantity*.”

Then § 99: “*Quantity* is pure being in which determinacy is posited as no longer one with being itself, but as *sublated* or *indifferent*.”

**Note:** In SoL (1812) we have: “Section Two: Magnitude (Quantity)”, in EL, § 99, note 1, we read: “The expression *magnitude* is unsuitable for quantity, insofar as it signifies [...] determinate quantity.” (Determinate quantity is called **quantum**, § 101, and corresponds to being-there, while **pure quantity** corresponds to pure being, and **degree** to being-for-self.)

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**Logical space is pure quantity**, or: “The absolute is pure quantity”, i.e. “matter in which the form is indeed on hand, but as an indifferent to determination” (§ 99, n. 3). Pure space and time (the pure I, ...) are examples of quantity. What determines them – real contents of various sorts – does not modify them. [In fact what determines space-time does modify it, as witness Einstein’s GRT; but that would be a case of measure, not of pure quantity.]

Quantity is at the time **continuous** (a legacy of attraction) as well as **discrete** (a legacy of the self-repelling one), like becoming was both, *being* as well as *nothing*. And yet *becoming* all the way down. So quantity too is continuous in being discrete and vice versa (all the way down). Hegel refers us here to the antinomy of space, time, matter (cf. Leibniz’s labyrinth of the continuum).

The **quantum** then is determinate quantity and, qua perfectly determined, **number**. It is interesting that **Hegel** and (decades later) **Frege** point to the same difficulty in understanding number, but react in opposed ways. Number is an amount (“Anzahl”) of ones (units, Einheiten) and in fact is their unity (Einheit). But the ones in a given number would have to be strictly **indiscernible** and would thus collapse into identity.

Hegel and Frege see the incoherence, but **Frege** calls for a new and different approach to number. (Numbers are properties of general concepts, roughly. E.g. 2 is the common property of all and only those concepts with exactly two instances.) Hegel takes the incoherence as the basis for the further **dialectic of quantity** instead.

He then goes on to develop the “kinds of calculation” that “are usually listed as contingent ways of treating numbers” (§ 102 n.), viz. addition, multiplication, raising of the power, from the moments of number (amount and unity). Finally he studies **quantitative proportion** (or **ratio**): the direct, the inverse and the ratio of powers, in which **measure**, the “qualitative quantum” (§ 107), is finally reached.

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### **Second part. From quantity to absolute indifference through measure**

The logic of **quantity** has three chapters (we talked summarily about the first two already):

- Chapter 1: Quantity [continuous and discrete magnitude, limitation of quantity]
- Chapter 2. Quantum [number, extensive and intensive quantum, quant. Infinity]
- Chapter 3. The Quantitative Relation or Quantitative Ratio

At the end of chapter 2 Hegel considers **quantitative infinity** and in particular the **quantitative infinite progress**. This progress goes to **infinity** in **both** directions: toward the **infinitely**

**large** in counting and toward the infinitely small (the **infinitesimal**) in dividing the continuum. And it never reaches its **beyond**, i.e. **quality** as such.

That is an interesting point. The **beyond** of the quantitative infinite progress could nowadays be conceived as, *prima facie*, a **transfinite** number. So,  $\aleph_0$  is the smallest non-finite cardinal number and  $\omega$  the smallest non-finite ordinal number (limit number).

But although set theory thus **might** be taken to have shown that the **beyond** of the quantitative progress is still a **quantum**, cardinal or ordinal, i.e. extensive or intensive, it (set theory) has at the same time shown that no **real** beyond is thereby reached, because the progress just continues in the **transfinite** ( $\omega$  has no predecessor, but a successor of the same cardinality; and then larger ordinals with higher cardinalities come up as well). The **true** beyond, in which the progress would have come to a halt, can only be **quality**.

What is going on in the remainder of the logic of being is, basically, the transition of **quantity** back to **quality**. This will eventually lead to a short **loop** (one single circular urstate, in the end) in the transition from quality to quantity to quality etc., like in the case of the alternation of the one-sided **infinite** and the **finite**. But this time the impasse is there to stay, and being as such will collapse into absolute indifference (that one single circular urstate).

Before that happens, we will get more **logical structure**. The transition of quantity back to quality is, at first, something only *for us*, in our BL. The newly arrived at quantitative quality, called **measure**, will at first get the chance to unfold logically before our critical eyes. Only then the loop will be posited also as an OL-urstate and create the final impasse of immediate being.

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Measure is reached starting from the quantitative ratio or proportion

the direct proportion/ratio	$y = px$
the indirect/inverse ratio	$y = 1/x$
the ratio of powers	$y = x^2$

Cf. EL § 106:

The sides of the proportion are still immediate quanta and the qualitative and quantitative determinations are still external to each other. But as for what they truly are, that the quantitative in its externality is itself the relation to itself, or that being-for-itself and the indifference of the determinacy are united, this is **measure**.

I won't go through the details of the three variants of quantitative ratio. Suffice it to say that in the ratio of powers the quantum,  $x$ , **determines itself**:  $x$  times  $x$ , in its own externality. So Hegel can say:

“But in the ratio of powers, quantum is present in the difference as *its own difference from itself*. [It is not only different from itself but is now itself its very difference from itself!] The *externality* of the determinateness is [has always been] the quality of quantum and this externality is now posited in conformity with the Notion of quantum, as the latter's own self-determining, as its relation to its own self, as its *quality*.” (SoL Miller 323 top / 21.320 top)

The point is that the externality as such has at last turned out as the internality, i.e. as the quality, of quantum.

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We in BL see that pure thinking has now gone **full circle**: from quality to quantity and back to quality. From one inconsistency to another and back to the first. From the frying pan into the fire and back into the frying pan.

And this could go on forever in a new infinite progress. What will happen next is that the **circle**, which is there for us, in BL, and in which pure thinking is caught at the **OL level**, will have to become a **unitary OL urstate** (a *catastrophic* one) for pure thinking itself.

But first, this new unitary urstate is there for pure thinking only as the **immediate unity** of quality and quantity in which its inconsistency is well hidden: this is **measure**. (“Abstractly expressed, in measure quality and quantity are united.” SoL 327/323. “At first, as an immediate measure it is an immediate quantum, hence just some specific quantum or other; equally immediate is the quality belonging to it, some specific quality or other.” 333/329)

In EL, measure is treated very briefly. First, we have **immediate measure**, a quantum to which a quality is attached (e.g. a foot, for measuring length).

To this **immediate unity** of quality and quantity there corresponds the **immediacy** of their **difference** (for, of course, they are different as well). Quality and quantity can depart immediately at certain points. You gradually enlarge your garden, and then, some day, it’s a park.

This points to **specific quantum** which is a **rule** – one might say: a **rule of thumb**. We know roughly how large a garden must be in order to be neither just a patch or bed nor a whole park, but a garden, justly so-called.

The (specific) **quantum qua bare** quantum may be diminished or increased without measure thereby being set aside or the rule being violated. You may increase or decrease your garden without thereby ceasing to have a garden. But if you go on diminishing or increasing the area of the garden, you will finally wind up with a patch or a park respectively.

Beyond the measure we will hit upon the *measureless*. But, typically, the measureless of x is the measure of y. The measureless of your garden is the measure of your park or your patch. This “self-abrogation and restoration of measure in the measureless” (EL § 109) can be imagined as an **infinite progress** again, an infinite “nodal line of measure relations” (SoL 366 / 364). (In nature, each nodal line will of course be finite, cf. e.g. the two nodes at 32°F and 212°F, as regards the aggregate state of water.)

The former **immediacy** of the unity of quantity and quality is now sublated (**EL § 110**): “Yet measure turns out to sublimate itself in[to] the measureless. The latter, while it is the negation of measure, is nonetheless itself the unity of quantity and quality, and hence displays itself just as much as simply coming together *with itself*.”

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This then is the point at which **pure thinking** at the **OL level** catches up with our **BL** thinking in uniting quantity and quality into one dynamic, self-mediated urstate. The oscillation between quantity and quality which was there as an infinite progress (for us, in BL) is now present at the OL level as an oscillation between the specific measure and the measureless. So, again we have here a transition of the kind we know from the case of the infinite progress of the finite and the one-sided infinite into the true infinite. In Hegel’s words (§ 111):

The infinite, the affirmation as negation of negation, now has for its sides quality and quantity instead of the more abstract sides of being and nothing, something and an other, and so on.

**Measure** thus gets aligned with **becoming**, **alteration**, the **infinite**, as a dynamic unity of two sides or factors each of which is inconsistent and gives way to its counterpart.

But there is here no way anymore for a collapse into a stable, **affirmative** unity. The whole **sphere of being** is now compressed into a single urstate “being”, which is a **substrate** of two **states** (purely external qualities), quality and quantity, both of which are self-destructive and, “*through the negation* of every determinateness of being”, turn being into **absolute indifference**, a purely negative and inconsistent “simple unity” (SoL 375).

Pure being, which submerged into the logical underground, before logical development started with the big bang of becoming, and then was the subliminal, tacit **substrate** of the logical development of being, is back as an urstate again (or in fact for the first time), with the main stations of the logical development: quality and quantity, as its **states**.

The whole of the logic of being thus is **condensed** into a substrate with two states, each of which is internally **incoherent** and gives way to the other – and back again. We now see what the logic of being was: shipwreck from its beginning to its end.

Being was **abstract indifference** at the beginning of the logic qua result of our abstracting from all possible differences. Now this same indifference is reached as a **result** of being’s **own** “abstracting” from all internal differences in its internal inconsistency. This is why the indifference is now called “absolute”: it is **internal** to being itself, self-induced.

The indifference we produced in BL at the beginning is now produced by the OL itself.

And there is no way here to save the situation by pleading **indexicality**. This move has been used up with becoming, alteration, idealization and has in the event turned out not to be of lasting success. Pure being was meant to be eternal: the lasting substrate of the logic of being. Now it is a substrate (with two incoherent states) qua OL-urstate.

So, the inconsistency is there to stay, forever, destroying all internal structure. The enterprise of the presuppositionless theory has finally ended in **shipwreck**. The whole logic of being is “sublated” in – shipwreck (called “absolute indifference”)! Or so it seems.

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### Third part. A new start

#### Some reflections on our present situation:

- (1) Being was to be grasped by thinking, in an act of pure intellectual intuition, as something immediately given. We now see that being is everlasting **self-destruction** without any **profile** (structure, determination, distinction, difference). Thus, we in BL may conceive of a negation of being, stipulating at the same time that it is not of its (i.e. being’s) ilk. We must be careful, for being itself is already the negation (and destruction) of being, so we must devise something sufficiently **new**.
- (2) The new urstate (as yet unknown) which is to negate being might be conceived as an urstate which is **not graspable** as something immediately given by pure thinking but as hiding behind the immediately graspable. What is hiding behind the phenomena as something deeper and more real is usually called their **essence**. Thus, the essence of **manifest** water is a **theoretical** (and as such unobservable) entity called H<sub>2</sub>O.
- (3) So, we might **dub** the looked for new logical urstate “**essence**” and **stipulate** (i) that it is the **negation of being as a whole**, but (ii) a **new**, essence-like, hitherto unknown kind of **negation**, and (iii) nonetheless a negation that arises out of the **antinomy of being** itself (and not totally unconnected to it), so that pure thinking will be somehow be able to get from the tracks of being onto the tracks of essence.
- (4) If we dub the unknown **other** of antinomial being “essence”, then being will be **non-essence**, or the **unessential**. But of course, we don’t want the new urstate *essence* to fall back into the relation of **something** and an **other**. At first it does, for lack of pro-

file of the new negation, and thus we get the opposition of the **essential** and the **unessential**. This is the beginning of the logic of essence (chapter 1, on “shine”, section A).

- (5) But we know that the *essential* in its opposition to the *unessential* cannot be what we are looking for; its content (*essence*) does not fit into its form (*being-there*). And it would lead us back into the antinomial story of the logic of being, anyway.
- (6) So, we need something totally **new**. The new urstate *essence* lies **behind** (or well hidden **within**) antinomial being which in turn is no real other for essence but only its null and invalid **foreground**. We in BL must sever the pure thinking of antinomial being from any (objective) **truth claim**. But what remains of a content when severed from objective truth claims is a mere **seeming**, mere **appearance**, mere **shine**. So, we have at least a **name** for what has remained of being, in relation to the new urstate *essence*: **shine** (“illusory being” in Miller’s translation, but *shine* need not be **illusory**, it may as well be seen through and be treated for what it is, and then no illusion is attached to it – shine can be belief-independent).
- (7) So, being in its everlasting antinomy is **shine**, and its global negation is **essence**. Shine in its total invalidity and nullity cannot stand in any real opposition to essence. It is strictly **nothing** (writ small) in relation to essence. All there is to it must somehow come from essence itself. (So there is a sense in which shine is identical with essence after all, but we must be careful not to say that shine is essence, full stop; nothing could be further from the truth.)
- (8) So, pure thinking **grasps shine** but it must “mean” *something else* (care must be taken not to interpret this along the lines of being-there) behind shine, called essence. Thus, pure thinking goes **representational! Shine is a sign**, a *sêma*, in Greek. The dimension of **semantics** is thus opened up before our very eyes. (But Hegel does not comment on it; the importance of semantics for first philosophy became clear only decades later, with Frege, Russell and Wittgenstein.)
- (9) In shine, pure thinking is totally closed within itself and severed from any real urstate. The window thinking is trying to look through has become a **mirror**. Thinking gets reflected to itself, and that’s it. **More metaphors**: If pure thinking could walk, in shine it would persistently stumble over its own feet. In shine, it is completely entangled with itself. There is no “transcending” to any outside, to the real and objective (not: anymore, but: not yet, because in the sphere of being, we were still completely beyond the duality of the subjective and the objective; now this duality announces itself from far away, but that is all, for the time being).
- (10) Shine is **not** essence, shine **points** to (signifies, designates) essence as to its **hidden source**. Shine is the **shining of itself within itself** of (the otherwise hidden) **essence**.
- (11) Again we may employ our formula for **the negation-of-itself**: “ $\sim(\sim(\sim(\dots)))$ ”. This formula is now to be interpreted without any reference to immediate being. “[T]he other is not *being with negation* [...], but *negation with negation*” (399 / 11.249). It now stands (**not only** for self-related negation but also) for **autonomous negation** (Hegel speaks of “absolute negativity”, *ibid.*). That means we don’t use any “immediate” clue for interpreting it anymore. (We have passed from the negation-theoretic analogue of AFA<sub>1</sub> to the analogue of AFA.)
- (12) Nevertheless, we can (if we like) interpret the outer negation sign as standing for the negation of shine, thus:  
 essence  $\leftrightarrow \sim(\sim(\sim(\dots))) \leftrightarrow \sim[\sim(\sim(\dots))] \leftrightarrow \sim[\text{shine}]$ .  
 But then shine has **the same internal structure** as essence and is indeed identified

with essence, save the fact that it gets negated one more time, by essence. Thus, essence negates itself, and is called “**essence**” qua **negating** and “**shine**” qua **negated** (by us in our external BL reflection). Surely an **inconsistent** situation again.

- (13) The **inconsistency of essence** is, of course, vital for any logical progress. On the other hand, it must not be so overwhelming as to block any progress. The inconsistency will get **posited** in the “essentiality” (or determination of reflection) of **contradiction**. But first it should stay in the background. We come from the open inconsistency of being and need a way out of inconsistency (not a way deeper in).
- (14) So we do two things. (i) We say that essence is not cognitively accessible for pure thinking (yet) and all pure thinking has got to grasp is shine, which is indeed inconsistent (being that which is left over from being). This makes room for a little bit of logical structure of shine after all, to be considered in sections “B. Shine” and “C. Reflection”.
- (15) (ii) We then do what we always do with the formula of self-negation: take its negation signs in pairs to get self-affirmation and then add (to correct this one-sidedness) the formula once again, but this time as it were with an uneven number of negation signs, so that one outer negation is left over. This gives us the **formulae**  
 “[pure unfounded affirmation]” and  
 “~[pure unfounded affirmation]”  
 respectively as two **equally valid** formulae of **essence**.
- (16) The first formula depicts essence as **identity**, the second formula depicts essence as the negative thereof, **difference**. Identity and difference are called “essentialities” or “determinations of reflection” by Hegel; but first and foremost each of them is the whole of essence. They are **determinations of reflection** only in so far as each “shines” in the other one, thereby betraying its own one-sidedness. Qua determinations of reflection they articulate the logical structure of shine (the topic of chapter 1, sections B and C).

Our next task will be to say something about the internal structure of shine (**positing**, **external** and **determining** reflection) and then something about the **determinations** of reflection.

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#### Fourth part. **Positing, presupposing/external and determining reflection**

- Chapter 1    **Shine**  
 A    The Essential and the Unessential [already treated, shortly]  
 B    Shine [already treated, shortly]  
 C    Reflection, (a) positing, (b) external, (c) determining reflection

“[Shine] is the same thing as *reflection*; but it is reflection as *immediate*”, while reflection is shine made foreign or “estranged from its immediacy” (399 m; therefore homely Saxon “shine” and foreign Latin “reflection” respectively).

“[Shine] is all that remains from the sphere of being.” (395 b) Shine is the immediate successor of the **unessential**: the unessential stripped of its being. A note regarding **method**: To get access to the sphere of essence, one has to start working with essence-fallen-back-into-*being-there*: the essential and the unessential. So, the **unessential**, the putative “other” of essence, minus **being** is **shine**.

**General note**: The respective **first chapters** of the logics of *being*, *essence*, *concept* are all a bit **detached** from what follows them (being: logical pre-history; essence: search for a new start; concept: more our external reflection and the whole of the concept in nuce.) McTaggart

wanted even to skip the first chapter of the logic of essence, and Hegel skipped it himself in EL (but arguably because EL is so condensed, only).

But the **opening chapter** on shine is important for getting **into** the logical development that starts with identity, and it is important for a preview of the **method**: first **positing** reflection (with the determinations of reflection), then **external** reflection (with the dualities of appearance), then **determining** reflection (with actuality and the transition to the concept).

The respective logical developments start with (a) being-there (or self-*identical* something), (b) *identity*, (c) *universality* or again *judgmental quality* (the judgment of *being-there*).

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Normal, **extra-logical shine** is not absolute, not even in case of hallucination. Reality is always open to us, albeit in ways that lead us to misconceive it grossly. But here, at the beginning of the logic of essence, shine is total, **absolute**. No presence of essence, only supposed *re*-presentation of it (shine as mere *sêma*). The real (=essence) is locked in itself like a black whole, shine does not have any real connection with it. Shine is free-floating within itself.

The grinding mill of negation delivers shine without real input. Shine is “*reflected immediacy*” (396 t): only there in the coming back from ... (**nothing**). There is no immediate surface (no other) from which it could come back; shine is “the non-self-subsistent which *is* only in its negation.” (ibid.) – Hegel says that shine is “the phenomenon of scepticism” and that “the Appearance of idealism, too, is such an *immediacy*, which is not a something or a thing” (ibid).

This immediacy then is not present in shine, but only **presupposed** as “a side that is independent of essence” (397 m/t). But shine is nothing apart from essence, and so, in fact, the moments of shine “are thus *the moments of essence itself*”. (397 b) Shine is to be fully **internalized** to essence itself. As such it is **reflection**.

Shine is like a virus with its own DNA but without metabolism. It needs a host in order to share the hosts metabolism. Here, the host is essence (as yet totally unknown to us), and the shining DNA is reflection: positing, then presupposing and external, then determining. (In determining reflection host and virus are happily merged.)

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**Positing**, in the course of the logic of being, was the making **explicit** (or giving being-there to) what was there *in itself* (in principle, implicitly, for us in BL only). Now this diachronic **logical** movement (BL movement) is turned into an **OL** content as **positing reflection**.

Positing is not just **stipulating**, inventing, creating. Positing has to be **true to the facts**, it is bound by what is there already, “in itself”. (The acorn cannot be “posited” into a palm tree.)

Think of phenomenal colours: They are there also in the dark. The pink of a pink ice cube is there, in itself, in the dark freezer. But it gets posited in daylight (and by actual vision). Daylight (and healthy eyes) is true to the colour facts: pink things look pink in daylight.

Such was positing in the **sphere of being**. What was there in itself (and for us) was then posited and thus there for pure being as well.

In the **sphere of essence** (or shine) positing does not come back to us from something real (some real *in-itself*), but from nothing.

Sure: “In the *sphere of essence*, *positedness* corresponds to determinate being.” (406 m/t) – But: “*Determinate being is merely posited being or positedness*; this is the proposition of essence about determinate being.” (406 m, *positedness* is the middle term between being-there and essence.)

That from which **positing reflection** starts is (or was) not there in the first place (think of the empty mill, grinding nonetheless). But positing reflection makes it seem to have been there *ex post*. Positing reflection is thus **presupposing** its starting point, i.e. it posits its terminus a quo as something non-positated, as something already there, when the positing started.

We are not here in the philosophy of **spirit** or of **consciousness**. But we are at one of the logical sources of what is going on in our judgments qua objective **truth claims**: We are then claiming that something is the case independent of our claiming so. This is a form of positing-as-not-positated, i.e. of presupposing.

If the terminus a quo of the positing reflection is only **presupposed** and not **present** or **open** to it, then the reflection is **external** in relation to its target or terminus ad quem. (In reflection the terminus a quo is the same as the terminus ad quem. What is presupposed ought to be reached in positing, e.g. our objective truth claims ought to be true to the facts; they ought to reach what they start from.)

But **external reflection** is **severed** from its source/target (its terminus a quo et ad quem) [like in the strawman position “subjective idealism” the world of appearance from the thing in itself]. At least, external reflection, being external to its source/target, cannot distort the source/target, but has to leave it intact as it stands.

If it should nonetheless be (non-contingently) **true** to its target, it would be what I call **conservative projection** and what in the *Logic* (as contrasted with epistemology) Hegel calls **determining reflection**.

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When later **Fichte** puts **absolute appearance** at the place of the **absolute I** (that in 1794 he had conceived as logical space and as the totality of the real; *logically* it was *being-for-self*), then he must have something like determining reflection in mind. The **absolute appearance** is completely external to the absolute and yet is its true and faithful picture, it's the **appearance of the absolute** or the existing (ex-sisting, coming out and to the fore, coming into epistemic being) of the absolute.

Fichte's absolute appearance (*logically*: determining reflection) considered in isolation is **shine**, and Fichte's **absolute** considered in isolation is **light-shunning essence** (Hegel's “Lichtscheues”, light-shy, a logical black hole like the infamous thing in itself). But in determining reflection both come together *virtually*, so to speak (not causally). Shine becomes true to essence without being determined to be true from its outside.

Shine determines itself to be true to what is not **it** (shine), but essence; though of course the real activity (*enérgeia*) here is essence. Since all of logical space is now essence, since therefore there is nothing here but essence, shine can be nothing but the shining-in-itself of essence.

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### **Fifth part. Identity and difference**

Therefore, reflection, even *external* reflection (in which shine only signifies essence which remains hidden), must in the last analysis be the internal movement of essence itself, thus internal, **determining reflection**. And the aspects of this reflection must be aspects or moments of essence itself: **essentialities**. But the essentialities appear as **second floor** determinations (while the categories were ground floor: determinations of being). Qua second floor they are **determinations of reflection**.

(Identity properties *supervene* on ground floor properties: *a* and *b*, if two items, cannot differ only by being different; there must be some property that one of them has and the other not.)



The first essentialities (or determinations of reflection) are **identity** and **difference** (cf. the self-identical something and an other). Each of them is free from immediate being (in contrast to the SI-something and its other), each of them is reflected-in-itself (like the Liar and the Truth Teller), and each of them shines into its negative counterpart: they negate each other. Each of them is (qua reflected into itself,) the whole of essence, but like a reversible figure (or Wittgenstein's duck/rabbit-head) each has the other one as its – identical – opposite.

“By virtue of this reflection-into-self the determinations of reflection appear as free essentialities floating in the void without attracting or repelling one another.” (407 m) Each of them, qua posited by the other, is at the same time sublated, but qua reflected into self, both are self-subsistent and are “infinite self-relation” (408).

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Think of **unfounded** or **circular** or **infinite negation** again: “ $\sim(\sim(\sim(\dots)))$ ”. If we “forget” about the right-hand-side infinity of negation signs we can think of the leftmost negation as numbered either by an **even** or by an **odd** ordinal number. If its ordinal is counted **even**, what is expressed is unfounded affirmation: **identity**. If the ordinal of the leftmost negation sign is counted **odd**, on the other hand, then what is expressed is the negation of unfounded affirmation: **difference**.

But in fact, the same infinite negation series is there in both cases: Identity and difference, though negating each other, are strictly the same – are the one and same *essence*.

Essence is their inconsistent “unity”, and will be posited as such in the further development of the logic of the essentialities: Difference develops from **absolute difference** to **diversity**, to **opposition**, to **contradiction**. With contradiction the inconsistency of the logical development up to that point is finally **posited** in one single **urstate**.

The inconsistency that haunted the logic of being at its end is now back in the sphere of essence. The inconsistency was first **controlled** by being **split** between two reversible figures of essence; but now essence is one again – and inconsistent. “Das Wesen geht zu Grunde”: essence goes to ground, meaning: it perishes, *and* it goes down to be the inconsistent and indeterminate bedrock source of it all.

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## Transitions Into, With, and From Hegel's *Science of Logic*

### 7 Feb 18: Negation turned upon itself (3): from essence to the concept/notion

- Today:**
- I. Shine
  - II. Reflection
  - III. The determinations of reflection
  - IV. The absolute or substance (Spinoza's standpoint)
  - V. The transition into the logic of the concept

#### First part. Shine

Three conceptions of **shine** ("it seems that p"):

- (1) **Suspension of truth** claims (antinomy of self-denial, non-cognitive shine, Pyrrhonians),
- (2) **minimization** of truth claims by suspension of the our general claim to **objectivity** (subjective, immediate shine, true of the "inner" world, Descartes),
- (3) **minimization** of truth claims by suspension of all **specific**, empirical **objectivity** claims, not of our claim to objectivity as such (relative, essentially mediated shine: *epochê* as a means to isolate transcendental apperception or *the concept*, via abstraction from empirical claims).

With the **collapse** of being in absolute indifference, we first get (1): Shine is pure self-denial, bare of immediacy. Which would be the end of the Logic, in Pyrrhonian scepticism.

In order that the Logic go on we need a **cognitive reinterpretation** of shine and grant it an **immediacy** of a kind (conception 2). (To illustrate: shine as a stratum of internal, subjective sense data that – hopefully – stand for an outer, objective reality. Shine as *sêma* of essence.)

The **logic of essence** leads from this starting point at (2) to the **concept**, i.e. to (3).

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- Terminus a quo: absolute indifference (truth-less shine)
- Terminus ad quem: the concept (the transcendental frame)
- In between: essence (the concept "simply *posited*; [but] not yet *for itself*", EL § 112)

The **transcendental frame** in the **first step of Kant's TD**: transcendental apperception, synthesis, objectification, judgment, forms of judgement, categories.

In Kant, **space** and **time** belong to the transcendental frame, as becomes obvious in the second step of the TD and is spelled out in the chapter on transcendental schematism. Space and time are external to transcendental *logic*, though.

Two ways of "**eliminating externality**" (essay title by S. Rödl, relating to John McDowell):

- (1) Get space and time out of the transcendental frame altogether (Hegel *in* the logic), or
- (2) get the functions of thought into space and time (Hegel *after* the logic; a bit).

In the **logic**, the transcendental frame is considered **in isolation**, as its own (purely logical) content: All empirical and all *pure* aesthetical (spatiotemporal) content is neglected via abstraction (via *epochê*).

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The logic of essence starts with pitted, de-nucleated, i.e. "**de-immediatized**" self-denial: shine as truth-less left-over from being.

**In chapter 2** (where the *essence-logical development proper* begins) that pitted self-denial is divided into (1) self-affirmation as the *positive* result of self-denial: **identity**, and (2) the negative of self-affirmation/identity: **difference**. These are the **essentialities** or determinations of

**reflection.** (Same pattern: pure otherness was divided into the self-identical something and its other.)

But first shine/reflection: **chapter 1.** [McTaggart wanted to skip it, and in EL it is largely skipped and the whole first section of the logic of essence is rearranged (see “A. The essence as ground of concrete existence”, §§ 115 ff.; in SoL existence belongs to section B or Two). But chapter 1 is necessary for finding a new starting point.]

Subsection “B. Shine”: All **ontic immediacy** is left behind; but shine creates its own negative immediacy. Shine is “the phenomenon of scepticism”, and “the Appearance of idealism, too, is such an *immediacy*, which is not a something or a thing [...]. Scepticism did not permit itself to say ‘It is’; modern idealism did not permit itself to regard knowledge as a knowing of the thing-in-itself [...]” (SoL 396). The whole paragraph is very **instructive** (cf.: representations “arise in the monad like bubbles”)!

For the ancient **sceptic** the **bubbles** are untrue and yet immediately given; for **Descartes** they are determinations of the inner, **subjective** world; for a proponent of **subjective idealism** (a strawman?) they are given qua **appearances** (*sêmata*).

In any case: What **is not**, but only shines, is counted nevertheless as **immediate**. But the immediacy is parasitical, it is there only in coming back from nothing, it is de-nucleated, “only the *determinateness* of immediacy” (399 t). And it will be sublated by the internal movement of essence. “Essence in this its self-movement is *reflection*.” (399)

(In the *absolute indifference* there is no (ontic) immediate anymore, only negativity; and in the *concept*, the determinateness of immediacy will be completely mediated.)

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## Second part. Reflection

Subsection “C. Reflection” is particularly interesting for its **methodological** import. The **self-movement** of essence (viz. reflection) is here shortly delineated in advance: (a) **positing** reflection → presupposing (reflection) → (b) **external** reflection → (c) **determining** reflection.

### (a) Positing reflection

**Positing**, in the logic of being, was the making **explicit** (and giving being-there to) what was there *in itself* (for us in BL only). Now this diachronic **logical** movement (BL movement) is considered as an **OL** content, viz. as **positing reflection**.

Positing is not just **stipulating**, but has to be **true to the facts**. (The acorn cannot be “posited” into a palm tree. Phenomenal colours are real in the dark; but they get posited in daylight and by actual vision. Daylight is true to the colour facts: pink things look pink in daylight.)

Such was positing in the sphere of **being**. What was in itself (and for us) was later posited and then there for pure being as well.

In the **essence** (or shine) positing does not come back to us from something real (some real *in-itself*), but from nothing.

Sure: “In the *sphere of essence*, *positedness* corresponds to [being-there].” (406 m/t) – But: “[*Being-there*] is merely *posited being* or *positedness*; this is the proposition of essence about [being-there].” (406 m, *positedness* is the middle term between being-there and essence.)

Insofar as positing reflection makes it seem as if it came back from *something* (not *nothing*) it does **presuppose** its terminus a quo, i.e. it posits its terminus a quo as something *non-posited*, as something already there, when the positing starts. (What is *merely* posited and not also presupposed is ipso facto sublated, a shine, cf. e.g. EL § 143.)

We are not in the philosophy of **spirit**. But we are at a logical source of what goes on in objective **truth claims**: We are there claiming that something is the case independent of our claiming so. This is a form of positing-as-not-positing, i.e. of presupposing.

### (b) External reflection

If the terminus a quo of positing is only **presupposed** and not **present**, then the reflection is **external** relative to its terminus ad quem (in presupposing, the terminus a quo ought to be reached in positing, e.g. our objective truth claims ought to be true to the facts; they ought to reach what they start from, i.e. terminus a quo and terminus ad quem are the same.)

But **external reflection** is **severed** from its source and target (its terminus a quo et ad quem) [like in the strawman position “subjective idealism” the world of appearance is severed from the thing in itself]. At least, external reflection, being external to its source/target, cannot distort the source/target, but has to leave it as it stands.

If it should nonetheless be (non-contingently) **true** to its target, it would be what may be called **conservative projection** (in transcendental epistemology) and what in the *Logic* (as contrasted with epistemology) Hegel calls **determining reflection**.

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Now, in a rough and ready way, the **three types of reflection** may be correlated with the **three sections of the logic of essence** (of 1813):

<i>Positing</i>	One: Essence as Reflection Within Itself [long chapter: Ground]
<i>External</i>	Two: Appearance [beginning with existence/the thing]
<i>Determining</i>	Three: Actuality [incl. 1. The Absolute & 2. Modalities]

A little **problem**: The EL logic of essence (<sup>3</sup>1830) deviates in segmentation:

- A. The essence as ground of concrete existence (including the thing; §§ 115 ff.)
- B. Appearance (incl. “b. Content and form” <from 1813 “Ground”>; §§ 131 ff.)
- C. Actuality (without the absolute; modalities only in passing; §§ 142 ff.)

**Existence/the thing** has to do with the **manifest image** (Sellars), i.e. the categorial structure of the **lifeworld** (Husserl). There seems to be no duality and no pre-supposing here, just a presence of things to perception via their phenomenal properties, cf. chapter II of the PhS: “Perception; or the thing and illusion”.

Chapter III (PhS): “Force and Understanding; the sensible and the supersensible world” would then correspond to section *B. Appearance* of <sup>3</sup>1830. Here the duality of manifest appearances und hidden, metaphysically or scientifically posited and presupposed *theoretical entities* and *laws* becomes relevant.

In Sol (1813) the principle of segmentation seems to have been: 1) *mere* positing (*shining*), 2) existential positing, presupposing, external reflection, 3) determining reflection.

In EL (<sup>3</sup>1830) it seems to have been: 1) positing (including *existential* positing), 2) presupposing and external reflection, 3) determining reflection.

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Kant’s *critical question*, according S. Rödl, concerns the relation of *the general form of what is* and *the general form of knowledge* (see Jim Conant). This relation concerns and defines the transcendental frame (or logical space).

In pure, immediate **being** both forms collapse into one (one big, inarticulate logical urstate). In the **concept** they are well-articulated into **subjectivity** (first section) and **objectivity** (second section), and are nevertheless **one** as (absolute) **idea** (third section).

In the realm of **essence**, they are two, but essentially related in various ways (as world of appearance and world-in-itself, as whole and parts, as force and expression, as outer and inner) and then absolutely related (as substance and accidents, as cause and effect, in reciprocity).

Now, **reflection** typically belongs to the “subjective” side of the transcendental frame, i.e. to the general form of thinking. As *merely positing*, reflection *confines* itself to the subjective side. As *presupposing* it reaches out to its other, the “objective” side of the transcendental frame, but remains *external* to it, because the objective side does not show itself (rather, it remains hidden, inner).

With *actuality* (the absolute, substance) both sides come together, and the *concept* is almost already reached (but substance as such remains *light-shy*, “lichtscheu”. (The concept *is* fully reached with reciprocity.) But already substance as such is the power over the accidents in an activity (*enérgeia*) that may well be seen as a kind of determining reflection.

It is **important to note** that with substance the logical development turns out to have been the determining reflection of substance (or the self-exposition of the absolute, the chapter on the absolute – skipped in EL – being a short version of the whole section Three).

So, the logical process we have delineated in BL was in fact the **self-manifestation** of substance (or the self-exposition of the absolute) in **determining reflection**.

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### Third part. The determinations of reflection

By the logical “time” (i.e. stage) of shine (reflection, essence), *logical space* has gradually taken shape as the “**transcendental frame**”, i.e. as the interrelationship of the *general form of being* (the *in-itself*) and the *general form of thinking* (the *for-thinking*): proto-ontology and proto-epistemology. (In the PhS that same interrelationship was considered as the general form of spatiotemporal consciousness.)

With **shine** and **reflection**, though, at first only the general form of *thinking* is in view, as *pars pro toto*. Logical space seems to be reduced to this “subjective” side. The “objective” side is hidden (and only sought-for, at best), due to the total suspension of (“objective”) truth claims in the transition from being to essence.

Thus, the “subjective” side first develops internally, on its own, so to speak, i.e. the *determinations of reflection* develop, basically **identity** and **difference**: pure unfounded (circular) affirmation and the negation thereof.

Identity (“=”) and equivalence (“ $\leftrightarrow$ ”) are closely related. Identity is for objects what equivalence is for states of affairs. For urstates then they coincide. The urstate that is *nothing but* identical to itself is the urstate that is *nothing but* equivalent to itself (to its own being affirmed):

“( )=( )” and “( ) $\leftrightarrow$ ( )”

with the blanks being filled by the respective expressions themselves

If we take the double negation sign as a sign of affirmation, we can express unfounded affirmation thus:

$\alpha \leftrightarrow_{df} \sim\sim(\alpha)$

The definition index is misplaced, because the definiendum reappears in the definiens, still the definition sign is there to indicate the non-well-foundedness of the circular affirmation. Expanded, the “definition” runs into the infinite (its circle unfolds as an infinite process):

$\alpha \leftrightarrow_{df} \sim\sim(\alpha) \leftrightarrow_{df} \sim\sim(\sim\sim(\alpha)) \leftrightarrow_{df} \dots \leftrightarrow_{df} \sim\sim(\sim\sim(\sim\sim(\dots)))$

But the infinite process (or regress) is there only graphically, as a means to express pure circularity.

Equivalently, one could “define” pure identity as that which is identical to itself:

$$i =_{df} i$$

Again, the “definition” is not formally correct, unless expanded (and then, again, it is not formally correct either, because it runs into infinity): [“ $\iota$ ” is here used for the iota-operator]

$$i =_{df} (\iota x)(x = i) \quad = \quad (\iota x)(x = (\iota y)(y = (\iota z)(z = \dots)))$$

**Fichte** in his Doctrine of Science of 1794/95 starts with the law of identity, “ $x=x$ ”, and then presents the *self-positing I* as the first and pure paradigm instance of that law. To posit, Latin: *ponere*, is to claim, to affirm. Self-claiming, self-affirming reason thus is that which by definition is identical to itself and is **exhausted** by that self-identity.

(Normally, a thing is self-identical but by no means exhausted by self-identity. Everything is self-identical, so *no* normal thing can be defined by its self-identity.)

Fichte’s *absolute I* of 1794 is **logical space** as conceived by what Hegel thinks is **subjective idealism**. Hegel thinks that it is truncated logical space, its subjective side only.

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Pure **identity** (identity of identity and identity) is indistinguishable from its **opposite**, pure **difference** (difference between difference and difference). Pure affirmation is indistinguishable from the negation thereof. Both have the same expansion of their respective formulae:

$$\sim(\sim(\sim(\dots))) \quad \text{and} \quad \sim(\sim(\sim(\sim(\dots))))$$

The brackets here do not make any difference.

Both include each other, both negate each other. They are reciprocally sublated. At first each seems to be an independent guise of total essence (or a reversible figure of total essence, like Wittgenstein’s duck/rabbit head). But on closer inspection, each is a moment only of the other one: They **shine** each into the other one. Qua *merely* posited (and thus sublated) they are what Hegel calls **determinations of reflection**.

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With the pairs of opposing determinations of reflection, the inconsistency of circular negation is cut in (prima facie) coherent **halves**. But finally, in the determination **contradiction** (the last successor of **difference**), the halves get reunited and the inconsistency is thereby posited. The **whole** of essence is now posited and “falls to the ground” (“geht zu Grunde”) because of explicit inconsistency.

**Ground** is the last determination of reflection, and it is essence again or finally, total essence, posited as such. **SoL 1813** therefore has a long chapter on *ground* and then a **cut**. **EL 1830** instead treats *ground* very briefly and develops much of the relevant materials (e.g. form/matter and form/content) later, at other logical stages. And the **cut** comes later as well.

First comes “real” positing, so to speak: From the inconsistent ground emerges (concrete) **existence** and with existence the **thing** with its **properties**, i.e. the manifest (life-) world as such, without a hidden agenda of a supersensible, essential world as yet. The 1830 cut only comes, when the **duality** of manifest world and hidden essential agenda enters the scene.

From then on, **both sides** of the transcendental frame are present: the “subjective” side as existence (outer appearance) and the “objective” side as (inner) essence.

But the **relation** between both sides (*existence and essence*, the classical, pre-Heideggerian “ontological difference”, dating back to the monotheistic philosophies of Avicenna/Ibn Sina, Maimonides, Thomas Aquinas, cf. the latter, *de ente et essentia*) is not yet the **true and lasting** one. The transcendental frame is not yet the **concept**.

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#### **Fourth part. The absolute or substance (Spinoza’s standpoint)**

I skip over the middle section in order to approach the **transition** from essence to the concept. In the third section, SoL 1813 has an introductory chapter on the **absolute**, which is **missing** in EL 1830. The chapter on the absolute perhaps can be read as a short version of the whole section on actuality.

The **absolute** is treated by Hegel like Spinozian **substance** in that it is associated with “the absolute attribute” and “the mode of the absolute”. Later, substance is investigated as “the absolute relation” (a nice oxymoron), more specifically as “the relation of substantiality” (i.e. inherence: the relation of substance to its accidents).

Hegel declares on behalf of the connection between the absolute and substance and on behalf of the following chapters 2 and 3 of the section “Actuality” (SoL 528):

Secondly, we have *actuality* proper. *Actuality*, *possibility* and *necessity* constitute the *formal moments* of the absolute, or its reflection [its subjective side again so to speak].

Thirdly, the unity of the absolute and its reflection is the *absolute relation*, or rather the absolute as relation to itself – *substance*.

What is peculiar with regard to **the absolute/substance** is that it stands for the **whole** of logical space up to its development to the present stage (of the absolute/substance). Thus, when Hegel speaks of “the exposition, and in fact the *self*-exposition, of the absolute and [...] a *display of what it is*” (SoL 530), this is not only something happening in the respective chapter(s), but refers at the same time to the whole logical development up to the present stage.

**With the absolute/substance, the Logic turns explicitly self-referential!** Thus, when Hegel says that “the *flux of accidents* [...] is the absolute *form-unity* of accidentality, substance as *absolute power*” (556), then that applies to the ***flux of logical determinations*** throughout the logic of being and of essence. What we have hitherto studied thus turns out to have been substance qua absolute power (over its various accidents).

This opens up **new possibilities for argumentation**. For if we now ask, for instance, “How does substance exert its absolute power over its accidents?”, or, “How does the absolute expose itself?”, Hegel can say: “But you know already! Look at what has gone on in the Logic up to the present moment! That is how substance exerts its power and how the absolute exposes itself! You have been an eye-witness.”

We are no longer restricted to **extra-logical examples** in illustrating, say, substance (well, of course we never were totally), but now we have nice **inner-logical paradigm cases** as well. “The movement of accidentality” (SoL 555) may be illustrated by referring to Socrates who first sits and then stands, but as well (and more adequately so) by mentioning the shining “in one another of the *categories* of being and of the reflective determinations of essence”, i.e. by pointing to the logical development itself.

Logical space is **substance/the absolute**, and the **flux of its accidentality** is the evolution of logical space.

It seems to me that in the chapter on the **absolute** Hegel goes even further than later in der chapter on substance, cause and reciprocity. The absolute is not only substance, but its attribute/mode-structure betrays features of the concept already.

This is just an exegetical **hypothesis**. I am not sure, but it seems to me that the **mode** of the absolute are *we* in doing the logic, i.e. **the mode is the background logic!** See SoL 535, “C. The Mode [...]”, paragraph 2):

But mode, the *externality* of the absolute, is not merely this, but externality *posited* as externality [our subjectivity knows itself *as subjectivity* in knowing objective reality], a mere way and manner [this motivates the passing on to the *modalities* in chapter 2: from mode to modality] and hence [shine] as [shine] [our non-ontological mindedness knows itself as non-ontological mindedness], or *the reflection of the form into itself* [the form is the transcendental frame, it is *absolute* form, in its self-reflection providing its own logical content; “form” indeed in the *classical* sense: *idea, eidos* and *enérgeia*, form *activity*] – hence the *identity-with-self which the absolute is*. Therefore it is in the mode [in our background logic] that the absolute is in fact first posited as absolute identity; it is what it *is*, namely identity-with-self, only as related negativity, as a [*shining*] that is posited as [shining].

The **attribute** is (according to Spinoza) what the understanding grasps of the substance/the absolute as constituting its essence. So what we (the mode) in BL **grasp** in positing the absolute as absolute identity is the absolute **attribute** (not the “absolute absolute”).

But our grasping, i.e. positing, is a **conservative projection** or a **determining reflection**. That is what makes me surmise that with the absolute/attribute/mode situation we have in fact already reached the concept. See SoL 535f.:

Accordingly the true meaning of mode is that it is the absolute’s own reflective movement, a *determining*; but a determining which would make it not an *other* [it is not invasive, no imposition] but only that which it already *is* [cf. the objective validity of the categories in Kant], the transparent externality which is the *manifestation* of itself [...]. [...] the content of the absolute is just this, *to manifest itself*.

Logical space qua absolute or concept *is* its evolution as posited in BL! BL is a truly conservative projection or truly determining reflection. Or: BL is, at root, the concept.

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But slowly! In the absolute all former determinations are absorbed (that’s Hegel critique of Schelling’s version of the absolute). This is its **negative** self-exposition (see 531f.), as it is implicit in **Spinoza’s** metaphysics. We start with the host of contingencies and reduce them to **the one and only** substance with its infinitely many infinite attributes, only two of them we happen to know: thinking and (extended) being (cogitation and extension).

(But it is no contingency, Hegel claims, that we know only those two attributes. There are only those two there in the first place. They are the two correlative aspects of the transcendental frame: the for-thinking and the in-itself.)

The absolute, however, is not only and one-sidedly the **terminus ad quem** of the logical development, but as well the real **terminus a quo**. When we in BL started with pure being is what the mode of the absolute “in us” which made us start like that.

This is even more evident with *substance* qua **power** over its accidents. This – that the absolute/substance is also the terminus a quo – grounds the **positive** self-exposition. (One may even ask whether that self-exposition starts anew and this time in a deeper sense, when the absolute or substance transforms itself into the concept.

We are obviously getting close to the **concept!** “The identity of the absolute is [...] the absolute identity, since each of its parts is itself the whole, or each determinateness is the totality”, SoL 531.



**Exegetical hypothesis:** Hegel knew **two** ways from the *essential relation* (inner/outer) to the **subjective logic** of the **concept**, both via Spinozism, a short one with Spinoza's substance as the **absolute** and the mode as the subjective concept already, and a lengthier one via modalities, substance, causality, reciprocity to the universal concept. In SoL 1813 he delineated both, first the short, then the lengthier one. In EL he realized that that was a bit unsystematic, and he fused both ways into one, with the former lengthier one providing the key words

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### **Fifth part. The transition into the logic of the concept**

The absolute relation, at first, as the relation of substantiality, is grossly **asymmetric**. Substance is **power**, the accidents are **powerless**. So we learn something **new** about what we in BL were eye-witnesses of: It was not becoming that posited being-there nor being-there that sublated becoming (and so with all the other logical determinations: the “accidents as such [...] have no power over one another”, 556b), but it was **substance** itself, exerting its power over its accidents and positing and steering the logical development.

Substance is power, accidentality is powerlessness. Nonetheless both sides are at root **identical**. Substance just **is** the movement of the accidents, not an immediate underlying substrate (like pure being was for the logic of being). – SoL 556:

Substance [...] is the totality of the whole and embraces accidentality within it, and accidentality is the whole of substance itself. The differentiation of itself into the *simple identity of being* and the *flux of accidents* in it, is a form of [shine]. The former is the formless substance of ordinary thinking [...]. The other determination, the *flux of accidents*, is the absolute *form-unity* of accidentality, substance as *absolute power*.

The uniting middle term of substantiality (between substance as such and its accidentality) is **power**, i.e. **necessity**. But there is no real relationship here, because substance **is** its accidentality. EL § 152 indicates the step towards a real relation and thus to causality:

Substance, qua absolute power, is the power that *relates itself to itself* as only inner possibility, determining itself thereby to accidentality [the externality is not yet the mode, i.e. externality posited as externality, not yet BL], whereby the externality thus posited is distinguished from it [as real]. Just as it is substance in the first form of necessity, so substance is, according to the moment just described, genuine *relationship* – the *relationship of causality*.

So substance as such (in its necessitating power) is active and a **cause**. Accidentality qua its **effect** is now taken to be the accidentality of a passive substance, and the genuine relation between the positing, active substance and the effect posited in another substance is **causality**.

Let us skip the details. Suffice it to say that **symmetry** between both sides (which already has grown with this step from substantiality to causality) will grow to perfection in **reciprocity**: two substances interacting with one being active and altering the second passive one, which is identical to the first one save its being passive.

But if the second one is being altered this can only mean that its passivity is turned into activity. The first substance would then be the one that is acted on by the second, i.e. presupposed as passive and again turned into the active one and so forth in continuous oscillation.

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In the opening paragraphs of the logic of the concept, “**The Concept in General**”, Hegel points to a **long** and a **short** “genetic exposition of the concept” (3<sup>rd</sup> paragraph, p. 577), the long one being the **objective logic** as a whole and the short and immediate one being the manifestation of what is implicit in **substance**.

He then **summarizes** the short genesis (paragraphs 5–8, pp. 578-80). The decisive point is that in reciprocity the concept is reached as

the totality resulting from the reciprocal relation, [...] the unity of the *two substances* standing in that relation; but in this unity they are now free, for they no longer possess their identity as something blind, that is to say, as something merely *inner*; on the contrary, the substances now have essentially the status of [a shine] [“shine” taken positively here]; of being moments of reflection, whereby each [...] in its other is posited as simply and solely identical with itself. (SoL 581f.)

This is mutual **conservative projection** (or determining reflection) again. Each is real and at the same time posited (projected) by the other, and this being real and being posited is one and the same for both (who are one and the same as well).

The **concept** is shortly defined (in external reflection; its long and short geneses being the genuine definitions) as that whose *being in-and-for-itself* is identical to its *being posited*. That is the true and genuine **transcendental frame!**

Robert Pippin points to it in *Hegel’s idealism*, p. 18ff. and again p. 232:

It is one of the profoundest and truest insights to be found in the *Critique of Pure Reason* that the *unity* which constitutes the nature of the *Notion* [concept] is recognized as the *original synthetic* unity of the *I think*, or of self-consciousness. This proposition constitutes the so-called *transcendental* deduction of the categories [...]. (SoL 584)

The “*original synthetic* unity of the *I think*” is the **transcendental frame**: pure (non-empirical) self-consciousness as at the same time also consciousness not of itself but of objectivity as such, the “*Gegenstand überhaupt*”, according to the categories.

But **Kant** takes the transcendental frame as something fixed and perfect, while the SoL delineates its **logical genesis**. Its initial stages (through being and essential reflection) are **untrue**, and only its mature stage as **the concept** (and, more fully, *the idea*) is the true one. This stage must be the one that Kant had in mind, but he **understated** his case, when he let the thought of objectivity be defined by his short list of 12 categories only. Much more could and should be said about is, as witness Hegel.

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Hegel stresses that logic as such (as compared with the philosophy of nature and of spirit) is **formal** in a sense. The transcendental frame or the concept is form; but it is **absolute form**: An *eidōs* actively providing its own rich (logical) **content**.

In Kant, e.g., the “subjective” side of the transcendental frame is defined by the **functions of judgment** and the “objective” side by the **categories**. These are at root the same but still different enough so that the frame does not collapse into pure immediate being. And each side is as well the **whole** transcendental frame. The frame us, as Hegel said (581f.):

the totality resulting from the reciprocal relation, [...] the unity of the *two substances* standing in that relation; but in this unity they are now free, [...] and] have essentially the status of [a shine], whereby each [...] in its other is posited as simply and solely identical with itself.

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The concept (or the true transcendental frame) was **posited**: by our procedure of building *the* presuppositionless theory. We (as the mode of the absolute; in our BL) started form immediate **being** and have now arrived at (and thus **posited**) the **concept**. But we had to posit the concept as being in-and-for-itself, i.e. as being as well independent of our positing.

This looks like **presupposing** and **external reflection**; and, in fact, it was just that throughout the objective logic. The concept was not explicit there. But now we have reached it as it is. Our positing and the being-in-and-for-itself of the concept are finally one. OL and BL can merge (in principle). Our positing the concept thus is the concept's own activity; its being-in-and-for-itself includes our positing it.

By starting and proceeding in a presuppositionless way (namely by starting with pure, immediate being und proceeding via negation), we finally arrived at, i.e. posited, the **concept**. But that terminus ad quem is the true *archê* (the driving principle and terminus a quo) of our logical journey. So what we have witnessed is a case (in fact the only possible case) of true and perfect **self-determination!**

To be told, abstractly, that the concept is absolutely self-determining must make the addressee suspicious: "Humbug! How should that be possible? Must not determiners be determined already in some ways in order to determine themselves further?" Normally yes. But we found an exception: **the concept as the principle of our positing it presuppositionlessly**. This is self-determination unravelled!

Think again of a **mill** for grinding coffee. To get started with the logic of being, we bought coffee beans at a delicatessen counter (just one bean: brand "pure being") and a mill at a hardware store (brand "propositional negation"). And started grinding.

The mill turned out to be very **flexible**, changing shape and function after each grinding operation. At the end of the logic of being, we detected that we would not have needed to buy the bean, because the mill runs without input and offers an output to be then put into it all on its own.

But on the other hand, we would **not have found out**, if we hadn't bought the starting bean. So in *this* sense, buying the bean and starting with it was inevitable. But we could start the **logic of essence** then without a pre-existing bean. Just with the mill running free and empty and yielding outputs nonetheless.

At the end of the logic of essence, we made an even more astonishing discovery. We would not have needed to buy the mill either! In grinding it yields itself as its own output (and original input)! But again, we would not have found out, if we hadn't bought the mill in the first place. (One has to buy it to find out that that wasn't necessary.)

Back from hardware mills to soft **logical "entities"**:

In the **logic of being**, circular negation is centred on immediate being-there to yield the **self-identical something** (plus an other). In the **logic of essence**, circular negation is centred on nothing to yield **pure identity** (plus pure difference). In the **logic of the concept**, the logical operation (de facto negation, but we may forget that) is defined by being *that operation that yields itself when applied to itself*, i.e. it yields **universality** or the **universal concept** (plus particularity or the particular concept).

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## Transitions Into, With, and From Hegel's *Science of Logic*

### 8 Feb 25: Platonic and fact ontologies passed by: concept, judgment, syllogism

<b>Today:</b>	I. Left-over from last week	
	II. From opacity to transparency	
	III. Concept	
	[IV. Judgment	<i>rescheduled</i> ]
	[V. Syllogism	<i>to next week</i> ]

#### First part. Left-over from last week

Hegel stresses that logic as such (as compared with the philosophy of nature and of spirit) is **formal** in a sense (like a Platonic *idea* or an Aristotelian *eidos*). The transcendental frame or the concept is form; but it is **absolute form**: an *eidos* actively providing its own rich logical **content**. Of course, it cannot be perceived by the senses, but neither can a primary Aristotelian substance (*prôtê ousia*).

What is real, actual, substantial in Socrates is his individual form, according to Met. Z. Sensible matter is a necessary condition for the form determining, individuating and actualizing (a) itself as well as (b) its matter; but matter is not a principle of determination, individuation, actuality. And the forms of the intelligences “beyond the moon” are actual *and immaterial* in the first place. The intelligences *are* forms, immaterial substances (according to Met. Λ).

But Hegel's **absolute** form is a singular entium: logical space, the transcendental frame. In Kant, the “subjective” side of the transcendental frame is structured by the **functions of thought in judgment** and the “objective” side by the **categories**. These are at root the same (the categories were derived from the functions of thought) but still different enough so that the frame does not collapse into **pure immediate being**.

And each side is as well the **whole** transcendental frame. The frame is, as Hegel said (581f.):

the totality resulting from the reciprocal relation, [...] the unity of the *two substances* standing in that relation; but in this unity they are now free, [...] and] have essentially the status of [a shine], whereby each [...] in its other is posited as simply and solely identical with itself.

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The **concept** (or the true transcendental frame) was **posited**: by our painstaking procedure of building *the* presuppositionless theory. We (as the **mode** of the **absolute**; in our BL) started from immediate **being** and have now arrived at (and thus **posited**) the **concept**. But we had to posit the concept as *being-in-and-for-itself*, i.e. as being as well independent of our positing.

This looks like **presupposing** and **external reflection**; and, in fact, it was just that throughout the objective logic. The concept was not explicit there. But now we have reached it as it is. Our *positing* and the *being-in-and-for-itself* of the concept are finally one and the same. OL and BL can merge (in principle). Our positing the concept is the concept's **own activity**; its *being-in-and-for-itself* includes (i.e. comes to) our positing it.

By starting and proceeding in a presuppositionless way (namely by starting with pure, immediate being und proceeding via negation), we finally arrived at, i.e. posited, the **concept**. But that terminus ad quem is the true *archê* (the driving principle and terminus a quo) of our logical journey. So what we have witnessed is a case (in fact the only possible case) of true and perfect **self-determination**! Pure, **indeterminate** being already was the concept-in-disguise.

To be told, abstractly, that the concept is absolutely **self-determining** must make the addressee suspicious: “Humbug!” they will say, “How should that be possible? Must not determiners

be determined already in some way or other in order to determine themselves further?” Normally yes. But we found an exception: **the concept as the principle of our positing it pre-suppositionlessly**. This is self-determination unravelled.

Think again of a **mill** for grinding coffee. To get started with the logic of being, we bought coffee beans at a delicatessen counter (just one bean: brand: “pure being”) and a mill at a hardware store (brand: “propositional negation”). And started grinding (after adjusting the mill, which was built for propositions, to urstates first).

The mill turned out to be very **flexible**, changing shape and function after each grinding operation. And most uniquely, at the end of the logic of being, we detected that we would not have needed to buy the bean, because the mill runs without input and nonetheless offers an output to be then put into the mill (as input) all on its own.

On the other hand, we would **not have found out**, if we hadn’t bought the starting bean. So in *this* sense, buying the bean and starting with it was inevitable. But we could then start our second circuit, the **logic of essence**, without a pre-existing bean; just with the mill running free and empty and yielding outputs (as next inputs) nonetheless.

At the end of the logic of essence, we made an even more astonishing discovery. We would not have needed to buy the mill either! In grinding it **yields itself** as its own output (and original input)! But again, we would not have found out, if we hadn’t bought the mill in the first place. (One had to buy it to find out that that wasn’t necessary.)

Now back from hardware mills to soft **logical “entities”**:

In the **logic of being**, circular negation is centred on immediate being-there to yield the **self-identical something** (plus an other). In the **logic of essence**, circular negation is centred on nothing to yield **pure identity** (plus pure difference). In the **logic of the concept**, the logical operation (de facto negation, but we may forget that) is defined by being *that operation that yields itself when applied to itself*, i.e. it yields **universality** or the **universal concept** (plus particularity or the particular concept).

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The logical development of the concept starts with **universality**. But the concept is as well **particularity** and **individuality**. Each of these three **moments** is as well the **whole** concept (EL § 160). As regards universality and particularity, this points to the differentiation via *dihairesis* and the **Porphyry tree**. But *dihairesis* ends with the **species** and stops short of **individuation**. Individuation thus is **new**, is irreducible to differentiation or specification.

Cf. EL § 163 note: “While each moment of the concept is itself the entire concept (§ 160), individuality, the subject, is the concept *posited* as the totality.” Therefore Hegel can say:

Taken in an abstract sense, universality, particularity, and individuality are the same as identity, difference, and ground. But the universal is what is identical to itself *explicitly* in the sense that at the same time the particular and the individual are contained in it. (EL § 163 note)

And similarly, the **particular** is as well universal and individual – and the **individual** as well particular (as belonging to a **species**) and universal (as belonging to a **genus**).

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### Second part. From opacity to transparency

Last week I mentioned **Heraclitus** (in passing, not in the handout) as the discoverer of **inter-relationships** (IRs for short, “Wechselverhältnisse”). What stands in an IR are **distinct entities** which are nonetheless **related essentially** or **internally**. In artificial imitations of IRs, e.g.

in a set of **chess** figures, one can neatly separate the aspect of distinctness from the aspect of essential relatedness: Qua pieces of wood the black king and the white queen are distinct, qua abstract roles they are internally related and **at root identical** (identical inwardly or opaquely) in so far as both belong to the identity of the game of chess. Because of this separability of distinctness and essential relatedness, chess is not a real IR (but an artefact).

In a real IR, those aspects cannot be separated. What seem to be distinct entities through and through, in a real IR are nevertheless essentially related through and through at the same time.

So, an IR is latently characterized by an inconsistency. It is a **harmonious tension**, to speak with Heraclitus. Its identity is hidden “inwardly” and manifests itself outwardly only as a set of “modalized” relations, e.g. as **causality**. (Remember that **Hume** was right in saying that distinct entities could not stand in necessary relations; but he was wrong in trying to devise a deflationary account of causality. Causality betrays the aspect of non-distinctness of the entities which stand in causal and thus necessary relations.)

Now, Hegel is totally in line with the conception of an IR, when he says:

Necessity is [...] *inner identity*; causality is the manifestation of this [...]. (SoL 570 m)

But: “**Manifestation**” is a term that points beyond the sphere of necessity and merely inner identity. Causality may normally be kept within this sphere, but if we follow causality all the way to **reciprocity**, we shall see that it points beyond itself and that it **manifests** necessity and inner identity, thus turning necessity into **freedom** and inner identity (which is at the same time only outer identity: a system of outer relations, and in both ways opaque identity) into **transparent identity**.

So to complete the above quotation:

[Necessity is *inner identity*; causality is the manifestation of this], in which its illusory show of *substantial otherness* [of two distinct substances, an active and a passive one] has sublated itself and necessity is raised to *freedom*. [...]

In reciprocity, therefore, necessity and causality have vanished; they contain both, *immediate identity* [which is not yet manifested and thus only inner identity, showing itself outwardly] as *connexion* and *relation*, and the *absolute substantiality* [i.e. distinctness] of the *different sides*, hence the *absolute contingency* [“no necessary relation between distinct entities”] of them; the original *unity* of substantial *difference*, and therefore absolute contradiction. (SoL 570)

So, Hegel does not accept the conception of an IR as a last word about logical space, he wants to leave the **Heraclitean opacity** behind and attain to **Parmenidean transparency**. Reciprocity thus is **both**: the **end** of opacity and necessity (inner identity) and its “absolute contradiction” and the **beginning** of transparency and freedom, of “the absolute manifestation of itself for itself” which is the **concept**.

Now at last we have reached the **mill** that constitutes itself in its grinding: a **relation** (or form) that is identical to each of its **relata** (its content) and is thereby defined. So, we are no longer dependent upon a given meaning of “not” (taken over from the **propositional calculus** and adapted to the setting of the SoL), but we can now – quite conversely – define **negativity** as the **relationality** (the relational aspect) of the *relation between itself and itself* (the concept).

This new negativity is supposed not be **destructive** anymore, but has both sides of itself, one the negative of the other, stand in perfect **harmony** or even identity. Under the aspect of identity, the identity-of-itself-and-itself is the **universal**: negativity which is self-identical.

But, of course, negativity as well **differentiates** and thus “determines” (in a new, transparent, constructive way) both sides, which on the other are identical. This self-identity (self-relation) which is negative (self-identical negativity with the stress on “negativity”) is the **individual**.

Lastly, the **simple** identity of the universal and the individual is **particularity**. In other words, the universal qua individual (and thus potentially in relation to other individual universals) is the **particular**.

The **universal**, the **particular** and the **individual** are “three totalities” which are “one and the same reflection” (571 b).

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### Third part. Concept

*The Doctrine of the Concept* or *the Subjective Logic* as a whole is (expectably) divided into three major sections, “**One: Subjectivity**” (the subjective side of the transcendental frame or concept, considered as the whole concept), “**Two: Objectivity**” (the objective side considered as the whole), “**Three: The Idea**” (both sides reunited: the whole considered as the whole).

**Today:** Section One: Subjectivity. The section has **three chapters**, corresponding to traditional textbooks of general (formal) logic:

1. The Concept
2. The Judgment
3. The Syllogism

Chapter 1 contains what Hegel calls “more a subjective reflection or subjective abstraction” (623). We look at the concept and its internal structure as it appeared traditionally in the dialectician’s procedure of specification (*dihairesis*), according to the **Porphyry tree**. The Porphyry tree is the main pattern of the **cosmos of forms** in Plato, to be delineated by the philosopher (dialectician).

Insofar as the logical development goes on and the concept divides itself originally into judgment, thereby losing itself and initiating a partial fall-back into being (and then essence), the **Platonic cosmos of forms** is portrayed as unstable and untrue (qua candidate metaphysics).

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**Aristotle** is opposed to **Plato** with regard of the ontological status of the **universal**. According to Plato, the universal is real, even the *truly* real (*ontôs on*), and it is active and living (see *The Sophist*).

**Aristotle** reasons like this (end of Met. Z): If the universal, say *animal*, were real, then it would be possible for us to run into it: “Look there – the ANIMAL!” (as a *tode ti*). But how many legs does it have? Humans *essentially* have two legs, horses *essentially* have four legs and snakes *essentially* have none. So, the animal itself will (essentially, but it is *all* essence in the forms anyway) have exactly two and exactly four and exactly none legs – a contradiction.

In fact, therefore, the **universal** is *like matter*: an indeterminate determinable, and in fact *is* matter, though not regular, sensible matter, but *hylê noêtê*, intelligible matter (Met. H 6).

But then the **species** is not a true universal at all. You can run into a species as a *tode ti*: if you run into one of its individual members (if you see one daffodil, you will have seen them all). The individual and its species have **all essential properties in common**, so there is no (essential) difference in thinkable content between a species and its individuals. Therefore the **double meaning** of “*eidos*”, meaning (a) *species* and (b) *individual form*, is no conceptual handicap at all, quite the contrary: it is an exact conceptual tool.

**Aristotelian** forms thus are all **immanent** and **specific**. There are no generic (and no transcendent) Aristotelian forms. **Platonic** forms on the other hand come in all grades of generality, from specific forms up to the *megista genê*. But this, as Aristotle sees, leads to **contradiction**. Plato would not deny that, but would say that the art of **dialectics**, as the philosopher's method, is made to deal with that contradiction.

Now, **Hegel** is in fact trying to reconcile **Aristotle** and **Plato** on this fundamental point. He conceives the forms (the absolute form: concept) as **immanent**, *pace* Plato, but at the same time he conceives the universal (the generic universal) as real, *pace* Aristotle, and takes over from Plato the art of dialectics as the way to handle the immanent negativity of the concept.

The horse and the snake are both animals, different from each other but not from the animal. They are *animal all over* and *nothing but animal*. This is the universal's **shining to the inside**. But the universal is **shining to the outside** (SoL 606 m/b) as well: It has a place in a hierarchy of universals, the Porphyry tree (qua individual universal, i.e. qua particular).

From Hegel's point of view, **Aristotle** brings particularity ("species-hood") too close to individuality, and **Plato** brings it too close to universality (generality). For Aristotle all forms are individual forms and *ipso facto* specific forms, and that leaves him with a problem of individuation (within a species). An Aristotelian form must be like a Hegelian One, **repelling** itself to many Ones. What is universal (general, "allgemein"), on the other hand, is not real, not substantial, according to Aristotle.

**Plato**, in Hegel's view, wrongly posits a gulf between the individuals and the (specific and generic) forms, hence between the individual on the one side and the particular and the universal on the other. But all three belong together as the self-subsistent moments of the concept.

Each **individual** is as well particular (specific, as witness Aristotle) and universal: Socrates is a human being and an animal.

Each **particular** is one individual particular among many, and it is universal (comprising many individuals, and, *pace* Aristotle, divisible into sub-particulars.)

Each **universal** is one individual universal among many, and it has its place, as a particular universal, in the hierarchy of universals. So, e.g., animal is a particular corporeal substance.

In the realm of **singularity**, i.e. with the concept qua all of logical space, these relations are not so easily understood. The one and only concept is all three of them: *i, p, u*, like the one and only **essence** was identity, difference and ground. But now it is explicit in each of the moments that the concept is all three of them.

In its **universality** the concept "is in free equality with itself in its" determinacy. (The universal "goes through" its differences). In its **particularity** "the universal continues serenely equal to itself". In its **individuality** the concept (qua universal or particular) is reflected into itself – "which negative self-unity has complete and original determinateness, without any loss to its self-identity or universality" (EL § 163).

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But where does this "complete and original determinateness" come from? **Out of itself!** In the sphere of **being**, we had being as the immediately given *common factor of all truth claims whatsoever*, plus negation, as adapted from the propositional calculus. This was not much, but enough for creating all the various contents of the logic of being.

In the sphere of **essence** only negation was left as a possible given source of content, and it turned out enough as well and productive of (essential) being. Now, with the concept, nothing is left as a given source of content, and even that is supposed to be enough to create content.



The concept is definable as *the* (one and only) **self-creating content**. Or, alternatively, as **absolute form** which as such creates (and is) its own content. In its creating (via our BL activities!) it is mediation, relation. So it is relation between itself and itself. So we may define the concept as well as *the* (one and only) **relation which relates itself to itself**.

Now we need not appeal to the **propositional calculus** any longer in order to get a sense of negation. **Negation** can be **defined** as that which makes the concept a relation, its relational aspect. And the other, “positive” aspect of logical space, called “being”, is that which is responsible for there being *terms* of the relation. But in fact, terms and relation are one and the same: this is meant by the concept’s **universality** (self-identity). Nevertheless, negation is present in the concept, thus creating determinateness, which in the concept is (its) **particularity** (the first negation). But the negation is self-related (as it was already qua essence), and this self-relation of negation is the concept’s **individuality** (the second negation or the negation of the negation).

In short: The concept has the structure  $[r_1 \mathbf{R} r_2]$ , with  $r_1 = r_2 = \mathbf{R} = [r_1 \mathbf{R} r_2]$

The identity of both terms constitutes its **universality**.

The difference of the terms, qua terms of a relation, constitutes **particularity**.

The non-well-foundedness (i.e. self-relation) of  $\mathbf{R}$  constitutes **individuality**.

First, the concept is to be taken in its universality (as essence was in its identity), as the simple whole of logical space. But it is **shining towards its outside**. So, we have logical space shining constantly beyond itself. But this cannot be. What we in fact have, is a logical space more encompassing than we first thought: one in which the universal is only a particular, and its “other”, the particular itself is right there to its side.

So, logical space,  $U$ , comprises  $U$  and  $P$ . Thereby  $U$  itself is only a particular. We have here **coordination** and **subordination** at a time: The universal concept in its shining to the outside is coordinated to the particular concept; but at the same time the latter is subordinated to the universal concept in the hierarchy of generality.

But of course, the particular *Universal* and the *Particular* are as well both particulars. So they are both subordinated to *the Particular* as well, which thus is there common “universal”. – This is the total manifestation of one in the other. We just cannot fix their difference.

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And it is lastly all bent back into the **individual**, which is (a) the whole of universal logical space, but as well (b) the **loss** of the concept:

But individuality is not only the return of the Notion into itself, but immediately its loss. Through individuality [...] it becomes *external to itself* and enters into actuality. (SoL 621 t)

The individual, therefore, as self-related negativity is the immediate identity of the negative with itself; it is a *being-for-self*. (Ibid. m)

The first individuality is concept-like: transparent and free. The second individuality is thing-like or *one-like* (a being-for-self): negativity turned opaquely on itself. This opaque negativity splits the concept into two parts which are dubbed “subject” and “predicate” and whose unity, the **judgment**, is affected by immediate being as a kind of cement, the copula “is”.

It is the element of Individuality which first explicitly differentiates the elements of the notion [etc., see EL § 165]

So, this then is the **judgment**. [Parts IV and V must be rescheduled to **next week**.]

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## Transitions Into, With, and From Hegel's *Science of Logic*

### 9 Mar 03 Scientific ontologies passed by: From objectivity to the idea

**Today:** IV. (Rescheduled from last week) Judgment  
 V. (Rescheduled from last week) Syllogism  
 I. Objectivity/The Object: Mechanism and chemism  
 II. Teleology

#### Fourth part (from last week). Judgment

In “Hegel on Judgments and Posits” (Course Material), Christian Martin points out that the concept is pure **self-determination** and that judgment, qua “the concept in its particularity”, “consists in a *particular way* of pure self-determination, then”. This **particular way** has to do with a certain **tension** between (a) the **duality** characteristic of particularity and (b) the **three-fold** structure of the concept as such. Quote from p. 3 (“Hegel on ...”):

According to Hegel, pure self-determination must, initially, be marked by three distinguishable guises, namely 1. ingressive self-determination, i. e. what allows for and originates (further) determination considered prior to such determination, i. e. generality [or *universality*, according to some translations]; 2. resultative self-determination, i. e. generality as further determined, i. e. particularity; and 3. perfective self-determination, i. e. that in which the preceding guises of self-determination, generality and particularity, are united, i. e. singularity [or individuality]. Singularity, thus, consists in a manifold of particular determinations occurring as an immediate, i. e. unarticulated unity held together by a general nature.

The **concept** being the truth of logical space, its self-determination is the **logical evolution** of that space, starting from the utter generality of pure **being**, passing through the particularity and duality of **essence**, and reaching singularity (and individuality) with the **concept**.

That whole game is **epitomized** within the *concept as such* (in the opening chapter of the subjective logic), and there the **third** and perfective guise of self-determination takes on two **sub-guises**:

(1) The concept **returns** to itself from particularity **as** the singularity of logical space (this already points to the **happy end** of the overall story: the absolute idea).

(2) The concept **loses** itself in that return as one singular individual **within** logical space. This opens up a new round of **theory building**, in fact the building of the subjective logic.

The **individual** in logical space is **related** to one or the other of the two more general **moments** of the concept, first, in a way characteristic of the logic of **being** (more specifically the logic of quality or **being-there**). So the individual (*I*) goes to one side of *being-there qua cement of its relation* to (on the other side) either the particular (*P*) or the universal (*U*).

Therefore, it is important to see that Hegel must make a distinction between a sentence (or proposition, “Satz”) and a judgment (“Urteil”) (EL § 167). **Judgmental** form is **predicative** form: “S is P” (though not *elementary* predicative form as in Plato's *Sophist* or in Frege).

**Sentences** may have vastly varying logico-grammatical structures, but **judgments** have essentially two places only, i.e. places for two out of three conceptual determinations, with S being less general than P. (This, for Hegel, is even true for hypothetical judgments in a way, where the antecedent occupies the place of S and the consequent the place of P.)

Modern predicate logic (**MPL**) and traditional formal logic (**TFL**) differ on that point. **MPL** tries to capture as much as possible of sentential form (there are more formally valid infer-

ences than formally valid syllogisms), with **predication** being restricted to the most basic level of the sentence (elementary sentences).

**TFL** on the other hand casts all (categorical) sentences into predicative form, adding “quantity” to the subject term and “quality” to the predicate term. (Cf. Fred Sommers, *The Logic of Natural Language*.)

Now **Hegel** is (of course) loyal to TFL, but sees that it does not capture “the logic of natural language” as it stands, which he comments with a “so much the worse for natural language” (I am overstating the case). Fred **Sommers** on the other hand tries to enrich TFL up to a point where it equals MPL in expressive power and may be used to reconstruct the logic of natural language at the same time (while MPL tends to **regiment** – instead of laying bare the logical form of – natural language, according to Sommers).

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Now the **individual**, qua *concept well lost*, being a one (out of many ones), comes as **many individuals** in the realm of **judgment**. “Judgment” here is **not** to be taken subjectively only, as an act of ours, but neutrally, as objective/subjective: “All things are [i.e. each thing is] a judgment” (EL § 167). Logical space is seen here as THE JUDGMENT, i.e. as THE FACT. The logic of the judgment, insofar as it leads to something new in the event, the syllogism, can thus be read as a **critique of fact ontologies**.

In his exposition of the judgment, Hegel follows **Kant’s list** of the types of judgment. This creates a certain **quandary**. Kant has *four times three* different types of judgment, while Hegel regularly gives us three of each whatsoever. He helps himself with a little trick: **Essence**, as the antithetical middle sphere between being and the concept, makes for two types of judgment, because **judgment**, in its own turn, is the **locus of separation**. (Syllogism, as the locus of unity and identity, is thus not torn asunder by the negativity of essence):

Being	Judgment of being-there	[Quality]
Essence <sub>1</sub> (reflection)	Judgment of reflection	[Quantity! No neat fit!]
Essence <sub>2</sub> (necessity)	Judgment of necessity	[Relation]
Concept	Judgment of the concept	[Modality]

Cf. the **syllogism** (which brings up another surprise):

Qualitative syllogism	
Syllogism of reflection	
Syllogism of [not: the concept, but] necessity	[syllogism of concept = object?]

Now, what is specific about Hegel’s treatment of the judgment and the syllogism, is that it is not “formal”, not a survey of forms that judgments (and syllogisms) can take. According to **Kant**, each judgment must have **one** out of **three** quantities, one out of three qualities, relations and modalities. But there is no such thing in Hegel. For him all twelve types of judgment are **different judgments**, with different (purely logical) contents.

The **abstract** judgment reads: “The individual is the universal” (EL § 169), which of course is not true without qualification, because the individual is as well **not** the universal (but the individual). This, according to SoL 1816, gives us the **negative** judgment as a successor of the **positive** judgment in the domain of the **qualitative** judgment. – But let me follow EL 1830, in a short survey.

(a) **Qualitative** judgment (judgment of being-there)

We have a (logical) **quale**, i.e. a being-there which is identical with its quality, and press it into predicative form, using it **two times** over, as **subject** and as its own **predicate**. But no, it

is not quite that simple; because S and P are to be concepts, i.e. reflected into themselves. The quale is only their common content and, further, is that which unites them too: the **copula**.

The copula here is the concept qua – indeed – fallen back to the level of **being-there** or of **quality**. So here, with the copula, we have something that is just a logical **quale**, functioning as logical cement and as the uniting trait of S and P.

**Remember:** In our language, there is no such thing as a purely qualitative judgment. **All** our actual judgments have as well a quantity, a relation and a modality (according to **Kant's list**). But we are presently studying logical space in the form of the purely qualitative judgment, i.e. in a form which is not the truth about logical space, but just one stage in its development.

**Remember further:** The particular form (guise, status) of the **judgment** hinges on the status of the **copula**. The copula determines the type of predicate (and the type of subject) of the respective judgment.

First, in the judgment of being-there, the copula is **qualitative being**, this makes for the **inherence** (as Hegel points out) of immediate qualitative predicates (like e.g. colour predicates) in simple subjects (“The rose is red”). But one could have appealed to the **logic** itself for **paradigm cases**, e.g. to the logic of being, first section, “quality”: “The absolute (i.e. logical space) is quality”. (Then section two: “The absolute is quantity”, section three: “The absolute is measure”.)

[I am wondering whether one could then give a **finer grained theory** of judgment, with the copula evolving in finer grained steps: quality in a narrow sense, then quantity, then measure.]

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The qualitative judgment is first **positive judgment**.

1. The **positive** judgment: “The individual is a particular” (EL § 172), “The individual is [the] universal” (SoL 1816, EL § 166 note, § 169), e.g.: “The rose is red”.

The qualitative copula expresses **qualitative identity**. But in fact, S and P **are not** identical: The individual is not a particular (not universal). Therefore we need to pass on to the negative judgment. – Is that sophistry? No, given our starting point, i.e. the logical quale which was used twice, as S and as P. The **judgment** tears it asunder in **two**, thus **belying** the identity that it itself expresses by way of the qualitative copula.

2. The **negative** judgment (justified by the form of judgment, given the identity of the logical quale that serves as S and as P): “the individual is not a particular”, “the rose is not red (but of some other colour)”.
3. (aa) The **identical** judgment, “the individual is the individual” and (bb) the **infinite** judgment, “the individual is not [P from a foreign sphere]”, “the lion is not a table”.

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After the logical quale/something, which thus does not ground a true judgment, we have to consider an **existent/thing**:

#### (b) Judgment of **reflection**

Here the predicates aren't immediate (sensible) qualities anymore, but more like **dispositions**: e.g. *useful, dangerous; weight, acidity* (§ 174); because the copula now is reflective essence.

1. **Singular** judgment: The subject, the individual as individual, is a universal.
2. **Particular** judgment: The subject is partly this (and partly that).
3. **Universal** judgment: Some [entities] are the universal (i.e. all [dogs]).

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And now, with no. 3, **universality** is posited as well on the side of the **subject**, which makes for the:

(c) Judgment of **necessity**

Again the subject matter of the judgment has changed (there is no external formalism here): We have now arrived in the region of **substance**. The copula is substantial necessity now.

So in the

1. **Categorical** judgment, the genus or the species are predicated of the individual.
2. **Hypothetical** judgment: both sides have the form of self-subsistent actuality, whose identity is only an “inner” one. (So, we have here a self-alienation of the concept)
3. **Disjunctive** judgment: Universality as genus and as the sphere of its self-excluding particularisations (specifications).

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(d) Judgment of the **concept**

The content (of the copula) now, with disjunctive judgment, finally is the **concept**.

1. **Assertoric** [value] judgment: S is an individual, and P is the reflection of the subject’s particular being-there into its universal: “S is good/bad/true/beautiful” etc.
2. **Problematic** judgment: Assertoric judgments are mere affirmations under the principle of bivalence: true or false, and thus invite their counter-affirmation. Thus an assertoric judgment is degraded to a problematic judgment.
3. **Apodictic** judgment: Here, the **reason** or **justification** is built into the judgment: „This house, qua being so and so, is good”. The mediating ground or reason is here present in the judgment: “*All things* are [i.e. each thing is] a *genus* (its determination and end) in an *individual* actuality of a *particular* constitution” (EL § 179).

EL § 180:

In this manner subject and predicate are each the whole judgment. [...] What has been really made explicit [posited] is the oneness [unity] of subject and predicate, as the notion itself, filling up the empty ‘is’ of the copula [the copula finally has reached the level of the concept again: S is C<sub>1</sub>, the copula is C<sub>2</sub>, and P is C<sub>3</sub>]. While its constituent elements [its moments] are at the same time distinguished as subject and predicate, the concept is put [posited] as their unity, as the connexion [relation] which serves to inter-mediate [mediate] them: *the syllogism*.

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**Fifth part. Syllogism**

In the logical development of the **judgment**, the **copula** has achieved the value of the **concept** (term) in the **apodictic judgment** (“The house, *being so and so constituted*, is good”). It first had the value of **being-there** (in the **qualitative** judgment), then of **reflection**, then of **necessity**. Now of the **concept**!

Thus, the apodictic judgment gives way to the **syllogism** (which per definition is constituted by three concepts, at least the categorical one), first the **qualitative** syllogism (or syllogism of being there). By qualitative syllogism Hegel understands the (normal, formal) categorical syllogism.

In the premises of the **qualitative syllogism** one can (non-trivially) predicate

U of P **or** U of I **or** P of I (always the more general of the less general).

Two of these predications have to be picked as **premises**; and then we have to look what term occurs in both premises: this is the **middle term**, to be left out in the conclusion. This procedure gives us the three Aristotelian **figures** of the (qualitative) syllogism:

1 <sup>st</sup> figure:	U of P,	P of I,	therefore U of I	(P as middle term)
2 <sup>nd</sup> figure:	U of I,	P of I,	therefore U of P	(I as middle term)
3 <sup>rd</sup> figure:	U of P,	U of I,	therefore P of I	(U as middle term)

The usual **combinatorial** form yields a **fourth figure**, with the middle term, M, as **predicate** (not subject) in the major and as **subject** (not predicate) in the minor premise. But then M must be P (the particular) again, like in the first figure, for only P can occur both as predicate (of I) and as subject (for U). So, Hegel says that the fourth figure is an empty formalism.

Here is the **regular table** of the four figures ('G' as middle term, 'F' as minor, 'H' as major), with "Hegelian" subscripts as reminders:

<u>1<sup>st</sup> figure</u>	<u>2<sup>nd</sup> figure</u>	<u>3<sup>rd</sup> figure</u>	<u>4<sup>th</sup> figure</u>
G <sub>p</sub> is H <sub>u</sub>	G <sub>i</sub> is H <sub>u</sub>	H <sub>p</sub> is G <sub>u</sub>	H is G
F <sub>i</sub> is G <sub>p</sub>	G <sub>i</sub> is F <sub>p</sub>	F <sub>i</sub> is G <sub>u</sub>	G is F
F <sub>i</sub> is H <sub>u</sub>	F <sub>p</sub> is H <sub>u</sub>	F <sub>i</sub> is H <sub>p</sub>	F is H

One sees that subject and predicate are simply **reversed** in **both premises** of the fourth figure, as compared with the first. The middle term, G, is functioning, both, as subject and as predicate, in both figures, while in the 3<sup>rd</sup> figure it is functioning only as predicate (and must therefore be U) and in the 2<sup>nd</sup> figure only as subject (and must therefore be I).

So Hegel skips the 4<sup>th</sup> figure in **EL 1830** altogether as "a superfluous and even absurd addition of the Moderns" (EL § 187, Aristotle had only three figures), while in **SoL 1816** he had taken the chance of putting the tautological, "mathematical" syllogism in its place ("U-U-U").

In the **qualitative syllogism**, first, an **individual** is coupled (con-cluded, "zusammengeschlossen") with a **universal** by means of a (particular) **quality**. But an individual has many qualities and each quality can in turn be subsumed under many different universals. So in the first figure one can prove different and then (as difference is followed by opposition in the logic of reflection) even **opposite** claims of a given individual (given different premises).

The "**contradiction of the syllogism**" expresses itself also as an infinite **progress** (or, in fact, an infinite regress): the premises are as such **unproven**, therefore only **judgments**, not syllogisms. So they too must be proven (mediated) by more premises, and so on up.

This deficit (expresses and) **sublates** itself in the further development of the syllogism. The "immediate" syllogism (of the 1<sup>st</sup> figure) gives way to the 2<sup>nd</sup> figure and this in turn to the 3<sup>rd</sup>.

In the **conclusion** of the 1<sup>st</sup> figure, the individual is declared to be universal and thus (being both, I und U, at the same time) may now serve as **middle** term. The same happens to the **particular** in the 2<sup>nd</sup> figure.

So, taken together, the qualitative syllogism goes full **circle** in its three figures and all its terms get **fully mediated** by each other: I and U by P, P and U by I, I and P by U. The progress (or regress) is thus bent back into a **circle**:

The major of the 1<sup>st</sup> figure is the conclusion of the 2<sup>nd</sup>, and the minor of the 1<sup>st</sup> is the conclusion of the 3<sup>rd</sup> figure, and so on for the premises of the other figures as well. (But, of course, this circle has still something vicious about it: a mutual presupposing of the figures. So the story of the syllogism must go on.)

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**Traditional formal logic** looked at the **quantities** of subject terms and the **qualities** of predicate terms in categorical judgments in order just to botanize the formally valid syllogisms. In reasoning, **singular** judgments behave as universal judgments and **infinite** judgments (“the lion is not a table”) as negative judgments. So there were only four forms (combinations of quantity and quality) to consider, designated by the first four vowels of the Latin alphabet:

A	All F are G
E	Some F are G
I	No F is G
O	Some F are not G

Then one could just check the figures and look which sequences of judgments, called *modes*, made up a valid syllogism in that figure.

E.g. the mode “A-A-A” (“Barbara”) is valid in the first figure:

All G are H	H predicated of all G
All F are G	G predicated of all F
All F are H	H predicated of all F

Here is one of various traditional lists of valid syllogisms:

1 <sup>st</sup> figure:	Barbara, Celarent, Darii, Ferio, (Barbari, Celaront)
2 <sup>nd</sup> figure:	Baroco, Cesare, Camestres, Festino, (Camestrop, Cesaro)
3 <sup>rd</sup> figure:	Bocardo, Darapti, Datisi, Disamis, Felapton, Ferison
4 <sup>th</sup> figure:	Bamalip, Calemes, Dimatis, Fesapo, Fresison, (Calemop)

(**Two remarks.** (1) The bracketed modes are valid only under certain extra – existential – presuppositions. These are supplied by what Kant calls **inferences of the understanding**, like in “All men are mortal, therefore some men are mortal”; while in MPL, “All F are G” could be vacuously true. – (2) One does not use the **same mnemonic word** for two different figures, e.g. one takes “Celarent” for the first and “Cesare” for the second figure, “Darii” for the first and “Datisi” for the third.)

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In what Hegel calls the **syllogism of reflection**, the **middle** (i.e. the mediating term) is not an abstract particular determinacy of the subject anymore but is as well: **all individual concrete subjects** who have this particular determinacy among others (EL § 190). This gives us the **syllogism of allness** (so to speak the 1<sup>st</sup> figure of the syllogism of reflection, because here again P is the middle term):

Major:	All P are U	All humans are mortal
Minor:	I is P	Caius is a human [etym.: $\Gamma \rightarrow C \rightarrow G$ ; no K]
Conclusion:	So, I is U	So, Caius is mortal

But the major here presupposes the conclusion and has to be justified, which leads to the **syllogism of induction**, where I is the middle term (as in the 2<sup>nd</sup> figure of the qualitative syllogism), but the individual now as the **potentially infinite totality** of all individuals, which thus cannot be inspected empirically in their entirety. (Hegel displays its form at SoL 690.)

Because the totality of the individuals cannot be inspected as something present and given, the syllogism of induction presupposes the **syllogism of analogy**, where U functions as mediating middle (SoL 692):

The *earth* (an individual, but ...) is inhabited,  
 The moon is *an earth* (... in the value of a universal),  
 Therefore the moon is inhabited.

But of course, taking the middle term in two different values comes close to a *quaternio terminorum*. So the syllogism of analogy cannot be the end of the story either.

(Kant calls the syllogisms of induction and of analogy **inferences of judgment**, not syllogisms, i.e. inferences of **reason**.)

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The **qualitative** syllogism as such (and in its **first** figure) has the **particular** as middle term, which then gets replaced by the individual and the universal in the other figures. So the qualitative syllogism is **dominated by the 1<sup>st</sup> figure**. (The first figure is its “Leitfigur”.)

The syllogism of **reflection** as such (and in its **middle** version) has the individual as middle term, though here as well the other two terms attain to the middle position. So the syllogism of reflection is **dominated by induction (its “second” figure)**.

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The third syllogism is the **sylogism of necessity**, which, as such (and at its happy **end**), has the **universal** as its middle, again in such a way that the other terms (I and P) will attain to the middle position as well. (Cf. EL § 191.) So the syllogism of necessity is **dominated by its “third” figure**. Its three types of syllogism are:

<b>Categorical syllogism:</b>	a <b>particular</b> species or genus as middle.
<b>Hypothetical syllogism:</b>	an <b>individual</b> fact as mediating (antecedent) and an <b>individual</b> fact as mediated (consequent)
<b>Disjunctive syllogism:</b>	the mediating <b>universal</b> as the <b>totality</b> of its <b>particular</b> (mutually excluding) specifications

In the **disjunctive syllogism** one and the same universal is (the case) in these different determinations, which are therefore now negated:

This *realization* of the concept, – a realization in which the universal is this *one* totality withdrawn back into itself (of which the different members are no less the whole, and) which has determined itself as *immediate* unity by sublating the mediation: – this realization of the notion is the *object*. (EL § 193)

This transition corresponds to the sound kernel of the (in its syllogistic form deficient) **ontological argument** (for the existence of the perfect being). “**All things are a syllogism**” or “**The absolute is a syllogism**” thus loses its truth finally, and the logic of the syllogism may therefore be read as a **critique** of ontologies of essential relations between facts.

Thus, the **absolute** is the **object** now (EL § 194), which then splits asunder into many objects each of which is the totality: “the absolute *contradiction* of the complete self-subsistence of the manifold [objects] and their equally complete non-self-subsistence”.

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### **First part. Objectivity/The Object: Mechanism and chemism**

The fusion of BL with OL was **gained** with the concept and **lost** again with the loss of the concept in judgment. We in BL then saw that the subjective logic was de facto one-sided: developing only the subjective side of the transcendental frame (or logical space). But for OL subjectivity was all of it; there was **no opposition** there in OL. (**All things** were a judgement and then a syllogism.)



And there still is **no opposition**, with objectivity – the other side – now going proxy for logical space as such. We in BL know that it is the objective side that will be developed in what follows, but for OL it is just total logical space which is in view. At the present stage, then, logical space takes the form of **objectivity**.

Objectivity has **two senses**, according to Hegel: (1) that which *is thrown against* (Latin: *obicitur*) or *stands against* (German: *Gegenstand*, “gainstand”, cf. “gainsay”) self-conscious subjectivity, (2) that which is *in and for itself*. In OL only the second sense is operative, while we, in BL, may anticipate the importance of (1) also. Both senses, after all, belong together.

Objectivity (SoL 1816) or *the object* (EL 1830) is the **realization** of the concept, but the **immediate** realization (EL 193) – after the **mediation** of the concept in disjunctive syllogism has reached its **peak** and **collapsed** into immediacy. In the remark to EL § 193 Hegel says:

At first glance, this transition from the subject, [...] from the syllogism into the object, may seem strange [...]. By ‘object’, however one tends to understand [...] [according to the second sense] something concretely and *completely* self-sufficient in itself; this completeness is *the totality of the concept*. [p. 265]

In fact, “**God [is] the absolute object**” (ibid.). Thus, we can say that we have here the logical basis for the so-called **ontological argument**: the inference from the concept (of God, the absolute, logical space) to the (at first being-there, then existence, actuality, substantiality, now:) **objectivity** (of God). (Objectivity is the most developed and advanced member in that sequence, starting with being-there.)

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At first, the object (qua immediate) is the concept **only in itself** (not yet *for itself*, as in purposiveness). Conceptual mediation and (self-) determination is outside it, “an external determinacy”, only pressure and impulse (EL § 195), at first. The singular, absolute object thus is composed of many objects in external **mechanical** relations: objectivity qua **mechanism**.

Addition to EL § 195:

In nature only the completely abstract relationships of matter [...] are subject to mechanism. By contrast, even the phenomena and processes of the so-called ‘physical domain’ in the narrower sense of the word (for example, the phenomena of light, heat [this particular example later turned out to be ill-chosen, as the kinetic theory of heat has shown], magnetism, electricity, and so forth) cannot be explained in a merely mechanical manner (i.e. through pressure, impulse, displacement of parts, etc.

Thus, let us say: Mechanism is **topic-neutral** (in a sense to be elucidated), like **macrophysics** is. Macrophysics does not posit specific **theoretical entities**, like chemistry and microphysics do: atoms of various sorts, subatomic particles of different types, quarks of different “colours” etc. **Microphysics** (the physical in the narrower sense) thus already belongs under the heading of **chemism**.

**Mechanism is topic-neutral**: Macrophysics does not distinguish between entities of different phenomenal, chemical or microphysical character, but treats abstractly of *objects as such* (just their mass) under the limit conception of **mass points** in space (Newton) or (3+1)-dimensional punctate **events** (Einstein).

Hegel points out that **mechanism** is at work not only in mechanics (macrophysics), but also in other domains of reality as well, such as physics proper (non-topic-neutral physics) and **psychology** (e.g. in mechanical forms of knowing or memorizing). But there “the laws of mechanism are no longer the decisive ones” (EL § 195 add).

It is important to remember that we are in the *Logic* still, so **space** and **time** are not yet posited. **Logical mechanism** is only the conceptual *base* of mechanical relationships between objects in space and time. Nevertheless we may find the transition from **inertial** mass to **gravitational** mass (and perhaps even the transition from Newtonian mechanics to the GTR?) **fore-shadowed** in the logical transition from formal and real mechanism to **absolute mechanism** (in the SoL) or the transition from simple mechanism to “*centrality, subjectivity*” (in the EL, § 196).

By the way, Hegel may (and does) now use the structure of **syllogism**, developed in the previous chapter, for making and explaining **logical transitions**, see particularly EL § 197:

The development of this relationship forms the syllogistic inference that the immanent negativity as the central individuality of an object (the abstract centre) [U as major term] relates itself to objects lacking self-sufficiency [I as minor term] as the other extreme, relating to them through a middle [term] that unifies the objects’ centrality and lack of self-sufficiency, the relative centre [P as middle term]. [Hence, the object is] (3) absolute mechanism.

Hegel is thinking here of the **solar system** as an **extra-logical** example (as well as of the **state**, cf. EL § 198 remark), with the **sun** and its gravitational force as the **absolute centre** (and **genus**, *U*), the planets as **relative centres** (and species, *P*) and (I surmise, but am not sure) the objects on the surfaces of the planets as the “objects lacking self-sufficiency” (*I*).

In the case of the **state**, the individual **person** (*I*) is mediated through their physical and spiritual **needs** – “what becomes civil society” – (*P*), with the **state** (i.e. law, justice, government – the three powers) (*U*). And then Hegel takes pains to show that we have here not only one syllogism in each case (solar system and state), but in fact systems of three syllogisms in both cases; where each moment (*I*, *P*, *U*) takes the mediating role in one of the syllogisms. (For details see EL § 198, remark.)

But of course the original **logical paradigm “example”** of the triad of syllogisms associated with absolute mechanism is of interest as well, and more so still than the extra-logical examples: The logical paradigm case always is **logical space as such**, together with its **evolution**. Shall we say that at the given stage (absolute mechanism), **logical evolution** is portrayed as a triad of syllogisms with the “central body” of logical space (objectivity as such) as *U*, the three logical spheres (being, essence, concept) as the relative centres (*P*) and the various logical determinations (urstates) as the objects lacking self-sufficiency (*I*)? (**Just an idea!**)

Anyway, absolute mechanism is not the last word about logical space but gives way to **chemism** (§ 199): The “self-sufficiency [of the objects] is mediated by their relations to one another, hence, through their lack of self-sufficiency. Thus, the object must be posited as differentiated [different], in its concrete existence, opposite its other”. In chemism thus we have differences (e.g. between electrons and positrons; acids and bases etc.) plus their **neutral** results:

Chemically differentiated [chemisch-differente] objects are explicitly what they are, only through their difference [Differenz], and are thus the absolute drive to integrate themselves through and with one another. (EL § 200 add)

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If we step back and look at **present day** science and philosophy of science, we will find the transition from mechanism to chemism in the transition from **topic-neutral macrophysics** (the theory of inertial and gravitational mass) through **astronomy** (not topic-neutral anymore, Chr. Martin) to **microphysics** with posited theoretical micro-entities and further to **chemistry**.

It might therefore, if Hegel’s logic has it right here, turn out in due course that all attempts at **unifying** both theories into a **physical theory of everything** are doomed to failure in principle.

**Mechanism** and **chemism**, topic-neutral macrophysics and postulating microphysics, would then just belong to two different stages in the development of logical space (as Hegel's logic predicts) and could not be integrated completely into one comprehensive theory.

By the way, quantum mechanical **particles** often do not behave as logically well-behaved entities ought to. According to Fermi-Dirac statistics they tend to violate the logical principle of the **identity of indiscernibles**. **Quine** therefore suggests to get rid of them ontologically and attribute their respective properties directly to the space-time-regions they are conceived of as occupying (*Pursuit of Truth*, <sup>2</sup>1992, p. 35).

The content of microphysics would then be in its **predicates** only (Quine: its "ideology"), not in its ontology. Its **ontology** would be topic-neutral again: just the ontology of space-time regions (or sets of quadruples of real numbers according to an arbitrarily chosen coordinate system – Quine's brave new neo-Pythagorean ontology).

The basic **logico-ontological problem** of micro-entities (that Fermi-Dirac statistics points to) can be illustrated by a rough and ready analogy, thus: Take two qualitatively identical macro-objects, *a* and *b*, and two equal fields,  $F_1$  and  $F_2$ , that they may occupy. Then we have four possible states with equal probability (.25 in each case):

- |   |   |
|---|---|
| (1) <i>a</i> on $F_1$ , <i>b</i> on $F_2$ | (3) <i>a</i> and <i>b</i> on $F_1$ ( $F_2$ empty) |
| (2) <i>a</i> on $F_2$ , <i>b</i> on $F_1$ | (4) <i>a</i> and <i>b</i> on $F_2$ ( $F_1$ empty) |

But if *a* and *b* are suitably chosen **micro-objects**, they will behave differently: as if they were numerically one through cases (1) and (2), thus grounding three possibilities only, each with probability 1/3:

- |   |
|---|
| (1) <i>a</i> on $F_1$ , <i>b</i> on $F_2$ ; or (indistinguishably): <i>a</i> on $F_2$ , <i>b</i> on $F_1$ |
| (2) <i>a</i> and <i>b</i> on $F_1$ ( $F_2$ empty)   |
| (3) <i>a</i> and <i>b</i> on $F_2$ ( $F_1$ empty)   |

It is this **lack of stable identity** on the part of the supposed micro-entities that makes Quine want **not** to be ontologically **committed** to them ("no entity without identity"). His brave new ontology of real numbers and, in the last analysis, of pure sets, can help.

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### Fifth part. Teleology

Back to the **logic**. The dualism of **neutralization** and then again separation and **reduction**, typical of chemical processes (according to Hegel), through a triad of syllogisms again, leads to a **unitary** new stage of logical space: the concept, now free of objective externality, as the **objective free concept** or *concept-for-itself*: **purpose**.

The objective externality "stands over against" the purpose (as inessential) at first. But the purpose is **free** objectivity and the **drive** to realize itself. EL § 206:

The teleological relation is the syllogism in which the subjective purpose joins itself together [sich, .. zusammenschließt] with the objectivity external to it through a middle term [Mitte] that is the unity of the two, both as the purposive activity and as the objectivity immediately posited under the purpose, the means [Mittel].

So it is clear that we here deal with **external** purposiveness, **internal** purposiveness of **living organisms** (Kant's topic in the *critique of teleological judgment*) being reserved to the realm of the **idea**, i.e. the next (and final) stage in logical evolution.

The **transcendental frame** qua external purposiveness stretches (as drive) from the subjective side via a means (and a presupposed external objectivity) to its realization on the objective side and thus accomplishes the subject/object unity typical of inner purposiveness: the **idea**.

## Transitions Into, With, and From Hegel's *Science of Logic*

10      Mar 10      From the idea to space and time

**Today:**

- I. The idea
- II. The absolute idea
- III. The transition to nature
- IV. Space and time

### First part. The idea

Greek *idea* and *eidos* can be translated both as *form* and as *idea*. “Form” points to a second member of a duality: to matter or to content (performed matter), and is thus closer to **Aristotle**, while “idea”, signifying something self-dependent, is closer to **Plato**. **Hegel** used “form” on the way, even “absolute form”. Now that the way reaches its telos, he switches to “**idea**”.

EL § 213:

The idea is the true [*das Wahre*: a noun, not an adjective] *in and for itself, the absolute unity of the concept and objectivity*. Its [*ihr*: the idea's] ideal content is none other than the concept in its determinations. Its [*ihr*: the idea's] real [*reeller*] content is only its [*seine*: the concept's!] exhibition [*Darstellung*], an exhibition that it [*er*, the concept] provides for itself in the form of external existence [*Dasein*] and, with this shape incorporated into the concept's ideality and in its power, the concept thus preserves itself in that exhibition.

The idea thus is still **form**, for it has a content: an “ideal content” and a “real content”; its ideal content being the concept (*U, P, I*) and its real content being nothing but the concept's (i.e. the ideal content's) own **real exhibition**. And the concept's real exhibition is the **Logic**. That means, the concept “provides for itself” the evolution of logical space (delineated in the *Logic*), which is its own evolution and exhibition “in the form of external existence”.

The external existence (the **being-there**) of the concept qua idea thus is what we have hitherto been talking about (being, essence, judgment, syllogism, objectivity). But this external **being-there**, whose last successor determination was **objectivity**, is now in “absolute unity” with subjectivity: with the **concept** as such.

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“The idea is the *truth*; for the truth is this, that objectivity corresponds to the concept [...]” (EL § 213 remark). The **transcendental frame** (self-consciousness and objectivity, or more precisely: self-consciousness *as* objectivity) that we know from **Kant** and whose logical **evolution** we have studied throughout the *Logic* is now (nearly) finished, consummated.

In this consummation, the structure of self-consciousness (the functions of thought, in Kant) **correspondents exactly** to the structure of objectivity (the categories, in Kant), and such correspondence is what has been aptly called **truth**.

The consummated transcendental frame therefore is **the truth itself**, Platonically speaking (or “the true *in and for itself*”); not this or that particular correctness in the realm of representation (i.e. in space and time), but the basic, elementary and absolute **unity of concept and objectivity** in all correct representations.

But this absolute unity is not something **inarticulate** and *absolutely immediate*. If it were, the idea would collapse into pure being. The unity has its internal articulation in the shape of the logical evolution that has led to the idea. The idea is the **story** of its own “genesis-and-maintenance”, but it is as well the powerful **principle** of its own “genesis-and-maintenance”.

What is the principle (or cause) of its own genesis-and-maintenance is what **Kant** calls a “*Naturzweck*”, purpose of nature, i.e. an **internal purpose**. Such internal purposes (*Naturzwecke*) exist as **living organisms**. If the **idea** is the principle of its own genesis and maintenance, it will therefore be, in its first and (*relatively*, not absolutely) **immediate** shape, **logical space qua living organism** (cf. Plato’s *kosmos tôn ideôn* as a *zôion*; *The Sophist*, *Timaios*).

In its **absolutely** immediate shape the idea would be pure **being**. In its **relatively** immediate shape it is as what it presents itself, if we abstract from the mediation that has led us *to* it (i.e. if we abstract from the way from pure being to teleology). Given our abstracting, we still know that the idea is the principle of its own genesis and maintenance, but we abstract from the **specifics** of that genesis and maintenance (which would reveal it as theory-and-practice: *the absolute idea*). The idea then is just **life**, or the principle of life, i.e. **soul**. --- Cf. EL § 216: “The *immediate* idea is *life*. The concept is realized as the soul in a *body* [...]”

In **Plato’s Timaios** the myth of a demiurge was told who created the **world soul** as a likeness of the living *kosmos tôn ideôn*. The world soul is correlated with matter, the *chôra*, out of which the world body is produced. The cosmos of forms, on the other hand, i.e. logical space according to Plato, is self-dependent, i.e. not dependent on matter.

The (immediate) **idea** as the soul of logical space (in SoL), on the other hand, is **embodied** (like the world soul): “The concept is realized as the soul in a *body*” (EL § 216 again). (The *Logic* is closer to Aristotle than to Plato, after all.)

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**The section on the idea is divided into three parts (chapters):**

- a. **Life** [the living individual, the process of life, the genus]
- b. **Knowing** [1816: The idea of cognition]
  - α. Knowing [1816: The idea of the true]
    - i. Analytic cognition
    - ii. Synthetic cognition (definition, division, theorem)
  - β. Willing [1816: The idea of the good]
- c. **The absolute idea**

EL § 220 gives the **balance** of *chapter a. Life*:

In the initial stage of its process, the living individual behaves as a subject and concept in itself. Through its second stage, it assimilates its external objectivity to itself and thus *posits in itself* the real determinacy. As a result, it is now *in itself the genus*, substantial universality. The particularization of the latter is the relation of the subject to *another subject* of its genus and the judgment is the relationship of the genus to these determinate individuals standing opposite one another: the *difference of the sexes* [Geschlechtsdifferenz].

Thus we have three stages: (1) the living **individual** and its individual life process, (2) the process of life as **interaction** with external objectivity (nutrition, metabolism), (2) the **genus** and its reproduction through its differentiation/particularisation into two sexes.

The **reproduction** of the genus is the reverse side of the individual’s **death**; cf. SoL 12.191:

In copulation [*Begattung*, cf. *Gattung*, “genus”] the immediacy of living individuality perishes [dies away, *erstirbt*]; the death of this life is the coming to be of spirit. The idea, *implicit* [in itself: *an sich*] as genus, becomes *explicit* [for itself: *für sich*] in that it has sublated its particularity that constituted the living species [plural! *Geschlechter*:

generations, sexes, species], and has thereby given itself a *reality* which is *itself simple universality*; thus it is the idea that *relates itself to itself as idea*, the universal that has universality for its determinateness and existence [being-there: *Dasein*]. This is the *idea of cognition*.

According to the implicit wisdom or folly of the German language, copulation qua *Begattung* (a spouse is a *Gatte/Gattin*) is the realization of the genus (*Gattung*) as **universal** genus. It is the biological, evolutionary “job” of individual animals to mate and die (give way to the offspring) and thus to reproduce their genus/species as a universal, at their cost.

With the universal as universal comes **cognition**. Cognition as such (the *idea* of cognition) is the universal that has **universality** for its determinateness and **being-there!** When we “run into” cases of cognition, what do we see? What is cognition’s determinate being-there (its reality)? Sure, we run into the universal, but – remarkably enough – not, as usual, by meeting a particular, individual instance (as we meet the universal horse in individual horses).

Rather, individual cases of **cognition** are individual only *per accidens* (contingently individuated in space and time). But even then they essentially belong to the transcendental and universal unity of thinking (or judging) as such (to transcendental apperception, according to Kant). The individual instances of cognition qua individual instances are still **universal** through and through. That is what cognition (thinking, judging) is by its very nature.

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In **knowing** we have the two sides of the transcendental frame in the following constellation:

[Here] the idea is *for itself* both itself [subject] and *its other* [object]. Thus it is the *certainty* [the self-conscious necessary judgment or “absolute faith”, see below] of being *in itself* the identity of this objective world with it. – Reason comes to the world with the absolute faith in its capacity to posit the identity [which at first is there only *in itself*, not yet posited] and elevate its [subjective] certainty to [subjective/objective] *truth*, and with the drive to posit as also vacuous *for it* that opposition that is *in itself* vacuous. (EL § 224)

I shall skip over the details of Hegel’s treatment of cognition and just mention its **particularisation** (division) into **theoretical** and **practical** cognition. The absolute idea will then be the unity of both again.

Hegel introduces the division of cognition immediately after the lines just quoted (EL § 225):

In general, this process [see § 224] is *knowing* [*das Erkennen*]. In it, in *one* activity, the opposition, the one-sidedness of subjectivity together with the one-sidedness of objectivity, is sublated *in itself*. But this process of sublating takes place at the outset only *in itself* [not yet *for itself*, is not yet posited]. The process as such is thus itself immediately beset with the finitude of this sphere and falls apart into the *twofold*, diversely posited movement of the drive. [Spacing added, here and below, AFK]

[In one respect,] it is the drive to sublimate the one-sidedness of the *subjectivity* of the idea by taking up into itself the world *that is* [*seiende Welt*], taking it up into subjective representing and thinking [not eating it up, as in the metabolism of the living individual, but taking it up as it is, undistorted and intact], and to fill out the abstract certainty of itself with this objectivity as *content*, an objectivity that thus counts as true.

Conversely, it is the drive to sublimate the *one-sidedness* of the objective world that here accordingly, by contrast, counts as a *semblance* [*Schein?*] a collection of contingencies and shapes vacuous in themselves, and to determine and mould it through the *inner*

*dimension* of the subjective, that counts here as the objective, as what truly is [cf. the objectivity Kant claims for the law of freedom or moral principle].

The former is the drive of knowledge [*Wissen*] to truth, *knowing* [*Erkennen*] as *such*, the *theoretical* [activity]; the latter is the drive of the *good* to bring itself about, *willing*, the *practical* activity of the idea.

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### Second part. The absolute idea

The transition from willing (or the idea of the good) to the **absolute idea** is epitomized in EL (§ 235) as follows:

The *truth* of the good is [...] posited as the unity of the theoretical and practical idea, [the notion] that the good has been attained in and for itself – that the objective world is thus in and for itself the idea precisely as it [the idea] at the same time eternally posits itself as *purpose* and through activity produces its actuality. This life, having come back to itself from the differentiation [*Differenz*] and finitude of knowing, and having become identical with the concept through the activity of the concept, is the *speculative or absolute idea*.

So, now we have reached the final **fixed point** of logical evolution! It, the absolute idea,

is the concept of the idea, for which the idea as such is the object [Gegenstand], [...] – an object [Objekt] into which all determinations have gone together. This unity is accordingly the *absolute and entire truth*, the idea thinking itself, and here, indeed, as thinking, as the *logical idea*. (EL 236)

The absolute idea thus is the **quintessence** (*Inbegriff*) of the *whole logic*: All logical determinations have gone together into it. – The idea of life was that quintessence only **in itself**, the idea of knowing only **for itself**, the absolute idea is the quintessence **in and for itself** (§ 236 add).

Finally **BL and OL meet**, never to be separated again:

Up to now we [in BL] have had for our object [*Gegenstand*] the idea in the development through its diverse stages [i.e. OL]; now, however, the idea is objective with respect to itself [*sich selbst gegenständlich*]. [Now, OL is its own BL!] This is the *noêsis noêseôs*; what Aristotle already designated as the highest form of the idea. (Ibid.)

[I]t is the pure form of the concept that intuits its content as itself. [...] This content is the system of *the logical*. Nothing remains here of the idea, as *form*, but the *method* of this content – the determinate knowledge [*Wissen*] of the validity of its moments (EL § 237)

The science [OL] concludes in this way by grasping the concept of itself [BL] as the pure idea, for which the idea is. (EL § 243)

The **transcendental frame** is at last at ease with itself. Its subjective self-“consciousness” (scare quotes) is identical with its “consciousness” of its objective categorial structure. So, what the about **negation**, contradiction, inconsistency, then? Is that all over now?

**Negativity** belongs to the logical form (**method**) as well as to the logical **content**. But somehow Hegel must think that it is now **domesticated**, not a wild beast anymore but a domestic animal doing useful theoretical work, viz. articulating the absolute idea into the logical determinations. Negativity smoothly spans or stretches out the content of the idea as an articulate evolution of logical space.

The absolute idea, as **quintessence**, is the logical determinations condensed into a unitary **content**; the absolute idea, as **form**, on the other hand, is the **method** (the internal, i.e. OL method, not our external method) of this logical content, its dialectical (finally the D-word is legitimate!) articulation: “the determinate knowledge of the validity of its moments”.

But we must not expect any wondrous enlightenment, as Hegel makes pretty clear in the very useful and telling addition to § 237:

When one speaks of the absolute idea, one can think that here finally the substantive must come to the fore, that here everything must become clear. One can, to be sure, vacuously spout on end [*ohne Ende?*] about the absolute idea; the true content, meanwhile, is nothing but the entire system, the development of which we have considered up to this point. It can accordingly also be said that the absolute idea is the universal, but the universal not merely as an abstract form opposite which the particular content stands as something other than it. Instead it is the absolute form [“absolute form” again!], into which all determinations, the entire fullness of the content posited by it [by that absolute form], have gone back. In this respect, the absolute idea is comparable to the old man who says the same religious sentences as the child does, but for the old man they have the meaning of his entire life. Even if the child understands the religious content, what validity that content has for him is still of the sort that lies outside his entire life and world. – The same holds then also for human life in general and the occurrences that make up the content of it. All work is only aimed at the goal, and if this is attained, then one is astonished at finding nothing else than precisely this, what one wanted. The interest lies in the entire movement. If a human being pursues his life, then the end can appear to him as quite limited, but it is the entire *decursus vitae* [course of a life] that is encompassed in it. – Thus, too, then the content of the absolute idea is the entire expanse of what we had before us up until now. The final [point] is the insight that the entire unfolding makes up the content and interest. – This is, furthermore, the philosophical view that everything that appears limited, taken for itself, acquires its worth through inhering in the whole and being a moment of the idea. Thus it is that we have had the content and what we still have is the knowledge [*Wissen*] that the content is the living development of the idea and this simple retrospective is contained in the form. Each of the stages considered up to this point is an image of the absolute, albeit in a limited manner at first, and so it drives itself on to the whole, the unfolding of which is precisely what we have designated the method.

Thus, we now see that *our* beginning with pure **being** was nothing but the “speculative idea’s self-determining”, which posited itself (the **idea**) as the negative of itself (**being**) (EL § 238). We see as well that our **proceeding** (in BL) was “the posited *judgment* of the idea” (§ 239). And we thirdly see that the end (we have reached now) is for the idea

at the same time nothing more than the process by which the *semblance* [shine] that the beginning is something immediate and it [the idea] a result *vanishes*; – in other words, this end is the knowledge that the idea is the one totality. (EL § 242)

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### Third part. The transition to nature

How does the idea start its self-determining and how does posit itself as the negative of itself, i.e. as being? Does it force us into going through the logic a second and then a third time and so on, in bad infinity?

No, the **final picture** is rather this: We have indeed gone full circle, and the absolute idea qua form or method is that circular articulation of the content. But as the condensed content itself, the idea is, as it were, the **centre** of that circle, from which all particular logical determina-



tions are equidistant. Each particular determination is as well (in itself) the idea (while the idea is all determinations in and for itself).

As this unitary, condensed centre, the absolute idea is “*the process of intuiting*” (EL § 244). The Platonic philosopher (e.g. Diotima) **intuits** or contemplates the idea of the good or beautiful (and the cosmos of forms); but then again it is her job (done by Socrates/Plato for her) to articulate the forms in definitions, divisions and theorems, by the craft of **dialectics**. This is the idea qua logical form and method.

Now, when we (in our BL) started with pure being, we had come from the realm of imaginative and discursive **representation**, i.e. the material world in **space and time**, and had abstracted from all differences between possible discursive truth claims (and thus from space and time as the forms of representation too).

But (1) if that, the **natural, spatiotemporal** world, was our starting point and (2) if **our** beginning (and then proceeding) was just the **self-determining** of the **idea**, then we must conclude that spatiotemporal nature is the version or guise in which the absolute idea originally posits itself as the negative of itself, i.e. as being.

Therefore, at the end of the *logic*, we are being directed not **back** to pure being as such (the immediate and indeterminate **nucleus** of the idea), but **forward** to pure being as the **negative** of the idea, i.e. to pure being in the form of utter *externality to thought*: pure being qua spatiotemporal **nature**.

We have therefore to conclude, in leaving the scope of the *logic* behind us, that the **idea** has (always already) posited itself as its negative – without blind and opaque necessity, rather in pure and transparent freedom – in the forms of externality, i.e. **space and time**.

If we conceive of the idea as the **process of intuiting**, then we posit it by our

external reflection in a one-sided determination of immediacy or negation [as if there were no spontaneity in play, with the idea]. Yet the absolute *freedom* [and thus spontaneity] of the idea is that it does not merely pass over [the form of transition in the logic of being] into *life* or let life shine in itself [logic of essence] as finite knowing, but instead, in the absolute truth of itself, *resolves to release* freely *from itself* the moment of its particularity [...], the *immediate idea*, as its *reflection* [*Widerschein*], itself as *nature*. (EL § 244)

The **immediate** idea, as it is freely **released** by and from the **absolute** idea, thus is pure being not qua supposed logical urstate, but pure being as spread out in space and time. Hegel comments in his final addition (to § 244):

We have now returned to the concept of the idea with which we began. This return to the beginning is at the same time a move forward [*Fortgang*]. What we began with was being, the abstract *being*, and now we have the idea as being; this *idea* insofar as it is [*diese seiende Idee*], however, is *nature*.

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#### **Fourth part. Space and time**

The **philosophy of nature** in a way recapitulates the section “objectivity” plus the first chapter “life” of the section “the idea” of the logic of the concept:

The idea qua nature has (EL § 252)

- 1) “the determination of extrinsicality and of infinite individuation” (therefore it has as its general form a principle of pre-conceptual multitude or a principle of the separation of the concepts of numerical and of qualitative identity: space; the argument for the sub-

jectivity thesis draws on that): This constitutes *matter*, and the ideal nature of the system of matter, i.e. *mechanics*.” [Macrophysics]

- 2) “the determination of particularity [...]. This is a relationship of reflection, i.e. *physics*.” (Microphysics. Chemism is not mentioned here, nor is external teleology.)
- 3) “the determination of [animal] subjectivity [...], i.e. *organics*.” (This corresponds already to the idea of life.)

Then comes the transition into the **philosophy of spirit**, beginning with **subjective** spirit (in theoretical philosophy) and passing on to **objective** spirit (in practical philosophy: law, family, society, state, world history) and finally to **absolute spirit** in the guises of **art**, **religion** and **philosophy**.

**Art** correctly puts into intuitive, sensible shape the divine (the absolute) as human figures (the statues of the Olympic gods in classical Greek art).

**Religion** portrays the absolute under the conditions of (imaginative and) **discursive representation**: Prophets revealing God in speech (and Jesus revealing God in speeches, deeds and sufferings: God as a human individual who dies! This is why Christianity is special to Hegel).

**Philosophy** unfolds the absolute according to the requirements of the **concept**, i.e. in speculative thinking, and in the event in the guise of the *science of logic* and the *philosophies of nature and spirit*. So, here, the absolute turns fully self-referential and **self-conscious**, and the **absolute idea** fully restores itself from its self-exteriorisation into nature.

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But back to **nature**! Chapter One: “Space and time (Mathematical mechanics)”, begins with section A: Space, in § 252:

The primary or immediate determination of nature is the abstract *universality of its self-externality*, its unmediated indifference, i.e. *space*. It is on account of its being self-externality, that space constitutes *collaterality* of a completely ideal [space has to be realized by matter!] nature; as this extrinsicality is still completely *abstract*, space is simply *continuous*, and is devoid of any determinate difference.

Hegel is very short in “eliminating externality” (John McDowell), i.e. in connecting the **dimensions of space** with the moments of the **concept** (U, P, I) (§ 255 remark): In space as

abstract quantity, the determinations of the Notion constitute a merely superficial and completely empty difference. Consequently one cannot say how *height*, *length*, and *breadth* differ from one another, because they are merely supposed to be distinctions.

Nevertheless the three dimensions *must* be distinguished from one another (a requirement that the argument for the **subjectivity thesis** draws on). Hegel moves on instead, first to spatial negativity that creates the threefold forms of spatiality as **point**, **line**, **plane**, then to the **enclosing surface** (that completes space) and finally to **time**.

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The **negativity** of space, its contradictory character (which is responsible for points, lines and planes), posited for itself, is *time*. (B: Time, §§ 257ff.) So, the **contradiction** of **space** is rescued and cushioned by **time**. But time has its own contradiction, as J.M.E. McTaggart noted – very likely drawing on his expertise as a Hegel scholar.

Time, says **Hegel**, is purely abstract and ideal, like space (space and time are realized – and systematically deformed! GRT – by matter) and, more specifically, “is the being which, in that it *is*, is *not*, and in that it is *not*, *is*. **It is intuited becoming** [...]” (§ 258). That is, time

(like space, a pure form of sensibility or intuition: “the insensible factor in sensibility”) is the abstract, ideal **scale** of becoming (and alteration).

Hegel calls the three **modes** or **moments** of time: **present**, **future** and **past**, its “dimensions” somewhat inaptly (§ 259). Space, being contradictory, has passed over (conceptually, not temporally) into time, and time, which is contradictory as well, passes over back to space, but to a **spatial now**, called “**place**” that makes possible motion and matter.

I shall conclude with a view on the **contradiction of time**, later spelled out by **McTaggart** and made the base by him of his rejection of time, as **unreal**. It directly relates to time as the scale of the so-called **A-series of events**: In the A-series, events are first in the distant future, then in the near future, then present, then past, then distantly past. So, what gives sense and structure to the A-series are the modes of time. (The **B-series** is supposed to be more objective, doing without the modes of time; but it is dependent on the A-series for time’s arrow. The **C-series** for Mc Taggart is the real, metaphysical base that underlies the shine of time; probably the logical series of thought determinations in the *logic*.)

Now **Hegel** says [C: “Place and motion (The union of space and time)”, §§ 260 ff.] that time’s “opposed moments, held together in unity, immediately sublimate themselves”, causing time to “collapse into undifferentiation”, i.e. into space (viz. **place**) again (§ 260).

**McTaggart** has unfolded and popularized this thought [see „The Unreality of Time“, in: Robin Le Poidevin und Murray MacBeath (eds.), *The Philosophy of Time*, Oxford 1993, 23-34. Cf. Mellor, D.H., *Real Time II*, London 1998, esp. p. 73f.]. The **opposed moments** of time are its **modes**: present, future and past. No **event** is ever more than **one** of them; that is why the modes are *opposed*. And yet, we have to *hold them together in unity*, as when we say of any arbitrary **single event** that it is (first) *future*, (then) *present* (or *now*) and (finally) *past*.

Let’s abbreviate “e is present” as “Ne”, “e is future” as “Fe”, and “e is past” as “Pe”. These three propositions **contradict** each other pairwise. But it seems we know ways to dissolve the contradictions: Maybe (e.g.) e is present now, future in the past and past in the future, thus:

NNe, PFe, FPe

But there are six further combinations (ordered pairs) of temporal modes as possible predicates of an event, all true of any given event.

NFe, NPe, PNe, PPe, FNe, FFe

So we have a set of **nine predications** of ordered pairs of temporal modes, each true of any given event, and again that set is **inconsistent**. Sure, the subset just considered, {“NNe”, “PFe”, “FPe”}, is consistent, but there are other subsets which are not, e.g. {“NNe”, “FFe”}, {“NNe”, “PPe”}, {“FFe”, “PPe”}.

To cope with that inconsistency we would have to resort to ordered triples of temporal modes. For instance, “NNNe” and “PFFE” will **remedy** the inconsistency of {“NNe”, “FFe”}. But with ordered triples, we have now  $3^3=27$  cases to consider, and again we will find inconsistent combinations whose inconsistency would have to be coped with by resorting to **quadruples**. Then we will get  $3^4=81$  cases and again inconsistencies among them and so on indefinitely.

This means that the contradiction of temporal modes is “cured” only by an **infinite progress** of curative attempts and therefore never and not at all. McTaggart concluded that **time is unreal**. Not he though, as is usually the case, but **Hegel**, should be credited with having detected the underlying inconsistency in *holding the temporal modes together in unity*.

(**Hermeneutical philosophy**, according to the **subjectivity thesis**, treats **tenses** as basic and irreducible. Then the Hegel/McTaggart contradiction of time vanishes. But it comes back with a vengeance, here too. A long and winding story!)

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<sup>i</sup> Hegel 1970: 76. (Cf. the translation by A.V. Miller, Hegel 1977: 52-53.)

<sup>ii</sup> Hegel 1970: 78. (Cf. Miller's translation, Hegel 1977: 54-55.)

<sup>iii</sup> Hegel 1970: 79. (Cf. Hegel 1977: 55.)

<sup>iv</sup> Hegel 1970: 72. (Cf. Hegel 1977: 50, 'thoroughgoing scepticism'.)

<sup>v</sup> Hegel 1970 and Hegel 1977: chapter IV. B. Freedom of self-consciousness: Stoicism, Scepticism, and the Unhappy Consciousness.

<sup>vi</sup> Hegel 1970: 12. (Cf. Hegel 1977: 2.)

<sup>vii</sup> Hegel 1970: 13. (Cf. Hegel 1977: 2-3.)

<sup>viii</sup> Strawson 1959: chapter 6.

<sup>ix</sup> Cf. Castañeda 1966 and Perry 1977.

<sup>x</sup> Hegel 1970: 87. (Cf. Hegel 1977: 62.)