

Individual I-thoughts can only be concretely established as singular once they are reencountered through the other—an unbound reality—for which the I is not a totalized individual, but a process of individuation. In permanently losing its home, in suspending itself in the abyss of intelligible reality, the mind retroactively recognizes that what was a merely formal order of self-consciousness was in reality an *actual* order of self-consciousness, that what was only a formal autonomy was in fact *concrete* freedom, that the immediate was mediated and the trivial and simple identity 'I am I' non-trivial and complex. Accordingly, the truth of formal self-consciousness is ultimately and only in retrospect the truth of concrete self-consciousness.

However, the transition from formal self-consciousness qua minimal self-relation to concrete experienced self-consciousness is the most fragile of all endeavours. The realization of intelligence bespeaks this maximal fragility. If geist stops seeing itself from the perspective of a radically other reality, if it gives up on expanding the intelligibility of the other, it ceases to be geist. Actual self-consciousness, then, is not a given state but a 'practical achievement',²⁷ and, as such, the object of a struggle. The transition from the formal autonomy of thought to an achieved state of concrete self-consciousness is—all things considered—the project of freedom as such:

By way of that self-conscious negation, self-consciousness itself engenders for itself both the certainty of its own freedom and the experience of that freedom, and it thereby raises them to truth. What vanishes is the determinate, that is, the distinction which, no matter what it is or from where it comes, is established as fixed and unchangeable. The distinction has nothing permanent in it, and it must vanish for thought

therefore abstract universality and hence an existence open to others. It does not suffice, in order to gain the freedom of substance, to represent the latter as a totality that, complete in itself, would have nothing to receive from the outside. On the contrary, a self-reference that grasps nothing conceptually but is only a mirroring is precisely a passivity towards the other.' Hegel, *Science of Logic*, 634.

27 R.B. Pippin, *Hegel on Self-Consciousness: Desire and Death in the Phenomenology of Spirit* (Princeton, NJ: Princeton University Press, 2011), 15.

because what is distinguished is precisely this: Not to exist in itself but rather to have its essentiality merely in an other.²⁸

Self-relation is the formal condition of intelligence. But only when it is steeped in the negativity of reason does it become an engine of freedom, for which intelligence cannot exist without the intelligible, and the intelligible cannot be conceived without intelligence. This essential correspondence intelligence-intelligible constitutes the truth of intelligence, without which it is an empty thought. However, this correspondence is not given in advance, and is never fully totalized: it is a labour, a project. Accordingly, treating intelligence as something that simply comes out of the black box of nature or technology is an equally empty thought. Once self-relation *concretely* becomes part of the order of thought that extends over into reality, nothing can stop the rise of intelligence. All given truths, all achieved totalities, all traps of history begin to slowly vanish like a spider's web baptized in a corrosive solvent. Realized through this essential correspondence, geist endorses nothing but intelligence, cultivates nothing but the intelligible. The 'odyssey of spirit' begins when geist suspends itself in the abyss of the intelligible that always exceeds it.²⁹ The unconditional endorsement of intelligence together with the unconditional cultivation of the intelligible is the truth of reality. Whoever and whatever opposes this truth will be swiftly weeded out by the reality of which intelligence is the resolute expression. However, what is intelligible is not merely ontological (the intelligibility of what is), but also embraces practical and axiological intelligibilities (the intelligibility of what should be). And in this sense, the question of 'what intelligence is' is inseparable from the question of what it must do and what its values are, in spite of what the given state of affairs may be.

Before moving forward, let us take a cursory look at the formal structure of self-relation as a functional quality of geist in its ongoing process of realization. In its most minimal and prevalent form, self-relation is an identity relation ($I=I$) and as such a *trivium curriculum* which is but the

28 Hegel, *Phenomenology of Spirit*, §204.

29 H.S. Harris, *Hegel's Ladder II: The Odyssey of Spirit* (Indianapolis: Hackett, 1997).

routine course of life. In its *sui generis* and emancipatory configuration, it is a formal relation whose formality is the order of thought or reason. The formally posited $I=I$, self-consciousness, is not a simple relation but a map to be expanded and navigated. The simple identity relation $I=I$ is what Hegel calls an awkward circularity,³⁰ but in its formal or rational manifestation ($I=I^*$) it is a functional circle that is neither vicious nor awkward. It is a circle that is in the process of closing upon itself by encompassing another I or self-consciousness as well as the *not this-I*, reality in its excess of otherness. In closing upon itself through the order of intelligibilities—theoretical, practical, and axiological—self-consciousness suspends every manifest identity relation, whether that of the I, the human, mind, or intelligence.

Self-consciousness cannot be described in terms of a simple identity relation, but only in terms of identity maps, in the strict sense of the concept of the identity map as basic ingredient for the composition of maps. Rather than tautologically referring to itself, the formal 'I am I' is a map that transforms I into I^* —that is, into I or mind from the perspective of its dual, reality in its radical otherness. But in order to determinately establish the truth of itself, mind must strive not only to render the unrestricted world intelligible, but also to expand the order of intelligibilities that is reality in its excess. This excess, seen through the lens of the intelligible, and not as some occult excess, is the very key for rethinking, reimagining and reinventing intelligence.

30 'But surely it is laughable to label the nature of this self-consciousness, namely that the "I" thinks itself, that the "I" cannot be thought without the "I" thinking it, an awkwardness and, as if it were a fallacy, a circle. The awkwardness, the circle, is in fact the relation by which the eternal nature of self-consciousness and of the concept is revealed in immediate, empirical self-consciousness—is revealed because self-consciousness is precisely the existent and therefore empirically perceivable pure concept; because it is the absolute self-reference that, as parting judgment, makes itself into an intended object and consists in simply making itself thereby into a circle. This is an awkwardness that a stone does not have. When it is a matter of thinking or judging, the stone does not stand in its own way; it is dispensed from the burden of making use of itself for the task; *something else outside it must shoulder that effort.*' Hegel, *Science of Logic*, 691 (emphasis mine).

Therefore, the formal order of self-consciousness (the logical $I=I$) first and foremost points to the underlying structure of what appears as a simple identity relation. This underlying structure is nothing other than the transformation afforded by conceiving I and I^* as identity maps ($I=I^*$). Adopting the Hegel-inspired mathematical formalism of William Lawvere, this map or composition of maps can be represented as follows.³¹

If we treat I and I^* as objects with their respective identity maps, then $I=I^*$ is really:

$$I \xrightarrow{f} I^*$$

meaning that I (formal self-consciousness) is the identity map of the domain I^* (concrete self-consciousness or the assertion that there is reality in excess of the self or mind) and I^* is the identity map of the codomain of I (the freedom of self-consciousness as conceived from a reality that is of nowhere and nowhen, a concrete freedom in which self-consciousness only exists in every respect for another self-consciousness). It then universally and necessarily follows that:

$$I \xrightarrow{f} I^* \Rightarrow I \xrightarrow{I} I \wedge I \xrightarrow{f} I^* \wedge I^* \xrightarrow{I^*} I^* \wedge I f = f = f I^*$$

In concretely rendering reality intelligible, in expanding the domain of the intelligible and hence that of reality, in acting on the intelligible or intervening in reality, the formal condition of intelligence (I) is realized as intelligence (I^*). Formal self-consciousness only becomes self-consciousness in satisfying another self-consciousness,³² in extending over into the intelligibility of a reality which in its unrestrictedness establishes the truth of I , the mind, or intelligence. Yet the achievement of this truth (I^*) is also impossible

31 F.W. Lawvere, *Functorial Semantics of Algebraic Theories* (New York: Columbia University Press, 1963).

32 'Self-consciousness attains its satisfaction only in another self-consciousness'—and without this satisfaction it is only a consciousness that finds its 'satisfaction in mere dirt and water'. Hegel, *Phenomenology of Spirit*, §8, §175.

without the positing of a truth-candidate that is formal qua rational self-relatedness. But what exactly does 'self-related' mean in this context? It is geist as the Concept. Geist's formal self-relatedness means that it has a concept of itself and that, as such, it treats itself as both the malleable subject and object of its concept. Rather than settling for the given immediacy of what it is, mind becomes mind only by virtue of *what* it takes itself to be. This 'what' is nothing but mind's concept of itself, whose content and nature are susceptible to change. And in so far as the concept belongs to the negativity of reason, not only can it negate the apparent immediacy of what mind is (the given), it can also positively extend over into the world.

It is necessary to point out that the rational order of self-relatedness, even in its minimal form ($I=I$), is already an $I=I^*$. In other words, general I-thoughts are not thoughts of a single individual (the monadic I), but belong to an order in which one self-conscious individual always stands in relation to another self-conscious individual. The order of formal self-consciousness already assumes a collection of individuals who stand in relation to one another through a formal space which is, at bottom, a deprivatized semantic space or language—the *dasein of geist*. I am only I, I am only a minded creature conscious of itself, in so far as I am part of this thoroughly public semantic space, to the extent that I am recognized by a minding act of another I through this space. I only have private thoughts to the extent that these thoughts are modelled on a public language. I am only conscious of myself as minded and minding because I am being recognized by another minded and minding I.

This cognitive system, which is built on an interactive semantic space, simply *is* the order of self-consciousness. Personhood is the product of the impersonality of reason, and consciousness of the individuated self is an artefact of an individuating cognitive space in which all selves are incorporated. In short, there is no consciousness without self-consciousness. Correspondingly, there are no cerebral particular *Is* without mind as a collective geist. But if the formal sociality of mind is a necessary condition for achieving concrete self-consciousness, it is by

no means a sufficient one.³³ Real self-consciousness is a historically and socially mediated process that makes this formal truth a concrete one. The first stage of this process consists in the recognition and augmentation of formal self-consciousness—or reason—whose linguistic and logical space is the infrastructure of cognition.

SELF-CONSCIOUSNESS AS CONCEPTION AND TRANSFORMATION IN AN OBJECTIVE WORLD

Logical self-relatedness defines the principal function of general intelligence as that which recognizes and acts on the objective intelligibility of the conditions of its realization. Exhibiting the formal order of self-relation, intelligence does not regard itself as the given of its history. It does not treat itself as a monad closed in on itself (a trivial identity relation). Instead, it treats its history as that which negates what is given in its immediacy and, as such, is 'only appearance and accidentality'.³⁴ The fragile project of freedom, or the move toward concrete self-consciousness, starts as soon as geist gives up the given immediacy of itself to itself—the given truth of what it is—and instead brings itself under a concept of itself—what it takes or conceives itself to be.

Unlike the given immediacy of that which is in itself, what geist takes itself to be in accordance with the order of reason opens up a window of opportunity for grasping what it is in itself in reality. But precisely to the extent that what geist takes itself to be might radically differ from what it really is (as in the case of a historical delusion), it is always in danger of relapsing into the givenness or accidental immediacy of its own truth.

33 'The self-relation in relation to objects and others must be achieved, is a practical phenomenon inseparable from a relation with and initially an unavoidable struggle with, others. Genuinely human mindedness, the soul, spirit, the variety of designations for the distinctly human, are all going to be read through the prism of this idea that such a distinction is fundamentally a result, what will eventually emerge as a historical achievement.' Pippin, *Hegel on Self-Consciousness*, 86.

34 Hegel, *Science of Logic*, 521.

Therefore, the self-conception of geist—its treating itself as the object of its own Concept—is not just a potential window into freedom but can also be a manhole leading to great tragedies and grand delusions. In facing these two possible consequences, geist cannot recoil in fear—it must choose. For without taking the path opened up by self-conception, it ceases to be geist. It is only a windowless monad, ‘a negative reflected into itself’ that ‘repels itself from itself’.³⁵

Within this immured world, nothing can ever be said or done, since everything has already been said and done, nothing is ever complex since everything is absolutely simple, and nothing is ever risked for everything is already given. Take the uphill path of freedom and risk its fragility and your livelihood in descending into the abyss of the intelligible, or take the downhill path of an easy fall back to the homely earth where nothing is ever risked (despite bravado to the contrary). But intelligence *is* only as a denizen of an intelligible abyss. In its current manifestation it may have come from this earth or another, but from the perspective of the abyss of the intelligible, it has no grounded home and never will have. A third alternative to the battle of the uphill path and the downhill breeze does not exist, for it is the unintelligible as such.

As a function of the geist that is always underway, formal self-relation is both a source of enablement and disablement. Only if geist refers to itself through the intelligible (ontological, epistemological and axiological intelligibilities, i.e., impersonal values and disvalues) is its self-relatedness an enabling condition. However, if self-relatedness is ever posited as a given or deemed to be a completed totality, it becomes the source of self-deceptions and tribulations. The former path is that of tedious tasks but also risky adventures one after another; the latter is the exemplification of residing in a comforting home whose foundations, sooner or later, will be eroded. In its positive form, self-relation enables intelligence to treat its own structure as the intelligible *object* of its own understanding, thus occasioning an estrangement or alienation whereby the thinking self, or more precisely the understanding (*Verstand*) self, is as much subject as it is object.

35 Ibid., 474, 486.

Self-relation as the formal condition of self-consciousness, then, begins with a disunified self for which the self is at once I and not-I (i.e., another self). Yet this disunified, alienated, or 'epistemically schizophrenic' self is, properly understood, not a crippling moment for self-consciousness, but rather the condition of its enablement as a *task*.³⁶ For as soon as the self becomes the *object* of its own understanding, it opens up the opportunity to grasp itself through the conceptually mediated presence of other selves and, by extension, as an object in connection with other objects within an intelligible reality. Self-consciousness can concretely expand in so far as the relation of the self to itself is now susceptible to change in the presence of other subjects.

This by no means suggests an abandonment of the subject in favour of objects or an alien reality, but rather a grasping of self-consciousness in terms of the search for intelligibilities or 'the exploration of conditions for object-intentionality'.³⁷ If self-consciousness is only self-conscious in the presence of other selves, and if the shift toward objects does not entail the annulment of self-consciousness but merely a shift in the level of self-consciousness, then the ultimate phase of self-consciousness should be seen—by way of speculative reason—as the self-consciousness of the Absolute. And it is in its attainment of the Absolute—a self-consciousness that has found and secured its own intelligibility in that of an unrestricted universe—that the task of self-consciousness can be understood as the critique and progressive suspension of all local and accidental features of transcendental subjectivity, and thus as a movement further and further away from simple forms of consciousness and self-consciousness. In this sense, the maturation of self-consciousness, the idea of reinventing the subject through the exploration of conditions for object-intentionality, should be understood as a thoroughgoing process of naturalization.

But in contrast to the dominant myopic naturalistic trends, a genuine programme of naturalization is not just about explaining self-consciousness in terms of a material reality, but equally about giving an account

36 Pippin, *Hegel on Self-Consciousness*, 48.

37 *Ibid.*, 47.

of nature that accommodates a full-blown transcendental philosophy, the formal distinction between thinking and being, and the absolute formal autonomy of reason: that which facilitates the process of unifying consciousness in knowledge of the sensible object (*gegenstand*) and self-consciousness in knowledge of the self qua object of thought (*objekt*). Such a program of naturalization, accordingly, cannot and should not be limited to the terms of the empirical sciences. As much as it should afford the fully fledged naturalization carried out by the empirical sciences, it should also allow for nonempirical claims regarding the autonomy of reason and the maturation of self-consciousness as such. Naturalization is, therefore, a universal method not exclusive to the empirical sciences. It corresponds to an adequate concept of nature in which both *homo homini lupus* (human as wolf)³⁸ and the distinct formal category *homo sapience* (human as reason), human as the product of 'infinite natural conditionality'³⁹ (pure heteronomy) and human as the 'individual of history'⁴⁰ (the autonomous object of its own Concept) are possible and thus can be actualized or made true. If naturalization only alludes to one of these possibilities to the exclusion of the others, then the concept of nature upon which it is erected is in fact impoverished.

This is to say that this framework of naturalization can no more fall back on a pretranscendental conception of the mind than on a prescientific one, since this entails a precritical account of nature in which either the structuring mind is supplanted by a prestructured nature, or the formal spontaneity of thought and the objective world are merely fused together rather than being integrated in a manner that preserves their distinction. On this account, those who push for a brute disenchantment—a supposed all-destroying demystification of Forms or Ideas—will be condemned to face a fully enchanted and mystified world.

However, to say that, in the transformation of self-consciousness, it is the conditions of object-intentionality that undergo change, rather than

38 T. Hobbes, *On the Citizen* (Cambridge: Cambridge University Press, 1998), 3.

39 H. Cohen, *Kants Begründung der Ethik* (Berlin: Dümmler, 1877), 108.

40 Ibid., 290.

the principle of subjectivity (i.e., the self as an object rather than the self as a subject), is not to suggest that the transcendental subject remains in every respect intact. In other words, it is not to suggest that upholding the necessity of transcendental subjectivity all the way commits us to the necessity of every feature or structural aspect of the transcendental subject of experience. Indeed, if the transformation of self-consciousness into more expansive modes implies that the subject's relation to the self has been fundamentally changed by its relation to the world (i.e., naturalized in the above sense), this also means that the transcendental conditions of experience, and correspondingly the subject's transcendental structures, which set the limits of experience, must undergo transformation.

The movement of self-consciousness from its simple egocentric form in which it is disjointed from itself to a self-consciousness in which such a form can be suspended in favour of a unity that is truly essential to it, cannot be achieved by rudimentary or abstract self-consciousness itself. All the egocentric form of self-consciousness can achieve is to further entrench itself by objectifying or unilaterally negating what is other to it—including itself as the *object* of self-consciousness. What is necessary in order to suspend this purely egocentric form is a renewed relationship between the transcendental subject and the world in its full objectivity, one that allows for a conception of reality which, in its radical and impersonal otherness, actively negates back. To recapitulate, the suspension of egocentric self-consciousness requires another self-consciousness or, more comprehensively, an objective and impersonal reality that is not merely at the receiving end of negation. However, the renewal or expansion of the relation with objective reality that this demands requires an expansion of the transcendental subject's field of experience, whether as regards other subjects (intersubjectivity) or as regards the world (objectivity). Absent the latter, the act of suspending (*aufheben*) cannot be continued *concretely* since either the conception of the world as radically other becomes a negatively abstract speculative thought verging on unintelligibility, in which case the egocentric framework can reestablish itself, this time under the guise of an alien other or material reality; or the subject is confined to a transcendental horizon unchallenged by new objective facts of experience, in which case

the implicitly egocentric characteristics of the subject's experience not only go unchecked but are also liable to be mistaken for the characteristics of objective reality.

Here, however, a problem arises: Since the limits of experience are set by the subject's particular transcendental structures, the scope for expansion of the field of experience is ultimately restricted to the limitations of those structures.⁴¹ Thus the concrete movement of self-consciousness, the suspension of the purely egocentric framework, and the objective grasp of mind as a unifying point, can only begin with a critical reflection on the possibility of the variation and modification of transcendental structures. The outcome of this necessary critique would be a concrete transformation of the local transcendental subject. To be forthright about it: there can be no concrete movement of self-consciousness, no prospect of a renewed and expanded relationship with other subjects or with the world in its objectivity, without a methodical and multifaceted transformation of the structure of the transcendental subject itself.

As will be argued in chapter 2, it is in this sense that something like the program of artificial general intelligence, adequately understood, is at its core a deeply philosophical project aiming to renegotiate the limits of experience and self-consciousness by carrying out a systematic and applied critique of human transcendental structures, whether pertaining to neurobiological sensory mechanisms, memory and perception, or language and linguistic faculties. Contemplating the possibility of *artificial* general intelligence—a thinking subject with a physical substrate that is not biological, or one that is capable of using an artificial language that in every respect surpasses the syntactic and semantic richness of natural languages—is to be regarded neither as technoscientific hysteria nor as intellectual hubris; it is an expression of our arrival at a new phase of critical self-consciousness.

41 On this point see G. Catren, 'Pleromatica or Elsinore's Drunkenness', in S. De Sanctis and A. Longo (eds), *Breaking the Spell: Contemporary Realism Under Discussion* (Sesto San Giovanni: Mimesis Edizioni, 2015), 63–88.

For geist, critical self-conception and self-transformation in the objective world is an undertaking whose prospects are by no means guaranteed by the realization of the transcendental subject, or discursive apperceptive intelligence. There is in fact a gap between the conditions of possibility of the I that thinks and the conditions sufficient for the real movement of thought. However, this gap can indeed be bridged by critical reflection on the conditions of possibility of the thinking self as a minded and minding subject. But this hinges on the key idea that critical reflection, in this case, cannot be limited to the function of understanding or transcendental reflection in which the analysis and comparison of concepts or representations (e.g., mind and world, subject and object, etc.) are conducted in relation to their respective sources in cognition. This is because transcendental reflection operates within the limits set by transcendental structures which both undermine the objective identification of the source of concepts/representation in cognition and limit the knowledge of cognition in general. Transcendental reflection on the conditions of possibility of having mind must be supplemented with critique not merely as an analysis but as a practical construction, and reflection not merely as a function of understanding but as speculation in its Hegelian sense, i.e., the movement toward that which is objective and the suspension of that which is immediately given or present.

Accordingly, critical reflection on the conditions of possibility of having mind entails both understanding what these conditions are *prima facie*, and the construction (i.e., revision or modification) of such conditions by suspending the immediate appearance of them as allegedly necessary and universal. This is in fact an underlying claim throughout the book: that the concept of mind is not something that is immediately present to us or something of which we have already a full grasp. If we limit our critical reflection on mind or the thinking subject to transcendental reflection, we risk misconstruing those accidental and local characteristics of the mind that are immediately present to us as essentially *necessary* and *universal*. It is only when reflection suspends what is immediately presented as necessary and universal—but might as a matter of fact be purely accidental and local—and treats necessity or universality as something to be determined

and constructed rather than something that is simply given, that it can become genuinely critical.

Therefore, mind as both the subject and the object of critical reflection is in reality the conception of *mind as a project* of determination and construction, rather than mind as a given or completed object of ordinary reflection. Critical reflection on the conditions of possibility of having mind should then essentially be understood not in terms of what the mind *is*, but rather in terms of what the mind *does*—that is to say, in terms of the concept of mind as that which can construct, modify, and shape itself in accordance with what it takes to be its essential function. To adopt a Hegelian viewpoint: It is only mind that can construct itself according to its concept and, in doing so, develop itself from what is merely a concept into a concrete reality—a development which is equivalent to the knowledge of mind beyond immediate appearances. The Concept (*Begriff*) of mind is akin to a seed out of which the Idea (*Idee*) of mind as a project of concrete self-knowledge and self-transformation can grow. It should be noted that the difference between the Concept of mind and the Idea of mind is a subtle one. The Idea is a fully realized or *actualized* Concept; in a sense, it is the truth of the Concept as realized in particulars (individual subjects) rather than as abstracted from them. The Idea of mind is neither purely the Concept of mind nor mind as viewed from the perspective of objective reality (whether construed as being, material reality, or nature), but the integration or bridging of Concept and objectivity. What is objective signifies the mutual determination not only of each subject by every other subject (intersubjectivity) but also of the subjective realm and objective reality (*Realität*), which is the detailed knowledge of that plurality in which the Concept is expressed.

Accordingly, the Idea of mind can be said to be the construction or development of the concept of mind as a blueprint within intelligible objective reality. Moreover, the Idea of mind is concerned with the integration of the epistemological, ontological, logical, empirical, and practical aspects of mind into one single set of concepts.

Consciousness is meaningless without a sensible object (*gegenstand*). It must have an object in order for it to count as consciousness, even if

that object is itself. Concrete self-consciousness, by contrast, is realized when consciousness becomes the object (*objekt*) of its own concept. In the latter sense, the object is an artefact of the concept—that is to say, a constructible object of determinate thought. The process of determining the meaning or truth of mind is nothing but the process of coordination of mind as an object of its own concept with mind as the critical subject of conception. The Idea of mind captures exactly this process of coordination through which mind is constructed as the object of more adequate concepts of itself—more adequate in the sense that such concepts of mind exhibit higher orders of unity between the identity of the concept and objective reality.

To argue that we do not know what mind is, and that therefore all talk of mind or mindedness is baseless—or worse, that it comes down to an attempt to determine the meaning of mind purely in terms of a set of empirical facts about it—is to confuse knowledge of mind qua *gegenstand* which remains bound to the existing conditions of experience with knowledge of mind qua *objekt* constructed according to its own concept. Knowledge of mind is not knowledge of an object that is (allegedly) immediately given by the senses or the conditions of experience; it is a knowledge that is under construction, in accordance with the logical function of mind *within* an objective world (i.e., mind as a configuring or structuring factor).

As the seed or blueprint for the Idea of mind, the Concept of mind contains both the logical function of mind as a configuring or structuring factor in the world, and a set of objective or empirical facts regarding its properties in so far as it belongs to that world. It is neither a logical idea abstracted from its physical properties nor a set of empirical descriptions independent of its logical function. As a truth-candidate for the idea of mind rather than the truth of mind as such, the Concept of mind, then, initially at least, is nothing but the realized concept of the human mind, a mixture of what we take to be its logical function and its physical properties as they appear to us. Thus the examination of the necessary conditions for the realization of mind begins with the conditions of possibility of this rudimentary Concept of mind, for which the distinction between body and

mind is neither adequately formulated or grasped. For this reason, the main emphasis in subsequent chapters will be on the conditions necessary for the realization of the Concept of mind as an embodied logical function that concerns the structuration of the world.

A SERIES OF TRANSFORMATIONS

The first contact of intelligence with the objective intelligible world is its encounter with its own underlying structure. By rendering intelligible this structure, *geistig* intelligence enables itself to intervene in its own structure and, in doing so, not only to transform itself but also to achieve a conception of itself that is not limited to what appears to be immediately present or a given totality. Thus it can be said that adequate self-conception leads to the enabling of self-transformation, and concrete self-transformation opens the path to objective self-conception.

Consequently, self-relation does not punctuate the structure of intelligence with an immutable identity, it transforms it. Just like the act of pointing to a point, an act that at once articulates what the point is and transforms it from something fixed into a dynamic gesture, the formal self-relation both articulates the intelligibility of the self-conscious mind and defuses its given fixed identity.⁴² This is the logic of self-relation as a

42 Consider a point as an object. One can either take it as something fixed, or instead conceive it only through acts of pointing. In the latter case, a point is a pointer that points, like an imaginary mark on paper left by the gesture of the finger pointing to it. Once a point is understood as an act and not merely a product, it can be articulated or gesticulated differently. A pointer can be composed with another pointer to make a new point, and so on. When it comes to defining a point, one can speak not only of a pointer but also of a concatenation of pointers or maps of transformation. In the case of self-reference the same principle holds: 'what is referred to' is an object of a referring act. And when self-reference is understood as an individuating act, there can be a concatenation of referring acts which have as their object the same reference. One can always swap the identity of the object *qua* 'what is referred to' with an appropriate collection of referring acts or group of transformations.

dynamic process wherein the identity of both 'what refers' and 'what is referred to', 'what acts' and 'what is acted upon', is defined by the unity of their transformations. Here, identity is the unity of a group of transformations that reveal its invariant features by ranging across its variations. This is by no means a weak interpretation of identity, but rather a strict notion of identity that entails neither fixity nor simple relationality.⁴³ There is no incompatibility between having a precise or strict notion of identity and a notion of identity through change and transformations.⁴⁴ If geist has an identity, this does not imply that its identity must be an entity or thing. It is the *activity* of geist that defines its identity, through a series of transformations which are its historical instantiations under its concept.

Geist's self-referential activity is a constructive process in the same way that the act of pointing or referring should be regarded not as a relation but strictly as a transformation. The role of formal self-relation is to establish the intelligibility of geist as that which is able to constitute its own transformation or to have a history rather than just a nature. But the articulation of this intelligibility is in reality equal to the transformation of geist, and vice versa. By pointing to itself as a unifying point or a configuring factor, geist acts on itself; and by acting on itself, it navigates the space of its concept. It changes its configuration. By pointing to its concept, by navigating the space of this concept further away from appearances or what seems locally to be the case, geist can explore the possibilities of its realization. The history of geist, which is the history of intelligence, is a sequence of self-transformations according to its own concept, a concept whose particular content is open to revision. This sequence or history, as will be argued in chapter 4, must necessarily be thought as an atemporal series of transformations. As we shall see, in its genuine form it is a history conceived according to a view from nowhen.

43 For an elaborate discussion on philosophical, logical, and mathematical conceptions of identity as a group of transformations, see chapters 6 and 7 in A. Rodin, *Axiomatic Method and Category Theory* (Dordrecht: Springer, 2014), 149–209.

44 *Ibid.*, 149–58.

In becoming conscious of itself beyond the given identity relation, geist must first render intelligible its own underlying structure, its conditions of realization. For it is only by acting on the objective intelligibility of these conditions that geist can reconstitute or realize itself according to its own concept. Geist's formal self-referential act, therefore, does not imply an immediate relation, a path that is limited to what is given or a privileged access to what seems to be immediate. In fact, as will be elaborated later, in order to maintain its intelligibility, geist must adapt to and act on a new order of intelligibility beyond the level of appearances and the given: the order of intelligibility concerning the nonmanifest as excavated by the modern sciences. Self-reference or self-recognition through this order of intelligibility engenders a different form of transformation, and signals a new phase for geist.

HISTORY AS THE ELABORATION OF WHAT IT MEANS TO BE AN ARTEFACT OF THE CONCEPT

Spirit is in itself the movement which is cognition—the transformation of that former *in-itself* into *for-itself*, of *substance* into *subject*, of the object of *consciousness* into the object of *self-consciousness*, i.e., into an object that is just as much sublated, that is, into the *concept*. This transformation is the circle returning back into itself, which presupposes its beginning and reaches its beginning only at the end. Insofar as spirit therefore is within itself necessarily this act of distinguishing, its intuited whole faces up against its simple self-consciousness, and since that whole is what is distinguished, it is thus distinguished into its intuited pure concept, into *time*, and into the content, that is, into the *in-itself*.⁴⁵

The ongoing labour of science in deepening the order of intelligibilities pertaining to the mind-independent, the nonmanifest, the nongiven, introduces a qualitative shift in the structure of intelligence. Science

45 Hegel, *Phenomenology of Spirit*, §802.

(*Wissenschaft*) ranges across not just the empirical sciences and the science of mind, but also embraces the science of history and the science of the *Greater Logic*, which is the science of thinking the intelligible unity of mind and world, thought and being, the autonomy of the former and the excess of the latter's otherness.

In order to uncover and act on the order of intelligibilities and to unbind its transformational capacities, the structure of intelligence itself must also undergo transformation. Science, that which excavates the order of intelligibilities, is responsible for the qualitative transformations in the structure of *geist*, its history. What is meant by conceiving here is 'bringing into conception', since the goal of spirit, according to Hegel, is to concretely attain its own concept, to form a normative conception of itself and to realize itself according to this conception rather than a given nature or meaning:

The spirit produces its concept out of itself, objectivizes it, and thus becomes the being of its own concept; it becomes conscious of itself in the objective world so that it may attain its salvation: for as soon as the objective world conforms to its internal requirements, it has realized its freedom. When it has determined its own end in this way, its progress takes on a more definite character in that it no longer consists of a mere increase in quantity. It may also be added that, even on the evidence of our own ordinary consciousness, we must acknowledge that the consciousness must undergo various stages of development before it becomes aware of its own essential nature.⁴⁶

The intelligibility of *geist* resides in its freedom, a freedom that is not simply freedom from constraints but a freedom to do something. It is a freedom that translates into intelligence. It stands for the ability of *geist* to constitute a history for itself rather than just a past or nature. But the ability to constitute history can only be realized by the ability to

46 G.W.F. Hegel, *Lectures on the Philosophy of World History*, tr. H.B. Nisbet (Cambridge: Cambridge University Press, 1975), 64.

posit a concept of itself and to then transform itself in accordance with that concept. This is what the formal order of self-consciousness already implies. Mind entails a self-relatedness which is not a given and simple identity-relation, it *is what it does* in order to be a unifying point for the intelligibility of itself and its unrestricted world. The concept of mind as a *unifying point*, accordingly, extends over the order of intelligibilities (of itself and reality).

But what does this extension over the order of intelligibilities mean for the concept of mind? It means that any particular or given content of this concept will be suspended, with only its form remaining necessary and invariant. The revision of the content of the concept of geist—its particular identity, its contingent configuration—is what the history of geist is. This is exactly what the concept of progress implies. In thinking about geistig progress, one has to suspend the ordinary intuition of a temporal progression, a march from the past to the future. Instead the concept of progress should be understood primarily in terms of a cognitive process—the step-by-step dissolution of all givens and achieved totalities of thought, in order to distinguish between what is particular and contingent for mind and what is necessary and universal for it—that can become socially concrete and explicit. Progress, in this sense, is neither linear nor essentially temporal. Freedom and intelligence thus coincide in the question of what it means to have a history and to sufficiently elaborate its consequences. The ramifications of having a history, the prospects of what it means to become an object of a concept and to be transformed by it, belong to the domain of intelligence—that which is always underway, neither given nor realized in its totality.

Hegel is the archenemy of the given, in that he takes the battle against the given from the realm of thought to that of action. Geistig intelligence does not merely abolish the givens of theory but also the givens of praxis and history. In defining the progress of geist as the elaboration of what it means to be the artefact of a concept whose content can and should be revised, Hegel gives the concept of progress paramount significance in the fight against the given. Geist must go beyond the given and develop its own concept, but only so as to further elaborate the meaning of this move