

The Science of Logic

The Concept Logic, Part 3, The Idea

CHAPTER 2 THE IDEA OF COGNITION

§ 1677

Life (Chapter 1 of The Idea) is the immediate Idea, or the Idea as its Notion not yet realised in its own self. In its judgment, the Idea is cognition in general.

The Notion is, as Notion, *for itself* in so far as it *freely* exists as abstract universality or as genus. As such, it is its pure self-identity, which inwardly differentiates itself in such a manner that the differentiated moment is not an *objectivity*, but is likewise liberated into subjectivity or the form of simple self-likeness, and hence the object of the Notion is the Notion itself. Its *reality* in general is the *form of its determinate being* and the point of interest is the determination this form, on this determination rests the difference between what the Notion is *in itself* or as *subjective* and what it is when submerged in objectivity, and then in the Idea of life.

§ 1678

In the latter it is indeed distinguished from its external reality and posited *for itself*, yet this its being-for-self it possesses only as the identity that is a relation to itself as submerged in its subjugated objectivity, or to itself as indwelling, substantial form. The elevation of the Notion above life means that its reality is the Notion form liberated into universality. Through this judgment the Idea is duplicated into the subjective Notion whose reality is the Notion itself, and into the objective Notion that is in the form of life. *Thinking, spirit, self-consciousness*, are determinations of the Idea where it has itself for object, and its determinate being, that is, the determinateness of its being, is its own difference from itself.

§ 1679

The *metaphysics of the spirit*, or, as it was more commonly expressed, of the *soul* revolved round the determinations of substance, simplicity, immateriality — determinations in which the *general idea* of spirit taken from *empirical* consciousness, was laid down as subject, and it was then asked, What predicates agree with our observations? This kind of procedure could get no further than the procedure of physics, which reduces the world of phenomena to general laws and reflective determinations since it too was based on spirit merely in its *phenomenal* aspect; in fact this procedure was bound to fall short even of the scientific character of physics.

§ 1680

Since spirit is not only infinitely richer than nature, but also, its essence is constituted by the absolute unity of opposites in the *Notion*, it exhibits in its phenomenal aspect and relation to externality contradiction in its extreme form. Consequently, it must be possible to adduce an experience in support of each of the opposed reflective determinations, or starting from experience it must be possible to arrive at opposite determinations by way of formal syllogistic reasoning.

§ 1681

Since the predicates immediately yielded by spirit's phenomenal aspect in the first instance still belong to empirical Psychology, there only remain, strictly speaking, for the metaphysical consideration, the wholly inadequate determinations of reflection. Kant, in his criticism of *rational psychology* adheres to this metaphysics, insisting that, in so far as rational psychology purports to be a rational science, the smallest *addition* from observation to the *general idea* of self-consciousness would transform that science into an *empirical* one and mar its rational purity and its independence of all experience. Consequently, on this view, nothing is left but the simple representation, 'I', a representation devoid of any content of its own, of which we cannot even say that it is a *notion* but a mere *consciousness* that *accompanies every notion*. Now according to the further Kantian conclusions, by this 'I', or if you like, it (the *thing*) that thinks, nothing further is represented than a transcendental subject of thoughts = x, which is cognised only through the thoughts which are its *predicates*, and of which, taken in its isolation, we can *never* have the least *conception*.

In this context, the 'I' has the *inconvenience*, to use Kant's own expression that *we must already make use of it* whenever we want make any judgment about it; for it is not so much a *single representation* by which a particular object is distinguished, but rather a *form* of representation in general in so far as this is to be called cognition. Now the paralogism committed by rational psychology, says Kant, consists in this, that *modes* of self-consciousness in thinking are converted into *notions of the understanding* as applied to an *object*; that the '*I think*' is taken as a *thinking being*, a *thing-in-itself*; and that in this way, from the fact that I always occur in consciousness as a *subject*, and that too as a *singular* subject, *identical* in all the multiplicity of representation, and distinguishing myself from the latter as from something external to me, the unjustified inference is drawn that the 'I' is a *substance*, and further a qualitatively *simple* being, and a one, and something that has a real existence independently of the things of time and space.

§ 1682

I have drawn out this exposition in some detail, because it shows clearly the nature of the previous *metaphysics of the soul* and especially, too, the nature of the *criticism* by which it was made obsolete. The former aimed at determining the *abstract essence* of the soul; in doing so, it started originally from observation and converted the empirical universality of observation and the wholly *external* reflective determination attaching to the individuality of the actual, into the form of the above-mentioned *determinations of essence*. Kant in his criticism had generally in mind only the state of the metaphysics of his time, which in the main adhered to these abstract, one-sided determinations wholly devoid of dialectic; the genuinely *speculative* ideas of older philosophers on the notion of spirit he neither heeded nor examined. In his criticism then of those determinations, he followed quite simply Hume's style of scepticism; that is to say, he holds fast to the 'I' as it appears in self-consciousness, from which, however, since it is its essence — the *thing-in-itself* — that we are to cognise, — everything empirical must be omitted; nothing then is left but this phenomenon

of the '*I think*' that accompanies every representation — of which '*I think*' we have *not the slightest conception*.

§ 1683

Certainly, it must be conceded that we have not the least conception the 'I', or of anything whatever, not even of the Notion itself, so long as we do not really *think*, but stop short at the simple, fixed *general idea* and the *name*. It is an odd thought — if it can be called a thought at all — that I must already *make use* of the 'I' in order to judge of the 'I'; the 'I' that *makes use* of self-consciousness as a means in order to judge, this is indeed an *x* of which, as well as of the relationship of such 'making use', we cannot have the slightest conception. But surely it is ridiculous to call this nature of self-consciousness, namely, that the 'I' thinks itself, that the 'I' cannot be thought without its being the 'I' that thinks, an *inconvenience* and, as though there was a fallacy in it, a *circle*. It is this relationship through which, in immediate self-consciousness, the absolute, eternal nature of self-consciousness and the Notion itself manifests itself, and manifests itself for this reason, that self-consciousness is just the *existent* pure *Notion*, and therefore *empirically perceptible*, the absolute relation-to-self that, as a separating judgment, makes itself its own object and is solely this process whereby it makes itself a circle.

§ 1684

A stone does not have this *inconvenience*; when it is to be thought or judged it does not stand in its own way. It is relieved from the burden of making use of *itself* for this task; it is something else outside it that must give itself this trouble.

Kant's Critique of Rational Psychology

§ 1685

These conceptions, which must be called barbarous, place the defect in the fact that in thinking of the 'I', the 'I' as *subject* cannot be omitted; but the same defect then also appears the other way round, namely in this way, that 'I' occurs *only as subject of self-consciousness*, or I can *use* myself only as *subject* of a judgement, and the *intuition* is lacking by which the 'I' might be *given* as an *object*; but the notion of a thing that can exist only as subject does not so far involve any objective reality at all. If external intuition, determined in space and time, is required for objectivity, and it is this that is missing here, then it is quite clear that by objectivity is meant merely sensuous reality; and to have risen above *that* is a condition of thinking and of truth. But of course, if 'I' is taken not in its Notion but as a mere, simple, general idea, in the way we pronounce 'I' in everyday consciousness, then it is the abstract determination and not the self-relation that has itself for object. In that case, it is only one of the extremes, a one-sided subject without its objectivity, or else it would be merely an object without subjectivity, were it not for the inconvenience alluded to, that the thinking subject cannot be eliminated from the 'I' as object. But in fact the same inconvenience occurs with the former determination, with the 'I' as subject; the 'I' thinks *something*, itself or something else. This inseparability of the two forms in which it opposes itself to itself belongs to the innermost nature of its Notion and of the Notion itself; it is precisely what Kant wants to stave off in order to retain the mere *general idea*, which does not inwardly differentiate

itself and therefore, of course, lacks the Notion. Now a Notionless conception of this kind may indeed oppose itself to the abstract reflective determinations or categories of the previous metaphysics: for in one-sidedness it stands on a level with them, though these are indeed on a higher level of thought; but on the other hand it appears all the more meagre and empty when compared with the profounder ideas of ancient philosophy on the conception of the soul or of thinking, as for example the genuinely speculative ideas of Aristotle. If the Kantian philosophy investigated the reflective categories in question, it was even more bound to investigate the firmly held abstraction of the empty 'I', the presumed idea of the thing-in-itself, which, precisely on account of its abstraction, proves on the contrary to be something completely untrue. The experience of the inconvenience complained of is itself the empirical fact in which the untruth of that abstraction expresses itself.

§ 1686

Mendelssohn's proof of the persistence of the soul is the only one mentioned in the Kantian critique of rational psychology, and I cite here the Kantian refutation of it on account of the remarkable nature of the argument employed to disprove it. The proof in question is based on the *simplicity* of the soul, by virtue of which it is incapable of alteration, *of transition into an other*, in time. Qualitative simplicity is in general the form of *abstraction* considered above; as *qualitative* determinateness it was investigated in the sphere of being, and it was proved that the qualitative, as such abstractly self-related determinateness, is on the contrary for that very reason dialectical, and is merely transition into an other. But in treating of the Notion it was shown that when it is considered in relation to persistence, indestructibility, imperishableness, it is the absolutely true being and the eternal, just because it is not *abstract*, but *concrete* simplicity, is determined not as abstractly self-related, but as the unity *of itself and its other*; it cannot therefore pass into that other as though it altered itself in it for the very reason that the *other* to which it is determined is the Notion itself, so that in this transition it only comes to itself. Now the Kantian criticism opposes to the said *qualitative* determination of the unity of the Notion, the *quantitative*. Although the soul is not a manifold of juxtaposed parts and contains no *extensive* magnitude, yet we are told consciousness has *a degree*, and the soul like *every concrete existent* has an *intensive magnitude*; but this postulates the possibility of transition into nothing by a *gradual passing away*. Now what is this refutation but the application to spirit of a category *of being*, of *intensive magnitude* — a determination that has no truth in itself but on the contrary is sublated in the Notion?

§ 1687

Metaphysics — even the metaphysics that restricted itself to fixed concepts of the understanding and did not rise to speculative thinking, to the nature of the Notion and of the Idea — had for its aim *the cognition of truth*, and investigated its objects to ascertain whether they were true things or not, substances or phenomena.

§ 1688

The victory of the Kantian criticism over this metaphysics consists, on the contrary, in doing away with the investigation that has *truth* for its aim, and this

aim itself; it omits altogether to raise the one question of interest, whether a particular subject, here the *abstract 'I' of ordinary thinking* possesses truth in and for itself. But to cling to phenomena and the mere conceptions given in everyday consciousness is to renounce the Notion and philosophy. Anything rising above this is stigmatised in the Kantian criticism as something high-flown to which reason is in no way entitled. As a matter of fact, the Notion does reach beyond the Notion-less, and the immediate justification for going beyond it is first, the Notion itself, and secondly, from the negative side, the untruth of phenomena and of ordinary thinking, as well as of abstractions like things-in-themselves and the above 'I', that is supposed not to be an object to itself.

§ 1689

In the content of this logical exposition it is from the *Idea of life* that the Idea of spirit has issued, or what is the same thing, that the Idea of spirit has proved itself to be the truth of the Idea of life. As this result, the Idea possesses its truth in and for itself, with which one may then also compare the empirical side or the manifestation of spirit to see how far the latter accords with the former. We have seen that *life* is the Idea, but at the same time it has shown itself not to be as yet the true representation or mode of the Idea's existence. For in life, the reality of the Idea exists as *individuality*; *universality* or genus is the *inwardness*; the truth of life as absolute negative unity is therefore to sublimate the abstract ' or what is the same, the immediate, individuality, and as *identical*, to be self-identical, as genus, to be self-similar. Now this Idea is *spirit*. In this context we may once more remark that spirit is here considered in the form that belongs to this Idea as logical. For it has other shapes as well that may be mentioned here in passing; in these it falls to be considered in the concrete sciences of spirit, namely as *soul*, *consciousness* and *spirit as such*.

§ 1690

The name *soul* was formerly employed for the individual finite spirit generally, and rational or empirical *psychology* was intended to be synonymous with *doctrine of spirit*. The expression "soul" evokes a mental picture of it as a *thing* like other things; one enquires as to its *seat*, the specific position in *space* from which its forces operate; still more, as to how this thing can be *imperishable*, how it can be subject to temporal conditions and yet be exempt from alteration therein. The system of *monads* exalts matter to the *psychical* [*Seelenhaftigkeit*]; in this conception the soul is an atom like the atoms of matter in general; the atom that rises as steam from the coffee cup is capable in favourable circumstances of developing into a soul; it is only the *greater* obscurity of its ideation that distinguishes it from a thing of the kind that manifests as soul.

§ 1691

The Notion that is for itself is necessarily also in *immediate existence*; in this substantial identity with life, as submerged in its externality, it is the subject matter of *anthropology*. But even anthropology must regard as alien to it the metaphysics that makes this form of *immediacy* into a *psychical thing*, into an *atom*, like the atoms of matter. To anthropology must be left only that obscure region where spirit is subjected to what were once called *sidereal and terrestrial* influences, where it lives as a natural spirit in *sympathy* with Nature and becomes aware of Nature's changes in *dreams and presentiments*, and indwells

the brain, the heart, the ganglia, the liver, and so forth. According to Plato, God, mindful that even the *irrational* part of the soul should partake of his bounty and share in higher things, gave to the liver the gift of prophecy above which self-conscious man is exalted. To this irrational side belong further the conditions of ordinary thinking and higher spiritual activity in so far as this activity is subjected in the individual subject to the play of a wholly contingent physical constitution, of external influences and particular circumstances.

§ 1692

This lowest of the concrete-shapes in which spirit is sunk in the material, has its immediate superior in *consciousness*. In this form the free Notion, as *ego that is for itself*, is withdrawn from objectivity, but relates itself to it as *its other*, as an object confronting it. Here spirit is no longer present as soul; on the contrary, in the *certainty* of itself, the *immediacy of being* has the significance of a *negative* for it; consequently, its identity with itself in the objectivity is at the same time still only an *illusory show*, since the objectivity, too, still has the form of an *implicit* being. This stage is the subject matter of the *phenomenology of spirit* — a science which stands midway between the science of the natural spirit and spirit as such. The phenomenology of spirit considers spirit that is *for itself*, but at the same time in its *relation to its other*, an other which, as we have recalled, is determined by that relation as both *implicitly* an object and also as negated. Thus it considers spirit in its *manifestation*, as exhibiting itself in its counterpart.

§ 1693

But the higher truth of this form is *spirit that is for itself*; for spirit in this form, the object that for consciousness has an *implicit* being has the form of spirit's own determination, of *ordinary thinking* as such; this *spirit*, acting on the determinations as on its own, on feelings, representations, thoughts, is thus infinite within itself and in its form. The consideration of this stage belongs to the *doctrine of spirit* proper, which would embrace what is the subject matter of ordinary *empirical psychology*, but which, to be the science of spirit, must not go empirically to work, but be scientifically conceived. Spirit is at this stage *finite* spirit, in so far as the *content* of its determinateness is an immediate, given content; the science of finite spirit has to display the process in which it liberates itself from this its determinateness and goes on to grasp the truth of itself, which is infinite spirit.

§ 1694

On the other hand, the *Idea of spirit* as the subject matter of *logic* already stands within the pure science; it has not therefore to watch spirit progressing through its entanglement with nature, with immediate determinateness and material things, or with pictorial thinking; this is dealt with in the three sciences mentioned above. The Idea of spirit already has this progress behind it, or what is the same thing, still before it—the former when logic is taken as *the last* science, the latter when logic is taken as the *first* science, out of which the Idea first passes over into nature. In the logical Idea of spirit, therefore, the 'I' is immediately the free Notion, as it revealed itself to be in issuing from the Notion of nature as nature's truth, the free Notion that in its judgement is itself the

object, *the Notion as its Idea*. But even in this shape the Idea is still not consummated.

§ 1695

While the Idea is indeed the free Notion that has itself for object, yet it is *immediate*, and just because it is immediate it is still the Idea in its *subjectivity*, and therefore in its finitude in general. It is the end that has to realise itself, or it is the *absolute Idea* itself still in its *manifested* aspect. What it *seeks* is the *true*, this identity of the Notion itself and reality, but as yet it is only seeking it; for it is here in its *first* stage still *subjective*. Consequently though the object that is for the Notion is here also a given object, it does not enter into the subject as an object operating on it, or as an object having a constitution of its own, or as a picture thought; on the contrary, the subject converts it into a *determination of the Notion*. It is the Notion that is active in the object, relates itself to itself therein, and by giving itself its reality in the object finds *truth*.

§ 1696

The Idea is therefore in the first instance one of the extremes of a syllogism, as the Notion that as end has initially its own self for subjective reality; the other extreme is the limitation of subjectivity, the objective world. The two extremes are identical in that they are the Idea; first their unity is that of the Notion, which in one is *only for itself*, in the other only *in itself*; secondly in one the reality is abstract, in the other it is present in its concrete actuality. This unity is now *posited* by cognition; and since this is the subjective Idea that, as end, proceeds from itself, the unity appears, at first, only as a *middle term*. The cognising subject, through the determinateness of its Notion, namely abstract being-for-self, relates itself, it is true, to an outer world, but it does so in the absolute self-certainty of itself, in order to raise its own implicit reality, this formal truth, into real truth. It possesses in its Notion the *entire essentiality* of the objective world; its process consists in positing for itself the concrete content of that world as identical with the *Notion*, and conversely, in positing the latter as identical with objectivity.

§ 1697

Immediately, the Idea as manifested Idea is the *theoretical* Idea, *cognition* as such. For immediately the objective world has the form of *immediacy* or of *being* for the Notion that exists for itself; just as the latter, at first, is to itself only the abstract Notion of itself, confined within itself; it is therefore merely a *form*; its reality that it has within it is no more than its simple determinations of *universality and particularity*, while the individuality or *specific determinateness*, the content, is received by this form from outside.

A The Idea of the True

§ 1698

The subjective Idea is in the first instance an *urge*. For it is the contradiction of the Notion to have itself for *object* and to be its own reality, yet without the object being an other, that is, self-subsistent over against it, or without the difference of the Notion from itself possessing at the same time the essential determination of *diversity* and indifferent existence. The specific nature of this

urge is therefore to sublate its own subjectivity, to make its first, abstract reality into a concrete one and to fill it with the *content* of the world presupposed by its subjectivity.

§ 1699

From the other side, this urge is determined in the following manner: the Notion is, it is true, the absolute certainty of itself; but its *being-for-self* is confronted by its presupposition of a world having the form of *implicit* being, but a world whose indifferent *otherness* has for the self-certainty of the Notion the value merely of an *unessentiality*; it is thus the urge to sublate this otherness and to intuit in the object its identity with itself. This reflection-into-self is the sublated opposition, and the individuality which initially appears as the presupposed *implicit being* of a world is now *posited* as individuality and made actual for the subject; accordingly the reflection-into-self is the self-identity of the form restored out of the opposition — an identity that is therefore determined as indifferent to the form in its distinctiveness and is *content*.

§ 1700

This urge is therefore the urge to *truth* in so far as truth is in *cognition*, accordingly to truth in its proper sense as *theoretical* Idea. *Objective* truth is no doubt the Idea itself as the reality that corresponds to the Notion, and to this extent an object may or may not possess truth; but, on the other hand, the more precise meaning of truth is that it is truth *for* or *in* the subjective Notion, in *knowing*. It is the relation of the Notion judgment which showed itself to be the formal judgment of truth; in it, namely, the predicate is not merely the objectivity of the Notion, but the relating comparison of the Notion of the subject-matter with its actuality. This realisation of the Notion is *theoretical* in so far as the Notion, as *form*, has still the determination of subjectivity, or has still the determination for the subject of being its own determination. Because cognition is the Idea as end as subjective, the negation of the world presupposed as an *implicit being* is the *first* negation; therefore also the conclusion in which the objective is posited in the subjective, has at first only this meaning, that the *implicit being* is only *posited* in the form of subjectivity, or in the Notion determination, and for this reason is not, in that form, in and for itself. Thus the conclusion only attains to a *neutral unity* or a *synthesis*, that is, to a unity of things that are originally separate and only are externally so conjoined. Since therefore in this cognition the Notion posits the object as its *own*, the Idea in the first instance only gives itself a content whose basis is *given*, and in which only the form of externality has been sublated.

§ 1701

Accordingly, this cognition still retains its *finitude* in its realised end; in its realised end it has at the same time *not* attained its end, and *in its truth* has *not* yet arrived at *truth*. For in so far as in the result the content still has the character of a *datum*, the presupposed *implicit being* confronting the Notion is not sublated; equally therefore the unity of Notion and reality, truth, is also not contained in it. Oddly enough, it is this side of *finitude* that latterly has been clung to, and accepted as the *absolute* relation of cognition — as though the finite as such was supposed to be the absolute! At this standpoint, the object is credited with being an unknown *thing-in-itself behind cognition*, and this

character of the object, and with it truth too is regarded as an absolute *beyond* for cognition. In this view of cognition, thought determinations in general, the categories, reflective determinations, as well as the formal Notion and its moments are assigned the position of being finite determinations not in and for themselves, but finite in the sense that they are subjective in relation to this empty *thing-in-itself*, the fallacy of taking this untrue relation of cognition as the true relation has become the universal opinion of modern times.

§ 1702

From this determination of finite cognition it is immediately evident that it is a contradiction that sublates itself — the contradiction of a truth that at the same time is supposed not to be truth — of a cognition of what *is*, which at the same time does not cognise the thing-in-itself. In the collapse of this contradiction, its content, subjective cognition and the thing-in-itself, collapses, that is, proves itself an untruth. But cognition must, in the course of its own movement, resolve its finitude and with it its contradiction; this examination of it made by us is an external reflection; but cognition is itself the Notion, the Notion that is its own end and therefore through its realisation fulfils itself, and in this very fulfilment sublates its subjectivity and the presupposed implicit being. We have therefore to consider cognition in its own self in its positive activity. Since this Idea is, as we have seen, the urge of the Notion to realise itself *for itself*, its activity consists in determining the object, and by this determining to relate itself in the object identically to itself. The object is in general something simply determinable, and in the Idea it has this essential side of not being in and for itself opposed to the Notion. Because cognition is still finite, not speculative, cognition, the presupposed objectivity has not as yet for it the shape of something that is in its own self simply and solely the Notion and that contains nothing with a particularity of its own as against the latter.

§ 1703

But the fact that it counts as an implicit beyond, necessarily implies that its *determinability by the Notion* is a determination it possesses essentially; for *the Idea* is the Notion that exists for itself, is that which is absolutely infinite within itself, in which the object is *implicitly* sublated and the end is now solely to sublate it *explicitly*. Hence, though the object is presupposed by the Idea of cognition as possessing an *implicit being*, yet it is essentially in a relationship where the Idea, certain of itself and of the nullity of this opposition, comes to the realisation of its Notion in the object.

§ 1704

In the syllogism whereby the subjective Idea now unites itself with objectivity, the *first premise* is the same form of immediate seizure and relation of the Notion to the object that we saw in the relation of end. The determining activity of the Notion upon the object is an immediate *communication* of itself to the object and unresisted *pervasion* of the latter by the Notion. In this process the Notion remains in pure identity with itself; but this its immediate reflection-into-self has equally the determination of objective immediacy; that which *for the Notion* is its own determination, is equally a *being*, for it is the *first* negation of the presupposition. Therefore the posited determination ranks just as much as a presupposition that has been merely *found*, as an *apprehension* of a *datum*;

in fact the activity of the Notion here consists merely in being negative towards itself, restraining itself and making itself passive towards what confronts it, in order that the latter may be able to *show* itself, not as determined by the subject, but as it is in its own self.

§ 1705

Accordingly in this premise this cognition does not appear even as an *application* of logical determinations, but as an acceptance and apprehension of them just as given, and its activity appears to be restricted merely to the removal of a subjective obstacle, an external husk, from the subject-matter. This cognition is *analytic* cognition.

(a) Analytic Cognition

§ 1706

We sometimes find the difference between analytic and synthetic cognition stated in the form that one proceeds from the known to the unknown, the other from the unknown to the known. But if this distinction is closely examined, it will be difficult to discover in it a definite thought, much less a Notion.

§ 1707

It may be said that cognition begins in general with ignorance, for one does not learn to know something with which one is already acquainted. Conversely, it also begins with the known; this is a tautological proposition; that with which it begins, which therefore it actually cognises, is *ipso facto* something known; what is not as yet known and is to be known only later is still an unknown. So far, then, it must be said that cognition, once it has begun, always proceeds from the known to the unknown.

§ 1708

The distinguishing feature of analytic cognition is already defined in the fact that as the first premise of the whole syllogism, analytic cognition does not as yet contain mediation; it is the immediate communication of the Notion and does not as yet contain otherness, and in it the activity empties itself of its negativity. However, this immediacy of the relation is for that reason itself a mediation, for it is the negative relation of the Notion to the object, but a relation that annuls itself, thereby making itself simple and identical. This reflection-into-self is only subjective, because in its mediation the difference is present still only in the form of the presupposed *implicit* difference, as difference *of the object* within itself. The determination, therefore, brought about by this relation, is the form of simple *identity*, of *abstract universality*. Accordingly, analytic cognition has in general this identity for its principle; and transition into an other, the connection of different terms, is excluded from itself and from its activity.

§ 1709

If we look now more closely at analytic cognition, we see that it starts from a *presupposed*, and therefore individual, *concrete* subject matter; this may be an object already *complete in itself* for ordinary thought, or it may be a *problem*, that is to say, given only in its circumstances and conditions, but not yet disengaged from them and presented on its own account in simple self-

subsistence. Now the analysis of this subject matter cannot consist in its being merely *resolved* into the particular *picture thoughts* which it may contain; such a resolution and the apprehension of such picture thoughts is a business that would not belong to cognition, but would merely be a matter of a closer *acquaintance*, a determination within the sphere of *picture-thinking*. Since analysis is based on the Notion, its products are essentially Notion-determinations, and that too as determinations *immediately contained* in the subject matter.

§ 1710

We have seen from the nature of the Idea of cognition, that the activity of the subjective Notion must be regarded from one side merely as the *explication of what is already in the object*, because the object itself is nothing but the totality of the Notion. It is just as one-sided to represent analysis as though there were nothing in the subject matter that was not *imported* into it, as it is one-sided to suppose that the resulting determinations are merely *extracted* from it. The former view, as everyone knows, is enunciated by subjective idealism, which takes the activity of cognition in analysis to be merely a one-sided *positing*, beyond which the *thing-in-itself* remains concealed; the other view belongs to so-called realism which apprehends the subjective Notion as an empty Identity that *receives* the thought determinations into itself from *outside*. Analytic cognition, the transformation of the given material into logical determinations, has shown itself to be two things in one: a *positing* that no less immediately determines itself as a *presupposing*. Consequently, by virtue of the latter, the logical element may appear as something *already complete* in the object, just as by virtue of the former it may appear as the *product* of a merely subjective activity. But the two moments are not to be separated; the logical element in its abstract form into which analysis raises it, is of course only to be found in cognition, while conversely it is something not merely *posited*, but possessing *being in itself*.

§ 1711

Now since analytic cognition is the transformation indicated above, it does not pass through any further *middle term*; the determination is in so far *immediate* and has just this meaning, to be peculiar to the object and in itself to belong to it, and therefore to be apprehended from it without any subjective mediation. But further, cognition is supposed also to be a *progress*, an *explication of differences*. But because, in accordance with the determination it has here, it is Notion-less and undialectical, it possesses only a *given difference*, and its progress takes place solely in the determinations of the *material*. It seems to have an *immanent* progress only in so far as the derived thought determinations can be analysed afresh, in so far as they are a concrete; the highest and ultimate point of this process of analysis is the abstract highest essence, or abstract subjective identity — and over against it, diversity.

§ 1712

This progress is, however, nothing but the mere repetition of the one original act of analysis, namely, the fresh determination as a *concrete*, of what has already been taken up into the abstract form of the Notion; this is followed by the analysis of it, then by the determination afresh as a concrete of the abstract that

emerges from it, and so forth. But the thought determinations seem also to contain a transition within themselves. If the object is determined as a whole, then of course one advances from this to the *other* determination of *part*, from *cause* to the other determination of *effect*, and so on. But here this is no advance, since whole and part, cause and effect, are *relationships* and moreover, for this formal cognition, relationships *complete in themselves* such that in them one determination is *already found* essentially linked to the other. The subject matter that has been determined as *cause* or as *part* is *ipso facto* determined by the *whole* relationship, that is, determined already by both sides of it. Although the relationship is *in itself* something synthetic, yet for analytic cognition this connection is as much a mere *datum* as any other connection of its material and therefore is not relevant to its own peculiar business. Whether a connection of this kind be otherwise determined as *a priori* or *a posteriori* is here a matter of indifference, for it is apprehended as something *found already there*, or, as it has also been described, as a *fact* of consciousness that with the determination *whole* is linked the determination *part*, and so forth. While Kant has made the profound observation that there are synthetic *a priori* principles and has recognised their root in the unity of self-consciousness and therefore in the identity of the Notion with itself, yet he adopts the *specific* connection, the concepts of relation and the synthetic principles themselves *from formal logic* as *given*; their justification should have been the exposition of the transition of that simple unity of self-consciousness into these its determinations and distinctions, but Kant spared himself the trouble of demonstrating this genuinely synthetic progress — the self-producing Notion.

“Analytical Science”

§ 1713

It is a familiar fact that *arithmetic* and the more general *sciences of discrete magnitude* especially, are called *analytical science* and *analysis*. As a matter of fact, their method of cognition is immanently analytical in the highest degree and we shall briefly consider the basis of this fact. All other analytic cognition starts from a concrete material that in itself possesses a contingent manifoldness; on this material depends all distinction of content and progress to a further content.

§ 1714

The material of arithmetic and algebra, on the other hand, is something that has already been made wholly abstract and indeterminate and purged of all peculiarity of relationship, and to which, therefore, every determination and connection is something external. Such a material is the principle of discrete magnitude, the *one*. This relationless atom can be increased to a *plurality*, and externally determined and unified into a sum; this process of increasing and delimiting is an empty progression and determining that never gets beyond the same principle of the abstract one. How *numbers* are further combined and separated depends solely on the positing activity of the cognising subject. *Magnitude* is in general the category within which these determinations are made; it is the determinateness that has become an *indifferent* determinateness, so that the subject matter has no determinateness that might be immanent in it and therefore a *datum* for cognition. Cognition having first provided itself with

a contingent variety of numbers, these now constitute the material for further elaboration and manifold relationships. Such relationships, their discovery and elaboration, do not seem, it is true, to be anything immanent in analytic cognition, but something contingent and given; and these relationships and the operations connected with them, too, are usually presented *successively as different* without any observation of an inner connection. Yet it is easy to discover a guiding principle, and that is the immanent principle of analytic identity, which appears in the diverse as *equality*; progress consists in the reduction of the unequal to an ever greater equality. To give an example in the first elements, addition is the combining of quite contingently unequal numbers, multiplication, on the contrary, the combination of *equal* numbers; these again are followed by the relationship of *the equality of amount and unity*, and the relationship of powers makes its appearance.

§ 1715

Now because the determinateness of the subject matter and of the relationships is a *posited* one, the further operation with them is also wholly analytic, and the science of analysis possesses not so much *theorems as problems*. The analytical theorem contains the problem as already solved for it, and the altogether external difference attaching to the two sides equated by the theorem is so unessential that a theorem of this kind would appear as a trivial identity. Kant, it is true, has declared the proposition $5 + 7 = 12$, to be a *synthetic* proposition, because the same thing is presented on one side in the form of a plurality, 5 and 7, and on the other side in the form of a unity, 12. But if the analytic proposition is not to mean the completely abstract identity and tautology $12 = 12$ and is to contain any advance at all, it must present a difference of some kind, though a difference not based on any quality, on any determinateness of reflection, and still less of the Notion. $5 + 7$ and 12 are out and out the same content; the first side also expresses the *demand that* 5 and 7 shall be combined in one expression; that is to say, that just as 5 is the result of a counting up in which the counting was quite arbitrarily broken off and could just as well have been continued, so now, in the same way, the counting is to be continued with the condition that the ones to be added shall be seven. The 12 is therefore a result of 5 and 7 and of an operation which is already posited and in its nature is an act completely external and devoid of any thought, so that it can be performed even by a machine. Here there is not the slightest trace of a transition to an *other*; it is a mere continuation, that is, *repetition*, of the same operation that produced 5 and 7.

§ 1716

The *proof* of a theorem of this kind — and it would require a proof if it were a synthetic proposition — would consist merely in the operation of counting on from 5 for a further 7 ones and in discerning the agreement of the result of this counting with what is otherwise called 12, and which again is nothing else but just that process of counting up to a defined limit. Instead, therefore, of the form of theorem, the form of *problem* is directly chosen, the *demand* for the operation, that is to say, the expression of only *one* side of the equation that would constitute the theorem and whose other side is now to be found. The problem contains the content and states the specific operation that is to be undertaken with it. The operation is not restricted by any unyielding material

endowed with specific relationships, but is an external subjective act, whose determinations are accepted with indifference by the material in which they are posited. The entire difference between the conditions laid down in the problem and the result in the *solution*, is merely that the specific mode of union or separation indicated in the former is *actual* in the latter.

§ 1717

It is, therefore, an utterly superfluous bit of scaffolding to apply to these cases the form of geometrical method, which is relevant to synthetic propositions and to add to the *solution* of the problem a *proof* as well. The proof can express nothing but the tautology that the solution is correct because the operation set in the problem has been performed. If the problem is to add several numbers, then the solution is to add them; the proof shows that the solution is correct because the problem was to add, and addition has been carried out. If the problem contains more complex expressions and operations, say for instance, to multiply decimal numbers, and the solution indicates merely the mechanical procedure, a proof does indeed become necessary; but this proof can be nothing else but the analysis of those expressions and of the operation from which the solution proceeds of itself. By this separation of the *solution* as a mechanical procedure, and of the *proof* as a reference back to the nature of the subject matter to be treated, we lose what is precisely the advantage of the analytical problem, namely that *the construction* can be immediately deduced from the problem and can therefore be exhibited as *intelligible* in and for itself; put the other way, the construction is expressly given a defect peculiar to the synthetic method. In the higher analysis, where with the relationship of powers, we are dealing especially with relationships of discrete magnitude that are qualitative and dependent on Notion determinatenesses, the problems and theorems do of course contain synthetic expressions; there other expressions and relationships must be taken as intermediate terms besides those *immediately specified* by the problem or theorem. And, we may add, even these auxiliary terms must be of a kind to be grounded in the consideration and development of some side of the problem or theorem; the synthetic appearance comes solely from the fact that the problem or theorem does not itself already name this side. The problem, for example, of finding the sum of the powers of the roots of an equation is solved by the examination and subsequent connection of the functions which the coefficients of the equation are of the roots. The determination employed in the solution, namely, the functions of the coefficients and their connection, is not already expressed in the problem—for the rest, the development itself is wholly analytical. The same is true of the solution of the equation $x^{(m-1)} - 1 = 0$ with the help of the sine, and also of the immanent algebraic solution, discovered, as is well known, by Gauss, which takes into consideration the *residuum* of $x^{(m-1)} - 1$ divided by m , and the so-called primitive roots — one of the most important extensions of analysis in modern times. These solutions are synthetic because the terms employed to help, the sine or the consideration of the residua, are not terms of the problem itself.

§ 1718

The nature of the analysis that considers the so-called infinitesimal differences of variable magnitudes, the analysis of the differential and integral calculus, has been treated in greater detail in the *first* part of this *logic*. It was there shown

that there is here an underlying qualitative determination of magnitude which can be grasped only by means of the Notion. The transition to it from magnitude as such is no longer analytic; and therefore mathematics to this day has never succeeded in justifying by its own means, that is, mathematically, the operations that rest on that transition, because the transition is not of a mathematical nature. Leibnitz, who is given the credit of having reduced calculation with infinitesimal differences to a *calculus*, has, as was mentioned in the same place, made the transition in the most inadequate manner possible, a manner that is as completely unphilosophical as it is unmathematical; but once the transition is presupposed — and in the present state of the science it is no more than a presupposition — the further course is certainly only a series of ordinary operations.

§ 1719

It has been remarked that analysis becomes synthetic when it comes to deal with *determinations* that are no longer *posited* by the problems themselves. But the general transition from analytic to synthetic cognition lies in the necessary transition from the form of immediacy to mediation, from abstract identity to difference. Analytic cognition in its activity does not in general go beyond determinations that are self-related; but by virtue of their *determinateness* they are also essentially of such a nature that they *relate themselves to an other*. It has already been remarked that even when analytic cognition goes on to deal with relationships that are not externally give material but thought determinations, it still remains analytic, since for it even these relationships are *given* ones. But because abstract identity, which alone analytic cognition knows as its own, is essentially the *identity of distinct terms*, identity in this form too must belong to cognition and become for the subjective Notion also the *connection* that is posited by it and identical with it.

(b) Synthetic Cognition

§ 1720

Analytic cognition is the first premise of the whole syllogism — the *immediate* relation of the Notion to the object; *identity*, therefore, is the determination which it recognises as its own, and analytic cognition is merely the *apprehension* of what *is*. Synthetic cognition aims at the *comprehension* of what *is*, that is, at grasping the multiplicity of determinations in their unity. It is therefore the second premise of the syllogism in which the *diverse* as such is related. Hence its aim is in general *necessity*. The different terms which are connected, are on the one hand connected in a *relation*; in this relation they are related and at the same time mutually indifferent and self-subsistent, but on the other hand, they are linked together in the *Notion* which is their simple yet determinate unity. Now synthetic cognition passes over, in the first instance, *from abstract identity to relation*, or from *being to reflection*, and so far it is not the absolute reflection of the Notion that the Notion cognises in its subject matter. The reality it gives itself is the next stage, namely, the stated identity of the different terms as such, an identity therefore that is at the same time still *inner* and only necessity, not the subjective identity that is *for itself*; hence not yet the Notion as such. Synthetic cognition, therefore, has indeed the Notion determinations for its content, and the object is posited in them; but they only

stand in *relation* to one another, or are in *immediate* unity, and just for that reason, not in the unity by which the Notion exists as subject.

§ 1721

This constitutes the finitude of this cognition; because this real side of the Idea in it still possesses identity as an inner identity, its determinations are to themselves still *external*; because the identity is not in the form of subjectivity, the Notion's own pervasion of the object still lacks *individuality*; what corresponds to the Notion in the object is indeed no longer the abstract but the *determinate form* and therefore the *particularity* of the Notion, but the *individual* element in the object is still a *given* content. Consequently, although this cognition transforms the objective world into Notions, it gives it Notion-determinations only in respect of form, and must find the object in respect of its *individuality*, its specific determinateness; such cognition is not yet self-determining. Similarly, it finds propositions and laws, and proves their *necessity*, but not as a necessity of the subject matter in and for itself, that is, not from the Notion, but as a necessity of the cognition that works on given determinations, on the differences of the phenomenal aspect of the subject matter, and cognises *for itself* the proposition as a unity and relationship, or cognises the ground of phenomena from the *phenomena* themselves.

We have now to consider the detailed moments of synthetic cognition.

1. Definition

§ 1722

First, the still given objectivity is transformed into the simple and first form, hence into the form of the *Notion*. Accordingly the moments of this apprehension are none other than the moments of the Notion, *universality*, *particularity* and *individuality*. The *individual* is the object itself as an *immediate representation*, that which is to be defined. The universality of the object of definition we have found in the determination of the objective judgment or judgment of necessity to be the *genus*, and indeed the *proximate* genus; that is to say, the universal with this determinateness that is at the same time a principle for the differentiation of the particular. This difference the object possesses in the *specific difference*, which makes it the determinate species it is and is the basis of its disjunction from the remaining species.

§ 1723

Definition, in thus reducing the subject matter to its *Notion*, strips it of its externalities which are requisite for its concrete existence; it abstracts from what accrues to the Notion in its realisation, whereby it emerges first into Idea, and secondly into external existence. *Description* is for *representation*, and takes in this further content that belongs to reality. But definition reduces this wealth of the manifold determinations of intuited existence to the simplest moments; the form of these simple elements, and how they are determined relatively to one another, is contained in the Notion. The subject matter is thus, as we have stated, grasped as a universal that is at the same time essentially determinate. The subject matter itself is the third factor, the individual, in which the genus and the particularisation are posited in one; it is an *immediate* that is posited *outside* the Notion, since the latter is not yet self-determining.

§ 1724

In the said moments, which are the form-difference of definition, the Notion finds itself and has in them the reality correspondent to it. But the reflection of the Notion-moments into themselves, which is individuality, is not yet contained in this reality, and therefore the object, in so far as it is in cognition, is not yet determined as subjective. Whereas, cognition on the contrary is subjective and has an external starting point, or it is subjective by reason of its external starting point in the individual. The content of the Notion is therefore a *datum* and contingent. Consequently, the concrete Notion itself is contingent in a twofold aspect: first it is contingent in respect of its content as such; secondly it is contingent which determinations of the content from among the manifold qualities that the object possesses in external existence are to be selected for the Notion and are to constitute its moments.

§ 1725

The latter point requires closer consideration. For since individuality, which is determined in and for itself, lies outside the Notion-determination peculiar to synthetic cognition there is no principle available for determining which sides of the subject matter are to be regarded as belonging to its Notion-determination and which merely to the external reality. This constitutes a difficulty in the case of definitions, a difficulty that for synthetic cognition cannot be overcome. Yet here a distinction must be made. In the first place, the definition of products of self-conscious purposiveness is easily discovered; for the end that they are to serve is a determination created out of the subjective resolve and constituting the essential particularisation, the form of the concrete existent thing, which is here the sole concern. Apart from this, the nature of its material and its other external properties, in so far as they correspond to the end, are contained in its determination; the rest are unessential for it.

§ 1726

Secondly, geometrical objects are abstract determinations of space; the underlying abstraction, so-called absolute space, has lost all further concrete determinations and now too possesses only such shapes and configurations as are posited in it. These objects therefore are only what they are *meant* to be; their Notion determination in general, and more precisely the specific difference, possesses in them its simple unhindered reality. To this extent, they resemble the products of external purposiveness, and they also agree with the subject matter of arithmetic in which likewise the underlying determination is only that which has been posited in it. True, space has still further determinations: its *three-dimensionality*, its continuity and divisibility, which are not first posited in it by external determination. But these belong to the accepted material and are immediate presuppositions; it is only the combination and entanglement of the former subjective determinations with this peculiar nature of the domain into which they have been imported that produces synthetic relationships and laws. In the case of numerical determinations, since they are based on the simple principle of the One, their combination and any further determination is simply and solely a positedness; on the other hand, determinations in space, which is explicitly a continuous *mutual externality*, run a further course of their

own and possess a reality distinct from their Notion; but this no longer belongs to the immediate definition.

§ 1727

But, thirdly, in the case of definitions of *concrete* objects of Nature as well as of spirit, the position is quite different. In general such objects are, for representation, *things of many properties*. Here, what we have to do in the first instance is to apprehend what is their proximate genus, and then, what is their specific difference. We have therefore to determine which of the many properties belong to the object as genus, and which as species, and further which among these properties is the essential one; this last point involves the necessity of ascertaining their interrelationship, whether one is already posited with the other. But for this purpose there is so far no other criterion to hand than *existence* itself. The essentiality of the property for the purpose of the definition, in which it is to be posited as a simple, undeveloped determinateness, is its universality. But in existence universality is merely empirical. It may be universality in time - whether the property in question is lasting, while the others show themselves transitory in the subsistence of the whole; or it may be a universality resulting from comparison with other concrete wholes and in that case it goes no further than community. Now if comparison indicates as the common basis the total *habitus* as empirically presented, reflection has to bring this together into a simple thought determination and to grasp the simple character of such a totality. But the only possible attestation that a thought determination, or a single one of the immediate properties, constitutes the simple and specific essence of the object, is the *derivation* of such a determination from the concrete properties of the subject matter. But this would demand an analysis transforming the immediate properties into thoughts and reducing what is concrete to something simple. Such an analysis, however, would be higher than the one already considered; for it could not be abstractive, but would have to preserve in the universal what is specific in the concrete, unify it and show it to be dependent on the simple thought determination.

§ 1728

The relations of the manifold determinations of immediate existence to the simple Notion would however be theorems requiring proof. But definition is the first, still undeveloped Notion; therefore, when it has to apprehend the simple determinateness of the subject matter, which apprehension has to be something immediate, it can only employ for the purpose one of *its immediate* so-called properties - a determination of sensuous existence or representation. The isolation, then, of this property by abstraction, constitutes simplicity, and for universality and essentiality the Notion has to fall back onto empirical universality, the persistence in altered circumstances, and the reflection that seeks the Notion-determination in external existence and in picture thinking, that is, seeks it where it is not to be found. Definition, therefore, automatically renounces the Notion-determinations proper, which would be essentially principles of the subject matter, and contents itself with *marks*, that is, determinations in *which essentiality* for the object itself is a matter of indifference, and which are intended merely to be *distinguishing* marks for an external reflection. A single, external determinateness of this kind is too inadequate to the concrete totality and to the nature of its Notion, to justify its

selection for its own sake, nor could it be taken for the true expression and determination of a concrete whole. According to Blumenbach's observation, for example, the lobe of the ear is absent in all other animals, and therefore in the usual phraseology of common and distinguishing marks it could quite properly be used as the distinctive characteristic in the definition of physical man. But how inadequate such a completely external determination at once appears when compared with the conception of the total *habitus* of physical man, and with the demand that the Notion determination shall be something essential! It is quite contingent whether the marks adopted in the definition are pure makeshifts like this, or on the other hand approximate more to the nature of a principle. It is also to be observed that, on account of their externality, they have not been the starting point in the cognition of the Notion of the object; on the contrary, an obscure feeling, an indefinite but deeper sense, an inkling of what is essential, has preceded the discovery of the genera in nature and in spirit, and only afterwards has a specific externality been sought to satisfy the understanding. In existence the Notion has entered into externality and is accordingly explicated into its differences and cannot be attached simply to a single one of such properties. The properties, as the externality of the thing, are external to themselves; that is why, as we pointed out in the sphere of Appearance when dealing with the thing of many properties, properties essentially become even self-subsistent matters; spirit, regarded from the same standpoint of Appearance, becomes an aggregate of a number of self-subsistent forces. Through this standpoint, the single property or force, even where it is posited as indifferent to the others, ceases to be a characterising principle, with the result that the determinateness, as determinateness of the Notion, vanishes altogether.

§ 1729

Into concrete things, along with the diversity of the properties among themselves, there enters also the difference between the *Notion* and its *actualisation*. The Notion in nature and in spirit has an external presentation in which its determinateness shows itself as dependence on the external, as transitoriness and inadequacy. Therefore, although any actual thing no doubt shows in itself what it *ought* to be, yet in accordance with the negative judgment of the Notion it may equally show that its actuality only imperfectly corresponds to this Notion, that it is *bad*. Now the definition is supposed to indicate the determinateness of the Notion in an immediate property; yet there is no property against which an instance cannot be brought in which the total *habitus*, though it enables one to discern the concrete thing to be defined, yet the property taken as its characteristic shows itself immature or stunted. In a bad plant, a poor specimen of an animal, a contemptible human being, a bad state, aspects of its concrete existence are defective or entirely obliterated that otherwise might have been adopted for the definition as the distinguishing mark and essential determinateness in the existence of such a concrete. But for all that, a bad plant or a bad animal, etc., still remains a plant or an animal. If, therefore, bad specimens too are to be covered by the definition, then all the properties that we wanted to regard as essential elude us through instances of malformations in which those properties are lacking. Thus for example the essentiality of the brain for physical man is contradicted by the instance of acephalous individuals, the essentiality of the protection of life and property for

the state, by the instance of despotic states and tyrannous governments. If the Notion is asserted against such an instance and the instance, being measured by the Notion, is declared to be a bad specimen, then the Notion is no longer attested by phenomena. But the self-subsistence of the Notion is contrary to the meaning of definition; for definition is supposed to be the *immediate* Notion, and therefore can only draw on the immediacy of existence for its determinations for objects, and can justify itself only in what it finds already to hand. Whether its content is *in-and-for itself* truth or a contingency, this lies outside its sphere; but formal truth, the agreement between the Notion subjectively posited in the definition and an actual object outside it, cannot be established because the individual object may also be a bad specimen.

§ 1730

The content of definition is in general taken from immediate existence, and being an immediate content has no justification; the question of its necessity is precluded by its origin; in enunciating the Notion as a mere immediate, the definition refrains from comprehending the Notion itself. Hence it represents nothing but the form determination of the Notion in a given content, without the reflection of the Notion into itself, that is, *without the Notion's being-for-self*.

§ 1731

But immediacy in general proceeds only from mediation, and must therefore pass over into mediation. Or, in other words, the determinateness of the content contained in the definition, because it is determinateness, is not merely an immediate, but is mediated by its opposite; consequently definition can apprehend its subject matter only through the opposite determination and must therefore pass over into *division*.

Division

§ 1732

The universal must *particularise* itself; so far, the necessity for division lies in the universal. But since definition itself already begins with the particular, its necessity for passing over into division lies in the particular, that by itself points to another particular. Conversely, it is precisely in the act of holding fast to the determinateness in the need to distinguish it from its other, that the particular separates itself off from the universal; consequently the universal is *presupposed* for division. The procedure is, therefore, that the individual content of cognition ascends through particularity to the extreme of universality; but now the latter must be regarded as the objective basis, and with this as the starting point, division presents itself as disjunction of the universal as the *prius*.

§ 1733

This has introduced a transition which, since it takes place from the universal to the particular, is determined by the form of the Notion. Definition by itself is something individual; a plurality of definitions goes with the plurality of objects. The progress, proper to the Notion, from universal to particular, is the basis and the possibility of a *synthetic science*, of a *system* and of *systematic cognition*.

§ 1734

The first requisite for this is, as we have shown, that the beginning be made with the subject matter in the form of a *universal*. In the sphere of actuality, whether of nature or spirit, it is the concrete individuality that is given to subjective, natural cognition as the *prius*; but in cognition that is a *comprehension*, at least to the extent that it has the form of the Notion for basis, the *prius* must be on the contrary something *simple*, something *abstracted* from the concrete, because in this form alone has the subject-matter the form of the self-related universal or of an immediate based on the Notion.

§ 1735

It might perhaps be objected to this procedure in the scientific sphere that, because intuition is easier than cognition, the object of intuition, that is, concrete actuality, should be made the beginning of science, and that this procedure is more *natural* than that which proceeds in the opposite direction to its particularisation and concrete individualisation. But the fact that the aim is *to cognise*, implies that the question of a comparison with *intuition* is already settled and done with; there can only be a question of what is to be the first and what is to be the nature of the sequel *within the process of cognition*; it is no longer a *natural* method, but a method appropriate to *cognition* that is demanded. If it is merely a question of *easiness*, then it is self-evident besides, that it is easier for cognition to grasp the abstract simple thought determination than the concrete subject matter, which is a manifold connection of such thought determinations and their relationships; and it is in this manner that we have now to apprehend the concrete, and not as it is in intuition. The *universal* is in and for itself the first moment of the Notion because it is the *simple* moment, and the particular is only subsequent to it because it is the mediated moment; and conversely the *simple* is the more universal, and the concrete, as in itself differentiated and so mediated, is that which already presupposes the transition from a first. This remark applies not only to the order of procedure in the specific forms of definitions, divisions, and propositions, but also to the order of cognition as a whole and simply with respect to the difference of abstract and concrete in general. Hence in learning to read, for example, the rational way is not to begin with reading of whole words or even syllables, but with *elements* of the words and syllables, and the signs of *abstract* sounds: in written characters, the analysis of the concrete word into its abstract sounds and their signs is already accomplished; for this very reason, the process of learning to read is a primary occupation with abstract objects. In *geometry*, a beginning has to be made not with a concrete spatial figure but with the point and the line, and then plane figures, and among the latter not with polygons, but with the triangle, and among curves, with the circle.

§ 1736

In *physics* the individual natural properties or matters have to be freed from their manifold complications in which they are found in concrete actuality, and presented with their simple necessary conditions; they too, like spatial figures, are objects of intuition; but first the way for their intuition must be prepared so that they appear and are maintained free from all modifications by circumstances extraneous to their own specific character. Magnetism, electricity,

the various gases, and so forth, are objects the specific character of which is ascertained by cognition only by apprehending them in isolation from the concrete conditions in which they appear in the actual world, Experiment, it is true, presents them to intuition in a concrete case; but for one thing experiment must, in order to be scientific, take only the conditions necessary for the purpose; and for another, it must multiply itself in order to show that the inseparable concretisation of these conditions is unessential, and this it does by exhibiting the things in another concrete shape and again in another, so that for cognition nothing remains but their abstract form.

§ 1737

To mention one more example, it might seem natural and intelligent to consider colour first, in the concrete manifestation of the animal's subjective sense, next, as a spectral phenomenon suspended outside the subject, and finally as fixed in objects in the actual external world. But for cognition, the universal and therefore truly primary form is the middle one of the above-named, in which colour hovers between subjectivity and objectivity as the familiar spectrum, completely unentangled as yet with subjective and objective circumstances. The latter above all merely disturb the pure consideration of the nature of this subject matter because they behave as active causes and therefore make it uncertain whether the specific alterations, transitions, and relationships of colour are founded in its own specific nature, or are rather to be attributed to the pathological specific constitution of those circumstances, to the healthy and the morbid particular affections and effects of the organs of the subject, or to the chemical, vegetable, and animal forces of the objects. Numerous other examples might be adduced from the cognition of organic nature and of the world of spirit; everywhere the abstract must constitute the starting point and the element in which and from which spread the particularities and rich formations of the concrete.

§ 1738

Now although the difference of the particular from the universal makes its appearance, strictly speaking, with division or the particular this universal is itself already determinate and consequently only a member of a division. Hence there is for it a higher universal, and for this again a higher, and so on, in the first instance, to infinity. For the cognition here considered there is no immanent limit, since it starts from the *given*, and the form of abstract universality is characteristic of its *prius*. Therefore any subject matter whatever that seems to possess an elementary universality is made the subject matter of a specific science, and is an absolute beginning to the extent that *ordinary thought is presupposed* to be acquainted with it and it is taken on its own account as requiring no derivation. Definition takes it as immediate.

§ 1739

The next step forward from this starting point is *division*. For this progress, only an immanent principle would be required, that is, a beginning from the universal and the Notion; but the cognition here considered lacks such a principle, for it only pursues the form determination of the Notion without its reflection-into-self, and therefore takes the determinateness of the content from what is given. For the particular that makes its appearance in division, there is

no ground of its own available, either in regard to what is to constitute the basis of the division, or in regard to the specific relationship that the members of the disjunction are to have to one another. Consequently in this respect the business of cognition can only consist, partly, in setting in order the particular elements discovered in the empirical material, and partly, in finding the universal determinations of that particularity by comparison. These determinations are then accepted as grounds of division, and there may be a multiplicity of such grounds, as also a similar multiplicity of divisions based on them. The relationship between the members, the species, of a division, has only this general determination, that they are determined relatively to one another *in accordance with the assumed ground of division*; if their difference rested on a different consideration, they would not be coordinated on the same level with one another.

§ 1740

Because a principle of self-determination is lacking, the laws for this business of division can only consist of formal, empty rules that lead to nothing. Thus we see it laid down as a rule that division shall *exhaust* the notion; but as a matter of fact each individual member of the division must exhaust *the notion*. It is, however, really the *determinateness* of the notion that one means should be exhausted; but with the empirical multiplicity of species devoid of any immanent determination, it contributes nothing to the exhaustion of the notion whether more or fewer are found to exist; whether, for example, in addition to the sixty-seven species of parrots another dozen are found is for the exhaustion of the genus a matter of indifference. The demand for exhaustion can only mean the tautological proposition that all the species shall be presented in their *completeness*. Now with the extension of empirical knowledge it may very well happen that species are found which do not fit in with the adopted definition of the genus; for frequently the definition is adopted more on the basis of a vague conception of the entire *habitus*, rather than in accordance with a more or less individual mark that is expressly meant to serve for its definition. In such a case the genus would have to be modified and a justification would have to be found for regarding some other number of species as species of a new genus; in other words, the genus would be defined by what we group together in accordance with some principle or other that we choose to adopt as unity; and in this case the principle itself would be the basis of division. Conversely, if we hold to the determinateness originally adopted as characteristic of the genus, that material which we wished to group, as species, in a unity with the earlier species would be excluded. This unsystematic procedure, which sometimes adopts a determinateness as essential moment of the genus and then either subordinates the particulars to it or excludes them from it, and sometimes starts with the particular and in grouping it lets itself again be guided by some other determinateness, gives the appearance of the play of a caprice to which it is left to decide which part or which side of the concrete it will fix on and use as its principle of arrangement. Physical nature presents of itself such a contingency in the principles of division. By reason of its dependent external actuality it stands in a complex connectedness that for it likewise is given; accordingly there exists a crowd of principles to which it has to conform, and therefore in one series of its forms follows one principle, and in other series other principles, as

well as producing hybrids that belong at the same time to different sides of the division. Thus it happens that in one series of natural objects marks stand out as very characteristic and essential that in others become inconspicuous and purposeless, so that it becomes impossible to adhere to a principle of division of this kind.

§ 1741

The general *determinateness* of empirical species can only consist in their being simply *different* from one another without being opposed. The *disjunction* of the *Notion* has been exhibited at an earlier stage in its determinateness; when particularity is assumed as immediate and given and without the negative unity of the *Notion*, the difference remains only at the stage of diversity as such, a form of reflection that we considered earlier. The externality in which the *Notion* chiefly exists in Nature brings with it the complete indifference of the difference; consequently, a frequent determination for division is taken from *number*.

§ 1742

Such is the contingency here of the particular in face of the universal and therefore of division generally, that it may be attributed to an *instinct* of reason when we find in this cognition grounds of division and divisions that, so far as sensuous properties permit, show themselves to be more adequate to the *Notion*. For example, in the case of animals, the instruments of eating, the teeth and claws, are employed in systems of classification as a broad radical ground of division; they are taken, in the first instance, merely as aspects in which the distinguishing marks for the subjective purposes of cognition can be more easily indicated. But as a matter of fact these organs do not merely imply a differentiation belonging to external reflection, but they are the vital point of animal individuality where it posits itself as a self-related individuality distinct from its other, from the nature that is external to it, and as an individuality that withdraws itself from continuity with the other. In the case of the *plant*, the fertilising organs constitute the highest point of vegetable life, by which the plant points to the transition into sex difference, and thereby into individual individuality. The system of botany has therefore rightly turned to this point for a principle of division that, if not adequate is far-reaching, and has thereby taken as its basis a determinateness that is not merely a determinateness for external reflection for purposes of comparison, but is in and for itself the highest of which the plant is capable.

3. The Theorem

§ 1743

1. The stage of this cognition that advances on the basis of the *Notion*-determinations is the transition of particularity into individuality; this constitutes the content of the *theorem*. What we have to consider here, then, is the *self-related determinateness*, the immanent difference of the object and the relation of the differentiated determinatenesses to one another. Definition contains only *one determinateness*, division contains determinateness in *relation to others*; in individualisation the object has gone asunder within itself. Whereas definition stops short at the general concept, in theorems, on the

contrary, the object is cognised in its reality, in the conditions and forms of its real existence. Hence, in conjunction with definition, it represents the *Idea*, which is the unity of the Notion and reality. But the cognition here under consideration, which is still occupied in seeking, does not attain to this presentation in so far as the reality it deals with does not proceed from the Notion, and therefore the dependence of reality on the Notion and consequently the unity itself is not cognised.

§ 1744

Now the theorem, according to the stated definition, is the genuinely *synthetic* aspect of an object in so far as the relationships of its determinatenesses are *necessary*, that is, are founded in the *inner identity* of the Notion. The synthetic element in definition and division is an externally adopted connection; what is found given is brought into the form of the Notion, but, as given, the entire content is merely *presented* [*monstriert*], whereas the theorem has to be *demonstrated*. As this cognition *does not deduce* the content of its definitions and the principles of its divisions, it seems as if it might spare itself the trouble of *proving* the relationships expressed by theorems and content itself in this respect, too, with observation. But what distinguishes cognition from mere observation and representation is the *form of the Notion* as such that cognition imparts to the content; this is achieved in definition and division: but as the content of the theorem comes from the Notion's moment of *individuality*, it consists in determinations of reality that no longer have for their relationship the simple and immediate determinations of the Notion; in individuality the Notion has passed over into *otherness*, into the reality whereby it becomes *Idea*. Thus the synthesis contained in the theorem no longer has the form of the Notion for its justification; it is a connection of [merely] *diverse* terms. Consequently the unity not yet posited with it has still to be demonstrated, and therefore proof becomes necessary even to this cognition.

§ 1745

Now here we are confronted first of all by the difficulty of *clearly distinguishing* which of the *determinations* of the *subject matter* may be admitted *into the definitions* and which are to be relegated to the *theorems*. On this point there cannot be any principle ready to hand; such a principle seems, perhaps, to be implied in the fact that what immediately belongs to an object appertains to the definition, whereas the rest, since it is mediated, must wait for its mediation to be demonstrated. But the content of definition is in general a determinate one, and therefore is itself essentially a mediated content; it has only a *subjective* immediacy, that is, the subject makes an arbitrary beginning and accepts a subject matter as presupposition. Now since this subject-matter is in general concrete within itself and must also be divided, the result is a number of determinations that are by their nature mediated, and are accepted not on the basis of any principle, but merely subjectively as immediate and unproved. Even in Euclid, who has always been justly recognised as the master in this synthetic kind of cognition, we find under the name of *axiom* a *presupposition* about *parallel lines* which has been thought to stand in need of proof, and various attempts to supply this want have been made. In several other theorems, people have thought that they had discovered presuppositions which should not have been immediately assumed but ought to have been proved. As regards the axiom

concerning parallel lines, it may be remarked that it is precisely there that we may discern the sound sense of Euclid, who had appreciated exactly the element as well as the nature of his science. The proof of the said axiom would have had to be derived from the *notion* of parallel lines; but a proof of that kind is no more part of his science than is the deduction of his definitions, axioms and in general his subject matter, space itself and its immediate determinations, the three dimensions. Such a deduction can only be drawn from the Notion, and this lies outside the peculiar domain of Euclid's science; these are therefore necessarily *presuppositions* for it, relative firsts.

Axioms

§ 1746

Axioms, to take this opportunity of mentioning them, belong to the same class. They are commonly but incorrectly taken as absolute firsts, as though in and for themselves they required no proof. Were this in fact the case, they would be mere tautologies, as it is only in abstract identity that no difference is present, and therefore no mediation required. If, however, axioms are more than tautologies, they are *propositions* from some *other science*, since for the science they serve as axioms they are meant to be presuppositions. Hence they are, strictly speaking, *theorems*, and theorems taken mostly from logic. The axioms of geometry are lemmata of this kind, logical propositions, which moreover approximate to tautologies because they are only concerned with magnitude and therefore qualitative differences are extinguished in them; the chief axiom, the purely quantitative syllogism, has been discussed above. Axioms, therefore, considered in and for themselves, require proof as much as definitions and divisions, and the only reason they are not made into theorems is that, as relatively first for a certain standpoint, they are assumed as presuppositions.

§ 1747

As regards the *content of theorems*, we must now make a more precise distinction. As the content consists in a *relation between determinatenesses* of the Notion's reality, these relations may be more or less incomplete and single relationships of the subject matter, or else may be a relationship embracing the *entire content* of the reality and expressing the determinate relation of that content. But the *unity of the complete determinatenesses of the content* is equivalent to the Notion; consequently a proposition that contains them is itself again a definition, but a definition that expresses not merely the immediately assumed Notion, but the Notion developed into its determinate real differences, or the complete existence of the Notion. The two together, therefore, present the *Idea*.

§ 1748

If we compare closely the theorems of a synthetic science, especially of *geometry*, we shall find this difference, that some of its theorems involve only single relationships of the subject matter, while others involve relationships in which the complete determinateness of the subject matter is expressed. It is a very superficial view that assigns equal importance to all the propositions on the ground that in general each contains a truth and is equally essential in the formal progress, in the context, of the proof. The difference in respect of the content of theorems is most intimately connected with this progress itself; some

further remarks on the latter will serve to elucidate in more detail this difference as well as the nature of synthetic cognition. To begin with, Euclidean geometry - which as representative of the synthetic method, of which it furnishes the most perfect specimen, shall serve us as example - has always been extolled for the ordered arrangement in the sequence of the theorems, by which for each theorem the propositions requisite for its construction and proof are always found already proved. This circumstance concerns formal consecutiveness; yet, important as it is, it is still rather a matter of an external arrangement for the purpose of the matter in hand and has on its own account no relation to the essential difference of Notion and Idea in which lies a higher principle of the necessity of the progress. That is to say, the definitions with which we begin, apprehend the sensuous object as immediately given and determine it according to its proximate genus and specific difference; these are likewise the simple, *immediate* determinatenesses of the Notion, universality and particularity, whose relationship is no further developed. Now the initial theorems themselves can only make use of immediate determinations such as are contained in the definitions; similarly their reciprocal *dependence*, in the first instance, can only relate to this general point, that one is simply *determined* by the other. Thus Euclid's first propositions about triangles deal only with *congruence*, that is, *how many* parts in a triangle *must be determined*, in order that the *remaining* parts of one and the same triangle, or the whole of it, shall be *altogether determined*. The comparison of two triangles with one another, and the basing of congruence on *coincidence* is a detour necessary to a method that is forced to employ *sensuous coincidence* instead of the *thought*, namely, the *determinateness* of the triangles.

§ 1749

Considered by themselves apart from this method, these theorems themselves contain two parts, one of which may be regarded as the *Notion*, and the other as the *reality*, as the element that completes the former into reality. That is to say, whatever completely determines a triangle, for example two sides and the included angle, is already the whole triangle for the *understanding*; nothing further is required for its complete determinateness; the remaining two angles and the third side are the superfluity of reality over the determinateness of the Notion. Accordingly what these theorems really do is to reduce the sensuous triangle, which of course requires three sides and three angles, to its simplest conditions. The definition had mentioned only the three lines in general that enclose the plane figure and make it a triangle; it is a theorem that first expresses the fact that the angle is *determined* by the determination of the sides, just as the remaining theorems contain dependence of three other parts on three others. But the complete immanent determinateness of the magnitude of a triangle in terms of its sides is contained in the theorem of Pythagoras; here we have first the *equation* of the sides of the triangle, for in the preceding propositions the sides are in general only brought into a *reciprocal determinateness* of the parts of the triangle, not into an *equation*. This proposition is therefore the perfect, *real definition* of the triangle, that is, of the right-angled triangle in the first instance, the triangle that is simplest in its differences and therefore the most regular. Euclid closes the first book with this proposition, for in it a perfect determinateness is achieved. So, too, in the

second book, after reducing to the uniform type those triangles which are not right-angles and are affected with greater inequality, he concludes with the reduction of the rectangle to the square - with an equation between the self-equal, or the square, and that which is in its own self unequal, or the rectangle; similarly in the theorem of Pythagoras, the hypotenuse, which corresponds to the right-angle, to the self-equal, constitutes one side of the equation, while the other is constituted by the self-unequal, the two remaining sides. The above equation between the square and the rectangle is the basis of the *second* definition of the circle - which again is the theorem of Pythagoras, except that here the two sides forming the right-angle are taken as variable magnitudes. The first equation of the circle is in precisely that relationship of *sensuous* determinateness to *equation* that holds between the two different definitions of conic sections in general.

§ 1750

This genuine synthetic advance is a transition from *universality to individuality*, that is, *to that which is determined in and for itself*, or to the unity of the subject matter *within itself*, where the subject matter has been sundered and differentiated into its essential real determinatenesses. But in the other sciences, the usual and quite imperfect advance is commonly on the following lines; the beginning is, indeed, made with a universal, but its *individualisation* and concretion is merely an *application* of the universal to a material introduced from elsewhere; in this way, the really *individual* element of the Idea is an *empirical* addition.

§ 1751

Now however complete or incomplete the content of the theorem may be, it must be *proved*. It is a relationship of real determinations that do not have the relationship of Notion-determinations; if they do have this relation, and it can be shown that they do in the propositions that we have called the *second* or *real definitions*, then first, such propositions are for that very reason definitions; but secondly, because their content at the same time consists not merely in the relationship of a universal and the simple determinateness, but also in relationships of real determinations, in comparison with such first definition, they do require and permit of proof. As real determinatenesses they have the form of *indifferent subsistence and diversity*; hence they are not immediately one and therefore their mediation must be demonstrated. The immediate unity in the first definition is that unity in accordance with which the particular is in the universal.

§ 1752

2. Now the *mediation*, which we have next to consider in detail, may be simple or may pass through several mediations. The mediating members are connected with those to be mediated; but in this cognition, since mediation and theorem are not derived from the Notion, to which transition into an opposite is altogether alien, the mediating determinations, in the absence of any concept of connection, must be imported from somewhere or other as a preliminary material for the framework of the proof. This preparatory procedure is the *construction*.

§ 1753

Among the relations of the content of the theorem, which relations may be very varied, only those now must be adduced and demonstrated which serve the proof. This provision of material only comes to have meaning in the proof; in itself it appears blind and unmeaning. Subsequently, we see of course that it served the purpose of the proof to draw, for example, such further lines in the geometrical figure as the construction specifies; but during the construction itself we must blindly obey; on its own account, therefore, this operation is unintelligent, since the end that directs it is not yet expressed. It is a matter of indifference whether the construction is carried out for the purpose of a theorem proper or a problem; such as it appears in the first instance *before* the proof, it is something not derived from the determination given in the theorem or problem, and is therefore a meaningless act for anyone who does not know the end it serves, and in any case an act directed by an external end.

§ 1754

This meaning of the construction which at first is still concealed comes to light in the *proof*. As stated, the proof contains the mediation of what the theorem enunciates as connected; through this mediation this connection first *appears as necessary*. Just as the construction by itself lacks the subjectivity of the Notion, so the proof is a subjective act lacking objectivity. That is to say, because the content determinations of the theorem are not at the same time posited as Notion-determinations but as given *indifferent parts* standing in various external relationships to one another, it is only the *formal, external* Notion in which the necessity manifests itself. The proof is not a *genesis* of the relationship that constitutes the content of the theorem; the necessity exists only for intelligence, and the whole proof is in the *subjective interests of cognition*. It is therefore an altogether *external* reflection that *proceeds from without inwards*, that is, infers from external circumstances the inner constitution of the relationship. The circumstances that the construction has presented, are a *consequence* of the nature of the subject matter; here, conversely, they are made the *ground* and *the mediating* relationships. Consequently the middle term, the third, in which the terms united in the theorem present themselves in their unity and which furnishes the nerve of the proof, is only something in which this connection *appears* and is *external*. Because the *sequence* that this process of proof pursues is really the reverse of the nature of the fact, what is regarded as *ground* in it is a subjective ground, the nature of the fact emerging from it only for cognition.

§ 1755

The foregoing considerations make clear the necessary limit of this cognition, which has very often been misunderstood. The shining example of the synthetic method is the science of *geometry* - but it has been inaptly applied to other sciences as well, even to philosophy. Geometry is a science of *magnitude*, and therefore formal reasoning is most appropriate to it; it treats of the merely quantitative determination and abstracts from the qualitative, and can therefore confine itself to *formal identity*, to the unity that lacks the Notion, which is *equality* and which belongs to the external abstractive reflection. Its subject matter, the determinations of space, are already such abstract subject matter,

prepared for the purpose of having a completely finite external determinateness. This science, on account of its abstract subject matter, on the one hand, has this element of the sublime about it, that in these empty silent spaces colour is blotted out and the other sensuous properties have vanished, and further, that in it every other interest that appeals more intimately to the living individuality is silenced. On the other hand, the abstract subject matter is still space, a non-sensuous sensuous; intuition is raised into its abstraction; space is a *form* of intuition, but is still intuition, and so sensuous, the *asunderness* of sensuousness itself, its pure *absence of Notion*. We have heard enough talk lately about the excellence of geometry from this aspect; the fact that it is based on sensuous intuition has been declared its supreme excellence and people have even imagined that this is the ground of its highly scientific character, and that its proofs rest on intuition. This shallow view must be countered by the plain reminder that no science is brought about by intuition, but only by *thinking*. The intuitive character of geometry that derives from its still sensuous material only gives it that evidential side that the *sensuous* as such possesses for unthinking spirit. It is therefore lamentable that this sensuousness of its material has been accounted an advantage, whereas it really indicates the inferiority of its standpoint. It is solely to the *abstraction* of its sensuous subject matter that it owes its capability of attaining a higher scientific character; and it is to this abstraction that it owes its great superiority over those collections of information that people are also pleased to call sciences, which have for their content the concrete perceptible material of sense, and only indicate by the order which they seek to introduce into it a remote inkling and hint of the requirements of the Notion.

§ 1756

It is only because the space of geometry is the abstraction and void of asunderness that it is possible for the figures to be inscribed in the indeterminateness of that space in such a manner that their determinations remain in fixed repose outside another and possess no immanent transition into an opposite. The science of these determinations is, accordingly, a simple science of the finite that is compared in respect of magnitude and whose unity is the external unity of *equality*. But at the same time the delineation of these figures starts from various aspects and principles and the various figures arise independently; accordingly, the comparison of them makes apparent also their *qualitative* unlikeness and *incommensurability*. This development impels geometry beyond the *finitude* in which it was advancing so methodically and surely to *infinity* to the positing of things as equal that are qualitatively different. Here it loses the evidential side that it possessed in its other aspect, where it is based on a stable finitude and is untouched by the Notion and its manifestation, the transition just mentioned. At this point the finite science has reached its limit; for the necessity and mediation of the synthetic method is no longer grounded merely in *positive* but in *negative identity*.

§ 1757

If then geometry, like algebra, with its abstract, non-dialectical [*bloss versandigen*] subject matter soon encounters its limit, it is evident from the very outset that the synthetic method is still more inadequate for *other sciences*, and most inadequate of all in the domain of philosophy. In regard to definition

and division we have already ascertained the relevant facts, and here only theorem and proof should remain to be discussed. But besides the presupposition of definition and division which already demands and presupposes proof, the inadequacy of this method consists further in the general *position* of definition and division in relation to theorems. This position is especially noteworthy in the case of the empirical sciences such as physics, for example, when they want to give themselves the form of synthetic sciences. The method is then as follows. The *reflective determinations* of particular *forces* or other inner and essence-like forms which result from the method of analysing experience and can be justified only as *results*, must be *placed in the forefront* in order that they may provide a general *foundation* that is subsequently *applied to the individual* and demonstrated in it. These general foundations having no support of their own, we are supposed for the time being to take them *for granted*; only when we come to the derived *consequences* do we notice that the latter constitute the real *ground* of those *foundations*.

§ 1758

The so-called *explanation* and the proof of the concrete brought into theorem turns out to be partly a tautology, partly a derangement of the true relationship, and further, too, a derangement that served to conceal the deception practised here by cognition, which has taken up empirical data one-sidedly, and only by doing so has been able to obtain its simple definitions and principles; and it obviates any empirical refutation by taking up and accepting as valid the data of experience, not in their concrete totality but in a particular instance, and that too, in the direction helpful to its hypotheses and theory. In this subordination of concrete experience to presupposed determinations, the foundation of the theory is obscured and is exhibited only from the side that is conformable to the theory; and in general the unprejudiced examination of concrete observations on their own is made more difficult. Only by turning the entire process upside down does the whole thing get its right relationship in which the connection of grounds and consequent, and the correctness of the transformation of perception into thought can be surveyed. Hence one of the chief difficulties in the study of such sciences is *to effect an entrance into them*; and this can only be done if the presuppositions are *blindly taken for granted*, and straightway, without being able to form any Notion of them, in fact with barely a definite representation but at most a confused picture in the imagination, to impress upon one's memory for the time being the determinations of the assumed forces and matters, and their hypothetical formations, directions and rotations. If, in order to accept these presuppositions as valid, we demand their necessity and their Notion, we cannot get beyond the starting point.

§ 1759

We had occasion above to speak of the inappropriateness of applying the synthetic method to strictly analytic science. This application has been extended by Wolf to every possible kind of information, which he dragged into philosophy and mathematics information partly of a wholly analytical nature, and partly too of a contingent and merely professional and occupational kind. The contrast between a material of this kind, easily grasped and by its nature incapable of any rigorous and scientific treatment, and the stiff circumlocutory language of

science in which it is clothed, has of itself demonstrated the clumsiness of such application and discredited it.

[For example, in Wolf's *First Principles of Architecture*, the Eighth Theorem runs: A window must be wide enough for two persons to be able to look out side by side in comfort.

Proof: It is quite usual for a person to be at the window with another person and to look out. Now since it is the duty of the architect to satisfy in every respect the main intentions of his principal, he must also make the window wide enough for two persons to look out at side by side in comfort. Q.E.D.

§ 1760

The same author's *First Principles of Fortification*. Second Theorem: When the enemy encamps in the neighbourhood, and it is expected that he will make an attempt to relieve the fortress, a line of circumvallation must be drawn round the whole fortress.

Proof: Lines of circumvallation prevent anyone from penetrating into the camp from outside. If therefore it is desired to keep them out, a line of circumvallation must be drawn round the camp. Therefore when the enemy encamps in the neighbourhood, and it is expected that he will attempt to relieve the fortress, the camp must be enclosed in lines of circumvallation. Q.E.D.]

§ 1761

Nevertheless, this misuse could not detract from the belief in the aptness and essentiality of this method for attaining scientific rigour in *philosophy*; Spinoza's example in the exposition of his philosophy has long been accepted as a model. But as a matter of fact, the whole style of previous metaphysics, its method included, has been exploded by Kant and Jacobi. Kant, in his own manner has shown that the content of that metaphysics leads by strict demonstration to *antimonies*, whose nature in other respects has been elucidated in the relevant places; but he has not reflected on the nature of this demonstration itself that is linked to a finite content; yet the two must stand and fall together. In his *First Principles of Natural Science*, he has himself given an example of treating as a science of reflection, and in the method of such, a science that he thought by that method to claim for philosophy. If Kant attacked previous metaphysics rather in respect of its matter, Jacobi has attacked it chiefly on the side of its method of demonstration, and has signalled most clearly and most profoundly the essential point, namely, that method of demonstration such as this is fast bound within the circle of the rigid necessity of the finite, and that *freedom*, that is the *Notion*, and with it *everything that is true*, lies beyond it and is unattainable by it. According to the Kantian result, it is the peculiar matter of metaphysics that leads it into contradictions, and the inadequacy of cognition consists in its *subjectivity*; according to Jacobi's result, the fault lies with the method and the entire nature of cognition itself, which only apprehends a connection of *conditionedness* and *dependence* and therefore proves itself inadequate to what is in and for itself, to what is absolutely true.

§ 1762

In point of fact, as the principle of philosophy is the *infinite free Notion*, and all its content rests on that alone, the method proper to Notion-less finitude is

inappropriate to it. The synthesis and mediation of this method, *the process of proof*, gets no further than a *necessity* that is the opposite of freedom, that is, to an *identity* of the dependent that is merely *implicit* [*an sich*], whether it be conceived as *internal* or as *external*, and in this identity, that which constitutes the reality in it, the differentiated element that has emerged into concrete existence, remains simply an *independent diversity* and therefore something finite. Consequently this *identity* does not achieve *concrete existence* here and remains merely *internal*, or, from another point of view, merely *external*, since its determinate content is given to it; from either point of view it is an abstract identity and does not possess within it the side of reality, and is not posited as *identity* that is *determinate* in and for itself. Consequently the *Notion*, with which alone we are concerned, and which is the infinite in and for itself, is excluded from this cognition.

§ 1763

In synthetic cognition, therefore, the Idea attains its end only to the extent that the *Notion* becomes *for the Notion* according to its *moments of identity and real determinations*, or of *universality and particular differences* — further also as an *identity* that is the *connection and dependence* of the diverse elements. But this subject matter of the *Notion* is not adequate to it; for the *Notion* does not come to be the *unity of itself with itself in its subject matter or its reality*; in necessity its identity is for it; but in this identity the necessity is not itself the *determinateness*, but appears as a matter external to the identity, that is, as a matter not determined by the *Notion*, a matter, therefore, in which the *Notion* does not cognise itself. Thus in general the *Notion* is not for itself, is not at the same time determined in and for itself according to its unity. Hence in this cognition the Idea which falls short of truth on account of the inadequacy of the subject matter to the subjective *Notion*. But the sphere of necessity is the apex of being and reflection; through its own essential nature it passes into its manifestation, which is the *Notion* as *Notion*. How this *transition* from the sphere of necessity into the *Notion* is effected *in principle* has been shown in treating of necessity; the same transition also presented itself as the *genesis* of the *Notion* at the beginning of this Book.

§ 1764

Here *necessity* has the position of being the *reality* or *subject matter* of the *Notion*, just as the *Notion* into which it passes now appears as the *Notion's* subject matter. But the transition itself is the same. Here too it is only at first *implicit* and lies as yet outside cognition in our reflection; that is, it is still the inner necessity of the cognition itself. It is only the result that is for it.

The Idea, in so far as the *Notion* is now *explicitly* determined in and for itself, is the *practical* Idea, or *action*.

The Idea of the Good

§ 1765

The *Notion*, which is its own subject matter, being determined in and for itself, the subject is determined for itself as an *individual*. As subjective it again presupposes an implicit otherness; it is the *urge* to realise itself, the end that

wills *by means of itself* to give itself objectivity and to realise itself in the objective world.

In the theoretical Idea the subjective Notion, as the *universal* that *lacks any determination* of its own, stands opposed to the objective world from which it takes to itself a determinate content and filling. But in the practical Idea it is as actual that it confronts the actual; but the certainty of itself which the subject possesses in being determinate in and for itself is a certainty of its own actuality and the *non-actuality* of the world_; it is not only the world's otherness as an abstract universality that is a nullity for the subject, but the world's individuality and the determination of its individuality. The subject has here vindicated *objectivity* for itself; its immanent determinateness is the objective, for it is the universality that is just as much absolutely determined; the formerly objective world, on the contrary, is now only something posited, something *immediately* determined in various ways, but because it is only immediately determined, the unity of the Notion is lacking in it and it is, by itself, a nullity.

§ 1766

This determinateness contained in the Notion and in the likeness of the Notion, and including within it the demand for an individual external actuality, is the *good*. It comes upon the scene with the worth of being absolute, because it is within itself the totality of the Notion, the objective that is at the same time in the form of free unity and subjectivity.

This Idea is superior to the Idea of cognition already considered, for it possesses not only the worth of the universal but also of the out-and-out actual. _ It is an *urge* in so far as this actuality is still subjective, positing its own self and not having at the same time the form of immediate presupposition; its urge to realise itself is, strictly speaking, not to give itself objectivity this it possesses within itself but merely this empty form of immediacy. Hence the activity of the end is not directed against itself in order to adopt and appropriate a given determination; on the contrary, it is in order to posit its own determination and by sublating the determinateness of the external world to give itself reality in the form of external actuality. _ The Idea of the will as *explicitly* self-determining possesses the *content* within itself. Now it is true that this is a *determinate* content and to that extent something *finite* and *limited*; self-determination is essentially *particularisation*, since the reflection of the will into itself as a negative unity in general is also individuality in the sense of the exclusion and presupposition of an other. Nevertheless, the particularity of the content is in the first instance infinite through the form of the Notion, whose own determinateness it is; and in this content the Notion possesses its negative self-identity, and therefore not merely a particular, but its own infinite individuality. Consequently, the above-mentioned *finitude* of the content in the practical Idea is tantamount to the latter being in the first instance the not yet realised Idea; the Notion is, *for the content*, something that is in and for itself; it is here the Idea in the form of objectivity that is *for itself*; on the one hand, the subjective is for this reason no longer something merely *posited*, arbitrary or contingent, but an absolute; but on the other hand, *this form of concrete existence, being-for-self*, has not yet the form of the *in-itself* as well. What thus appears in respect of form as such, as opposition, appears in the form of the Notion reflected into *simple identity*, that is, appears in the content as its simple determinateness;

thus the good, although valid in and for itself, is some particular end, but an end that has not to wait to receive its truth through its realisation, but is already on its own account the true.

§ 1767

The syllogism of immediate *realisation* itself requires no detailed exposition here; it is altogether the same as the syllogism of *external purposiveness* considered above; it is only the content that constitutes the difference. In external as in formal purposiveness, it was an indeterminate finite content in general; here, though it is finite too, it is as such at the same time as absolutely valid content. But in regard to the conclusion, to the realised end, a further difference comes in. The finite end in its *realisation*, all the same, gets no further than a *means*; since in its beginning it is not an end already determined in and for itself, it remains even when realised an end that is not in and for itself. If the good again is also fixed as something *finite*, if it is essentially such, then notwithstanding its inner infinitude it cannot escape the destiny of finitude – a destiny that manifests itself in a number of forms. The realised good is good by virtue of what it already is in the subjective end, in its Idea; realisation gives it an external existence; but since his existence is determined merely as an intrinsically worthless externality, in it the good has only attained a contingent, destructible existence, not a realisation corresponding to its Idea. Further, since in respect of its content the good is restricted, there are several kinds of good; good in its concrete existence is not only subject to destruction by external contingency and by evil, but by the collision and conflict of the good itself. From the side of the objective world presupposed for it, in the presupposition of which the subjectivity and finitude of the good consists, and which as a different world goes its own way, the very realisation of the good is exposed to obstacles, obstacles which may indeed even be insurmountable.

§ 1768

In this way, the good remains an *ought-to-be*; it is *in and for itself*, but being, as the ultimate abstract immediacy, remains also confronting it in the form of a *not-being*.

§ 1769

The Idea of the realised good is, it is true, an *absolute postulate*, but it is no more than a postulate, that is, the absolute afflicted with the determinateness of subjectivity. There are still two worlds in opposition, one a realm of subjectivity in the pure regions of transparent thought, the other a realm of objectivity in the element of an externally manifold actuality that is an undisclosed realm of darkness. The complete elaboration of the unresolved contradiction between that *absolute* end and the *limitation* of this actuality that *insuperably* opposes it, has been considered in detail in the *Phenomenology of Spirit*.

§ 1770

As the Idea contains within itself the moment of complete determinateness, the other Notion with which the Notion enters into relation in the Idea, possesses in its subjectivity also the moment of an object; consequently the Idea enter here into the *shape of self-consciousness* and in this one aspect coincides with the exposition of the same.

§ 1771

But what is still lacking in the practical Idea is the moment of consciousness proper itself; namely, that the moment of actuality in the Notion should have attained on its own account the determination of *external being*.

§ 1772

Another way of regarding this defect is that the *practical* Idea still lacks the moment of the *theoretical* Idea. That is to say, in the latter there stands on the side of the subjective Notion — the Notion that is in process of being intuited within itself by the Notion only the determination of *universality*; cognition knows itself only as apprehension, as the identity on its own account *indeterminate* of the Notion with itself; the filling, that is, the objectivity that is determined in and for itself, is for it a *datum*, and what *truly is* is the actuality there before it independently of subjective positing. For the practical Idea, on the contrary, this actuality, which at the same time confronts it as an insuperable limitation, ranks as something intrinsically worthless that must first receive its true determination and sole worth through the ends of the good. Hence it is only the will itself that stands in the way of attainment of its goal, for it separates itself from cognition, and external reality for the will does not receive the form of a true being; the Idea of the good can therefore find its integration only in the Idea of the true.

§ 1773

But it makes this transition through itself. In the syllogism of action, one premise is the *immediate relation of the good end to actuality* which it seizes on, and in the second premise directs it as an external *means* against the external actuality.

§ 1774

For the subjective Notion the good is the objective; actuality in its existence confronts it as an insuperable limitation only in so far as it still has the character of *immediate existence*, not of something objective in the sense of a being that is in and for itself; on the contrary, it is either the evil or the indifferent, the merely determinable, whose worth does not reside within it. This abstract being that confronts the good in the second premise has, however, already been sublated by the practical Idea itself; the first premise of the latter's action is the *immediate objectivity* of the Notion, according to which the end communicates itself to actuality without meeting any resistance and is in simple identical relation with it. Thus all that remains to be done is to bring together the thoughts of its two premises. To what has been already immediately accomplished by the objective Notion in the first premise, the only addition made in the second premise is that it is posited through mediation, and hence posited *for the objective Notion*. Now just as in the end relation in general, the realised end is also again merely a means, while conversely the means is also the realised end, so similarly in the syllogism of the good, the second premise is immediately already present *implicitly* in the first; but this immediacy is not sufficient, and the second premise is already postulated for the first — the realisation of the good in the face of another actuality confronting it is the mediation which is essentially necessary for the immediate relation and the accomplished actualisation of the good.

§ 1775

For it is only the first negation or the otherness of the Notion, an objectivity that would be a submergence of the Notion in the externality; the second negation is the sublating of this otherness, whereby the immediate realisation of the end first becomes the actuality the Notion is posited as identical with itself, not with an other, and thus alone is posited as the free Notion.

§ 1776

Now if it is supposed that the end of the good is after all not realised through this mediation, this signifies a relapse of the Notion to the standpoint occupied by it before its activity — the standpoint of an actuality determined as worthless and yet presupposed as real. This relapse, which becomes the progress to the spurious infinity, has its sole ground in the fact that in the sublating of that abstract reality this sublating is no less immediately forgotten, or it is forgotten that this reality is in fact already presupposed as an actuality that is intrinsically worthless and not objective.

§ 1777

This repetition of the presupposition of the end consequently assumes this character, that the *subjective bearing* of the objective Notion is reproduced and made perpetual, with the result that the *finitude* of the good in respect of its content as well as its form appears as the abiding truth, and its actualisation appears as a merely *individual* act, and not as a universal one. As a matter of fact this determinateness has sublated itself in the actualisation of the good; what still *limits* the objective Notion is its own *view* of itself, which vanishes by reflection on what its actualisation is *in itself*. Through this view it is only standing in its own way, and thus what it has to do is to turn, not against an outer actuality, but against itself.

§ 1778

In other words, the activity in the second premise produces only a one-sided *being-for-self*, and its product therefore appears as something *subjective* and *individual*, and consequently the first presupposition is repeated in it. But this activity is in truth no less the positing of the *implicit* identity of the objective Notion and the immediate actuality. This latter is determined by the presupposition as having a phenomenal reality only, as being intrinsically worthless and simply and solely determinable by the objective Notion. When external actuality is altered by the activity of the objective Notion and its determination therewith sublated, by that very fact the merely phenomenal reality, the external determinability and worthlessness, are removed from that actuality and it is *posited* as being in and for itself.

§ 1779

In this process the general presupposition is sublated, namely the determination of the good as a merely subjective end limited in respect of content, the necessity of realising it by subjective activity, and this activity itself. In the result the mediation sublates itself; the result is an *immediacy* that is not the restoration of the presupposition, but rather its accomplished sublation. With this, the Idea of the Notion that is determined in and for itself is posited as being no longer merely in the active subject but as equally an immediate

actuality; and conversely, this actuality is posited, as it is in cognition, as an objectivity possessing a true being.

§ 1780

The individuality of the subject with which the subject was burdened by its presupposition, has vanished along with the presupposition; hence the subject now exists as *free, universal self-identity*, for which the objectivity of the Notion is a given objectivity *immediately to hand*, no less truly than the subject knows itself as the Notion that is determined in and for itself. Accordingly in this result *cognition* is restored and united with the practical Idea; the actuality found as given is at the same time determined as the realised absolute end; but whereas in questing cognition this subjectivity appeared merely as an objective world without the subjectivity of the Notion, here it appears as an objective world whose inner ground and actual subsistence is the Notion. This is the absolute Idea.