LEIBNIZ

ET LES PUISSANCES
DU LANGAGE

édité par

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METAPHOR AND THE LANGUAGE OF PHILOSOPHY

Leibniz's philosophical writings are distinguished by the prominent role played in them by figurative language. In the best-known of his works, the *Monadology*, we read that monads are «so to speak, incorporeal automata» (§ 18). «Monads have no windows through which something could enter or leave» (§ 7). «All created or derivative monads are products, and are born, so to speak, by continual fulgurations of the divinity from moment to moment» (§ 47). «Each simple substance... is... a living mirror of the universe» (§ 56) [1]. Many more examples could be given, but these are enough to motivate the question with which this essay is concerned: how are we to interpret–what significance are we to give–the profusion of metaphors on which Leibniz relies? Are such metaphors an essential feature of Leibniz's presentation of his philosophy, or could they in principle be eliminated in favor of a more precise way of speaking?

Visual imagery of the sort encountered in the *Monadology* is central to the Platonist tradition to which Leibniz is heir [2]. For those whose minds are not prepared for abstract philosophical thought, figurative language can be a way of insinuating correct opinions and motivating correct action. As

1. «...pour ainsi dire des Automates incorporels» (§ 18). «Les Monades n'ont point de fenêtres, par lesquelles quelque chose y puisse entrer ou sortir» (§ 7). «... toutes les Monades creées ou derivatives sont des productions, et naissent, pour ainsi dire, par des Fulgurations continuelles de la Divinité de moment à moment» (§ 47). «... chaque substance simple... est... un miroir vivant perpetuel de l'univers» (§ 56) (GP VI 607-616).

2. This is true both of its ancient sources and of the mystically-inspired Christian Neoplatonism associated with later thinkers such as Nicholas of Cusa, Meister Eckhart, Jakob Boehme and Valentin Weigel. Leibniz expresses an ambivalent attitude toward the latter authors, often criticizing them for their excesses and lack of clarity. Neverthless, his criticisms are accompanied by a recognition of their sound moral intentions and their effectiveness in communicating with ordinary readers. I consider these points in greater detail in «Leibniz and Mysticism, » in *Leibniz, Mysticism and Religion*, éd. A. P. Coudert, R. H. Popkin, and G. M. Weiner, Kluwer, Dordrecht, 1998. For a thorough investigation of the Platonist background to Leibniz's thought, see C. Mercer: *Leibniz's Metaphysics: Its Origins and Developments*, Cambridge University Press, New York, 2001.

Leibniz writes, « when one has once thought rightly, figurative expressions are useful for winning over those for whom abstract meditations are painful. However, when one indulges oneself with metaphors, it is necessary to take care lest they give rise to illusions » [1]. The last proviso is crucial. The tendency of figurative language to deceive, or to promote philosophical misunderstanding, is highlighted by Leibniz in a 1698 letter to Andreas Morell, in which he comments on the views of Jacob Boehme :

> I admit that ways of speaking such as those you report from Boehme, in which he calls God « the eye of the ungrounded, since the impenetrable will grasps itself in a mirror in self-knowledge », do not at all satisfy me. These are metaphorical expressions that one can turn in any way one pleases, and I for my part want ones that are appropriate and distinct [2].

This passage leaves it unclear whether Leibniz is objecting to metaphor in general, or simply to Boehme's misuse of metaphor. There is reason to favor the latter reading. Defending to Samuel Masson his own description of monads as « living mirrors, » Leibniz writes,

> This mirror supplies a figurative expression, but one that is appropriate enough and which has already been employed by philosophers and theologians when they have spoken of a mirror infinitely more perfect, namely, the *mirror of the divinity* which they make the object of beatific vision [3].

From this one might infer that Leibniz has in mind a principled distinction between appropriate and inappropriate uses of metaphor based on their capacity to draw the mind toward the truth. I shall argue that this is indeed the case. Before turning to that argument, however, it is worth considering an objection that might been seen as preempting any deeper investigation of the role of metaphor in Leibniz's thought. Leibniz is well known for promoting the plan of an ideal philosophical language in which metaphysical truths would be represented as deductive conclusions from

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1. « ... car quand on a une fois pensé juste, les expressions figurées sont utiles pour gagner ceux, à qui les meditations abstraites sont peine. Cependant quand on a de l'indulgence pour les métaphores, il faut se bien garder de ne pas donner dans les illusions » (A VI iv, B, 1473).

2. « Je vous avoue que des manières de parler comme celle que vous rapportés de Boehme ou il appelle Dieu das auge des Ungrundes, da sich der unerforschliche will in einem Spiegel zu seiner selbst erkanntnis fasset, ne me contentent gueres. Ce sont des expressions métaphoriques qu'on peut tourner comme l'on veut, et moy j'en veux des propres et distinctes » (Grua I, 139).

3. « Ce miroir fournit une expression figurée, mais assés convenable et employée déja par les Philosophes et par les Theologiens, quand ils ont parlé d'un miroir infinitement plus parfait, à savoir du *miroir de la Divinité*, qu'ils faisoient l'objet de la vision beatifique » (GP III 626). See also GP III 562.

precise definitions and a small set of axioms. Part of the work involved in constructing such a language would be disambiguating the meanings of philosophical terms and devising new symbolic forms by which they could be expressed. Plausibly, it might be thought that metaphor–and figures of speech in general–would have no place in this ideal language. Thus, however Leibniz expresses his views in popular works such as the *Mona-dology*, one would expect something different in a rigorous presentation of his metaphysics, including the elimination of all figurative language.

Leibniz's writings offer surprisingly little support for this last conclusion[1]. One text that might be thought to count in its favor appears in book II, chap. XXIX of the *Nouveaux Essais*, in which Leibniz distinguishes "exoteric" and "esoteric" modes of exposition and states that,

> If anyone wants to write like a mathematician in metaphysics or moral philosophy there is nothing to prevent him from rigorously doing so[2].

He further implies that if anyone were to write in this way, it would require definitions that fix the significations of terms, and that this would mean ceasing « to give to words through a figure of speech a sense slightly different from their usual one »[3]. One would be hard-pressed to read this as an argument for the complete elimination of metaphor. In the first place, the passage leaves unspecified what is meant by the « usual sense » of words. Accepting that ambiguity or equivocation is to be avoided, it does not follow that philosophical terms can be defined in a way that avoids metaphor or figurative language entirely. Second, it is open to doubt whether Leibniz himself succeeds in writing as « a mathematician in metaphysics or moral philosophy ». Although he reiterates his support for the ideal of a demonstrative metaphysics, his failure to execute the plan in any detail may tell us something important about its prospects for success[4].

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1. The early « Preface to Nizolius » offers the following equivocal comment: « ... nunc illud attentendum est, sive popularibus, sive Technicis utamur, *tropos* tamen *aut nullos aut exiguos aptosque esse debere* » (GP IV 148).

2. « Et si quelqu'un vouloit écrire en mathematicien dans la Metaphysique ou dans la morale rien ne l'empecheroit de le faire avec rigueur; quelques uns en ont fait profession, et nous ont promis des demonstrations mathematiques hors de mathematiques, mais il est fort rare qu'on y ait reussi » (A VI VI 260-1). All translations from the *Nouveaux Essais* are drawn from G.W. Leibniz, *New Essays on Human Understanding*, trad., éd. P. Remnant, J. Bennett, Cambridge University Press, Cambridge, 1981.

3. « ... de donner aux mots par une manière de *Trope* quelque sens un peu différent de l'ordinaire » (A VI VI 260).

4. See D. Rutherford: « Demonstration and Reconciliation: The Eclipse of the Geometrical Method in Leibniz's Philosophy, » in *Leibniz's "New System" (1695)*, éd. Roger S. Woolhouse, Olschki, Firenze, 1996.

I conclude that the *prima facie* reasons for thinking that metaphorical expressions must be eliminated from philosophical discourse are not compelling and that more work must be done to understand the role they play in Leibniz's writings. In this paper, I shall defend three theses concerning Leibniz's position. 1) Given the principles of Leibniz's theory of meaning, metaphor is ineliminable from metaphysical and theological discourse. Because the objects of these sciences are supersensible, one can refer to them only by means of tropes or metaphors. 2) Leibniz employs the notion of metaphor as an explanation of word meaning, not an explanation of conceptual content: although we can only *speak* about supersensible things in metaphorical terms, we *understand* that reality directly in terms of innate intellectual ideas. 3) For Leibniz, the proper use of metaphor depends upon structure-preserving analogies between sensible and intelligible things. Yet because such analogies are never exact, and the correspondence between the sensible and the intelligible is incomplete, there is an inevitable imprecision in philosophical language[1].

MEANING AND METAPHOR

Linguistic meaning, for Leibniz, is a natural phenomenon amenable to causal analysis. The origin of word meaning lies in the affective response of human beings to their environment, particularly the imitation of natural sounds (onamatopœia) and the agreement between certain sounds and certain emotional states[2]. From this starting point, Leibniz speculates, « words have passed by means of metaphors, synecdoches and metonymies from one signification to another, without our always being able to follow the trail »[3]. Following this trail is the work of etymology, a branch of

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1. In what follows I expand on the preliminary treatment of these questions in D. Rutherford: « Philosophy and Language in Leibniz, » in *The Cambridge Companion to Leibniz*, ed. N. Jolley, Cambridge University Press, New York, 1995.

2. Cf. *De linguarum origine naturali*, ca. 1677-78 (?): « Certam quandam et determinatam inter Res et verba connexionem esse dici nequit; neque tamen res pure arbitraria est, sed causas subesse oportet, cur certae voces certis rebus sint assignatae... Habent tamen Linguae originem quandam naturalem, ex sonorum consensu cum affectibus, quos rerum spectacula in mente excitabant. Et hanc originem non tantum in lingua primigenia locum habuisse putem, sed in linguis posterius partim ex primigenia, partim ex novo hominum per orbem dispersorum usu enatis. Et sane saepe onomatopœia manifeste imitatur naturam, et cum *coaxationem* tribuimus ranis, cum *st* nobis significat silentii vel quietis admonitionem, et *r* cursum, cum *hahaha* ridentis est *vae* dolentis » (A VI iv, A 59). See also *NE* III.ii. 1 (A VI vi 281-3).

3. « Ce qui fait comprendre en même temps comment les métaphores, les synecdoques et les metonymies ont fait passer les mots d'une signification à l'autre, sans qu'on en puisse

history, for languages in general are « les plus anciens monuments des peuples » (A VI vi 285). The details of Leibniz's etymologies do not concern us, but a general thesis drawn from the evidence of his linguistic studies does. The thesis is that, for Leibniz, all linguistic meaning is originally empirical meaning, or meaning that it is given to spoken or written signs in virtue of reproducible sensory experiences. A corollary of this thesis is that the meanings of linguistic expressions that purport to refer to supersensible or purely intelligible objects or relations must be metaphorical meanings – meanings that involve an extended or figurative use of an expression whose root meaning is empirical.

Leibniz's acceptance of this thesis and its corollary can be established with respect to both denominative terms and particles, or what he distinguishes as the "matter" and "form" of speech (A VI ivA, 882). Concerning the former, he writes,

> the names of all natural, sensible, and frequently occurring things were prior to those of rare, artificial, moral and metaphysical ones. Thus, *pneuma, spiritus, anima*, words which now signify incorporeal things, originally denoted gases, from which they were transferred to other invisible and nonetheless active things, such as souls and minds [1].

This passage repeats a point made in the *Nouveaux Essais*. In the language of the Hottentots, Leibniz recalls, the Holy Spirit is denominated by words that signify « a gentle and pleasant wind ». And this is not unreasonable, he continues,

> since our Greek and Latin words *pneuma, anima, spiritus* primarily signify simply the air or wind which one breathes, as being one of the most rarified things that our senses acquaint us with; one starts with the senses in order to lead men gradually to what is above the senses [2].

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toujours suivre la piste » (A VI vi 283). Cf. « Preface to Nizolius » : « Unde boni Grammatici, atque etiam Philosophi est continuatis troporum soritis, ut sic loquar, vocis usum ex origine deducere posse » (GP IV 140).

1. « Rerum autem naturalium, sensibilium, crebrius occurentium appellationes priores fuêre quam rariorum, artificialium, moralium et metaphysicarum. Itaque pneûma spiritus, anima, quae nunc vocabula res incorporeas significant, originarie denotant flatum : unde translata sunt ad alias res invisibles, et tamen activas, quales sunt animae et spiritus. », *Epistolica de Historia Etymologica Dissertatio*, § 23, quoted from S. Gensini : *Il Naturale e Il Simbolico : Saggio su Leibniz*, Bulzoni, Roma, 1991, p. 229.

2. « Je me souviens aussi que dans le *credo* fait pour les Hottentots, on fut obligé d'exprimer le *Sainct Esprit* par des mots du pays qui signifient un vent doux et agreable. Ce qui n'estoit par sans raison, car nos mots grecs et latins, *pneuma, anima, spiritus* ne signifient originairement que l'air ou vent qu'on respire, comme une des plus subtiles choses qui nous soit connue par les sens : et on commence par les sens pour mener peu à peu les hommes à ce qui est au-dessus des sens » (A VI vi 104).

Leibniz is prepared to assert as a general truth that « the terms of theology, moral philosophy and metaphysics are originally derived from earthy things »[1]. Such terms begin by signifying sensible objects and acquire an extended, or metaphorical, meaning when transferred to non-sensible objects.

The same set of commitments is observed in the case of particles. With respect to the most important class of these, prepositions, Leibniz defends the view that all prepositions originally signify spatial or kinematic relations, and that thereafter their meaning is extended to include intelligible relations, such as those of logical consequence or ontological dependence. In a study from the mid-1680s, he writes : « All prepositions properly signify a relation of place, figuratively some other relation. A relation of place is either simple, or involves motion »[2]. In a longer piece, entitled in the Academy edition *Analysis Particularum*, he expands on this idea :

> It is not surprising that human beings should have had only place as a basis for forming prepositions, for in the beginning they perceive only sensible or corporeal things, from which particular words will be transferred to invisible thing through tropes[3].

This account resurfaces in the *Nouveaux Essais*, where Leibniz affirms that prepositions « are all derived from place, distance and motion and subsequently transferred to all kinds of changes, orders, sequences, differences, and conformities »[4]. He illustrates this claim with a number of examples, including one central to metaphysics : « just as what is shut up somewhere or is *in* some whole, is supported by it and goes where it goes, so accidents are thought of similarly as *in* the subject–*sunt in subjecto, inhaerent subjecto* »[5].

Generalizing from these examples, we may conclude that, for Leibniz, metaphor is ineliminable from philosophical discourse. Since all word

1. « ...les termes de Theologie, de Morale et de Metaphysique sont pris originairement des choses grossieres" (A VI vi 277).

2. « Omnes praepositiones proprie significant relationem Loci, translate aliam relationem quamcunque. Relatio Loci vel simplex est, vel motum continet; Motum scilicet vel rei quam afficit praepositio, vel aliarum » (A VI iv, A, 645).

3. « Mirum autem non est homines in praepositiones formandis loci tantum rationem habuisse, quia initio res tantum sensibles sive corporales spectarunt; quibus proprias voces postea per tropos ad res invisibles transtulerunt » (A VI iv, A, 649).

4. « ... *prepositions...* qui sont toutes prises du lieu, de la distance, et du mouvement, et transferées depuis à toute sorte de changemens, ordres, suites, différences, convenances » (A VI vi 277).

5. « Et comme ce qui est enfermé en quelque lieu ou dans quelque tout, s'y appuye, et est osté avec luy, les accidens sont considerés de même, comme dans le sujet, *sunt in subjecto, inhaerent subjecto* » (A VI vi 277-8).

meaning is originally empirical meaning, terms that signify intelligible objects or relations can do so only as metaphors.

LINGUISTIC AND CONCEPTUAL METAPHOR

The language by which we endeavor to speak about the intelligible realm is borrowed from ordinary empirical discourse – language by which talk about the properties and relations of bodies. On this account, terms that originally refer only to sensible objects and relations acquire an extended meaning as metaphors and thereby come to refer to non-sensible objects and relations. But how precisely does this extension of meaning occur? How are we to explain the figurative use of language?

According to one influential theory, the linguistic phenomenon of metaphor is a manifestation of a more basic form of conceptual metaphor. As Lakoff and Johnson describe it, « The essence of metaphor is understanding and experiencing one kind of thing in terms of another »[1]. Our ability to use metaphors that refer to the "structure", "foundation" or "stability" of a theory, for example, derives from that fact that the concepts in terms of which think about theories are structured by the concepts in terms of which we think about buildings. We metaphorically *talk* about theories in architectural terms because that is how we *think* about theories. Lakoff and Johnson combine this explanation of how metaphors work with a claim about the relative priority of different kinds of concepts. Their investigation of a wide range of metaphors leads them to posit that primary (or "source-domain") concepts are invariably ones that represent concrete bodily experiences and that abstract concepts arise as metaphorical extensions of these. Concerning the figurative use of prepositions such as "in", Lakoff and Johnson agree with Leibniz that our original understanding of such prepositions is in terms of perceivable spatial relations. However, they argue that what we understand when we use such terms metaphorically is at least partly determined by the experiences (or « image schemata ») that support our original use of the term. Thus, they believe, it is a mistake to think of metaphorical meaning (or the content of metaphors) as determined independently of bodily experience[2].

By restricting the content of metaphors in this way, Lakoff and Johnson's conceptual metaphor theory effectively rules out the possibility

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1. G. Lakoff and M. Johnson: *Metaphors We Live By*, University of Chicago Press, Chicago, 1980, p. 5.

2. See, especially, M. Johnson: *The Body in the Mind: The Bodily Basis of Meaning, Imagination and Reason*, University of Chicago Press, Chicago, 1989, chap. 2.

of metaphysics as a science of purely intelligible objects and relations. Since Leibniz aims to exploit the notion of metaphor to explain how we are able to talk about just such a realm, his account of metaphor must differ from theirs. As is well known, Leibniz premises our claim to have knowledge of metaphysical truth on the assumption that we have direct cognitive access to intelligible entities through innate ideas of the understanding:

> reflection is nothing but attention to what is within us, and the senses do not give us what we carry within us already. In view of this, can it be denied that there is a great deal that is innate in our minds, since we are innate to ourselves, so to speak, and since we include Being, Unity, Substance, Duration, Change, Action, Perception, Pleasure, and hosts of other objects of our intellectual ideas? And since these objects are immediately related to our understanding and always present to it... is it any wonder that we say that these ideas, along with what depends on them, are innate [1].

Leibniz maintains that knowledge acquired through reflection is independent of our ability to express it linguistically. Truth depends upon

> relationships among the objects of ideas, by virtue of which one idea is or is not included within another. That does not depend on languages, and is something we have in common with God and the angels [2].

He insists on this sharp distinction between knowledge of intellectual truth and its linguistic expression, in part, because linguistic meaning is empirically determined. Leibniz accepts that, as embodied creatures, we are largely limited to operating at the level of sense experience [3]. This is the

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1. « Or la reflexion n'est autre chose qu'une attention à ce qui est en nous, et les sens ne nous donnent point ce que nous portons dejà avec nous. Cela étant, peut-on nier, qu'il y ait beaucoup d'inné en nostre esprit, puisque nous sommes innés à nous mêmes pour ainsi dire, et qu'il y a en nous : Estre, Unité, Substance, Durée, Changement, Action, Perception, Plaisir, et mille autres objets de nos idées intellectuelles? Et ces objets étant immediats et toujours presents à nostre entendement... pourquoy s'étonner que nous disions, que ces idées nous sont innées avec tout ce qui en depend? » (A VI vi 51-2).

2. « Il vaut donc mieux placer les verités dans le rapport entre les objets des idées, qui fait que l'une est comprise ou non comprise dans l'autre. Cela ne depend point des langues, et nous est commun avec Dieu et les Anges » (A VI vi 397). For Leibniz, this is consistent with the claim that our thoughts always include some sensible trace, such as a word or sound. This is the basis of what he calls « blind » or « symbolic » thought: a pattern of speech or reasoning, in which we replicate the form of thought without actually apprehending the relevant ideas. See A VI vi 77, 212, 286.

3. As he writes in the *NE*, « C'est que nos besoins nous ont obligé de quitter l'ordre naturel des idées, car cet ordre seroit commun aux anges et aux hommes et à toutes les intelligences en general, et devroit estre suivi de nous, si nous n'avions point égard à nos interests : il a donc fallu s'attacher à celuy que les occasions et les accidens où nostre espece est sujette nous ont fourni... » (A VI vi 276).

level at which language functions; however, it is not the level at which we grasp the fundamental truths of metaphysics and moral philosophy.

For Leibniz, the crucial fact about philosophical metaphors is that they involve the transfer of a term from an original sensible object or relation to an *independently known* intelligible object or relation. Returning to the examples considered earlier, Leibniz believes that denominative terms such as *anima* or *spiritus* acquire meaning originally by referring to sensible objects (gases, breath, air). However, he denies that we acquire the *concept* of soul or mind through sense experience. Rather, we know these supersensible objects through innate intellectual ideas. For *anima* or *spiritus* to function as a philosophical term, therefore, requires its transfer from a sensible object to a purely intelligible object. The same point holds for the figurative use of prepositions. Prepositions such as "in" originally signify a spatial relation that is grasped perceptually. To understand that A is *in* B, I must be able to represent the spatial containment of A by B, and this I can do only perceptually. However, Leibniz proposes a more general notion of one thing's « being in » another that is defined independently of spatial representation (and hence of perception). On this account,

> We say that an entity *is in* or is an ingredient of something, if, when we posit the latter, we must also be understood, by this very fact and immediately, without the necessity of any inference, to have posited the former as well [1].

This second notion of one thing's being in another presupposes our grasp of the *necessary* dependence of one thing on another–a relation which, for Leibniz, cannot be perceived by the senses but is grasped by the understanding alone. Thus, the logical concept of *inesse* is independent of the concept of spatial containment. Nevertheless, it is Leibniz's view that the word "in" originally acquires meaning in connection with the latter, spatial relation, and that it is subsequently transferred as a metaphor to the more general logical relation.

METAPHOR AND ANALOGY

A term becomes a philosophical metaphor when it is transferred from a sensible object or relation to an independently known intelligible object or relation. In explaining the possibility of such transfers, or extensions of meaning, Leibniz chiefly appeals to the notion of *analogy*. What justifies

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1. « *Inesse* alicui loco dicimus vel alicujus *ingrediens* esse, quod aliquo posito, eo ipso immediate poni intelligitur, ita scilicet ut nullius opus sit consequentiis » (GM VII 19).

using a term in an extended or metaphorical sense is the presumed analogy between the respective domains of sensible and non-sensible things[1]. As Leibniz recognizes, the notion of analogy itself is an imprecise one[2]. Thus we should expect to find cases in which metaphors are more or less appropriate based on how strong the analogy is. Some analogies assume no more than a loose similarity of attributes. The most deeply rooted philosophical metaphors are of this sort: *anima, spiritus, substantia*. These are historical metaphors, which for all intents and purposes have ceased to function as metaphors. We are so familiar with their metaphysical usage that the implied analogy to sensible things has lost its relevance for us.

Not all metaphors are like this. Within Leibniz's philosophy, there remain many that are very much alive – metaphors that he calls on in elaborating the details of his metaphysical system. Here metaphor assumes an important heuristic function. As we have seen, Leibniz rejects the claim that our knowledge of intelligible entities is derived as a metaphorical extension of sensory or bodily representations. Nevertheless, Leibniz believes that metaphors can be useful in drawing us toward knowledge of supersensible things. When he describes the monad as a « living mirror », we do not by that fact alone acquire distinct knowledge of any property of a monad, but we are meant to grasp *something* about the monad – some property of it that is analogous to the property of mirroring. The question is whether we can say anything more about the kind of metaphors that best serve this heuristic function. In Leibniz's view, is a loose similarity of attributes enough to support an apt philosophical metaphor, or is something more required? In what follows, I shall sketch an answer to this question by looking at two of the key metaphors of Leibniz's theory of monads: the monad as a « metaphysical point » and as a « living mirror ».

When Lady Masham objected to Leibniz that she could form no conception of an « unextended substance », Leibniz replied: « since you have some notion of substance and also of the non-extended (for example, of a point), you have despite your excessive humility a notion of non-

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1. « Il sera bon cependant de considérer *cette analogie de choses sensibles et insensibles* qui a servi de fondement aux *tropes* » (A VI vi 277).

2. « ... et comme ces analogies sont extre[me]ment variables et ne dependent point de quelques notions determinées... » (A VI vi 278). The explanation of metaphor is only one example of Leibniz's use of the concept of analogy. His defense of the Christian mysteries relies on a similar appeal to the power of analogy. Cf. *Théodicée*, « Discours préliminaire », § 54-55 (GP VI 80-1). For broader treatments of the topic, see H. Poser, « Analogia und Expressio bei Leibniz », and P. Beeley, « Analogy and Infinity in Leibniz », both in *G. W. Leibniz: Analogía y expresión*, éd. Q. Racionero and C. Roldán, Editorial Complutense, Madrid, 1994.

extended substance » [1]. Leibniz draws on the notion of a point to illustrate an essential property of monads : their lack of spatial extension. In no way, though, does he mean to identify a monad with a geometrical point, for that would be to embrace the « labyrinth of the continuum », which he struggled to escape in his early writings [2]. At most, Leibniz offers the notion of a point as a metaphor for the non-spatiality of monads. Geometrical points and monads are fundamentally different kinds of things; nevertheless, they share the property of being non-extended. In Leibniz's view, this is a fact about monads that can be grasped independently of any metaphor. However, if someone like Lady Masham fails to understand what he means, he can appeal to the idea of a geometrical point, which also lacks extension and which is more closely tied to sensory experience. In calling the monad, a « metaphysical point » or « point of substance », Leibniz indicates the way in which a monad is like a point (in being non-extended) and yet also not like a point (in being real or substantial).

The famous opening section of the *Monadology* declares : « The *monad...* is nothing but a simple substance which enters into composites; *simple*, that is, without parts » [3]. To say that the monad is « without parts » is, again, to analogize it to a point. In this passage, however, Leibniz extends the metaphor to convey a further essential property of monads. This is the way in which they, like points, are the ultimate unities in terms of which compound entities are understood. Leibniz emphasizes that it is an error to think of geometrical points as the smallest parts of a line. Likewise, he maintains, it is wrong to think of monads as the smallest parts of a composite entity or body. In both cases, the correct account of the relationship is given in terms of the notion of an « immediate requisite » :

> It must not be said that indivisible substance enters into the composition of a body as a part but rather as an essential internal requisite, just as a point, it is granted, is not a part contributing to the composition of a line, but

1. « Et comme vous avés quelque notion de la substance et aussi d'un non-étendu (par exemple d'un point), vous avés malgré vostre trop grand humilité une notion de la substance non-étendue » (GP III 362). Leibniz indicated that this passage was to be excluded from the sent version of the letter.

2. « De dire que les Ames sont des *point intelligens*, ce n'est pas une expression assés exacte. Si je les appelle des centres ou des concentrations des choses externes, je parle par analogie. Les points, à parler exactement, sont des extremités de l'etendue, et nullement les parties constitutives des choses ; la Geometrie le montre assés » (GP VI 627).

3. « La *Monade*, dont nous parlerons icy, n'est autre chose, qu'une substance simple, qui entre dans les composés ; *simple*, c'est à dire, sans parties » (GP VI 607).

something heterogeneous that is nevertheless required in order for the line to be and to be understood[1].

The metaphor of a « metaphysical point » turns out to be a particularly apt one for Leibniz, because it is based on a structural analogy between the properties of monads and the properties of geometrical points. Although the two classes of entities differ in important respects, they play similar roles in grounding composite entities within their respective domains.

The image of the monad as a « living mirror » is ubiquitous in Leibniz's writings. While balking at some uses of this metaphor (e.g. by Boehme), Leibniz judges it « appropriate enough » in the case of the monad (GP III 626). At first glance this might seem surprising given the obvious differences between the properties of mirrors and monads. There is a loose sense in which we can talk of monads as "mirroring" other monads. However, if we press the analogy, we reach paradoxical conclusions. If a monad's perceptions are analogous to the reflections in a mirror, what is the monad reflecting? Not other monads, for they stand in no causal relation to the mirroring monad, nor do they correspond in an obvious way to the content of its perceptions. Those perceptions are of *extended* bodies; monads are *unextended* simple substances. If we say, on the other hand, that the monad mirrors the contents of the perceptions of other monads, the ground of reflection becomes reflection itself, setting up an infinite regress that is impossible in the case of physical mirroring.

Leibniz's way out of this problem is to insist that, at this informal level, the mirroring metaphor is of limited value. However, he believes the metaphor can be made more apt by isolating a formal property that the two entities share, namely, expression. In general, one thing is said to express another if there is « a certain constant relational law, by which particulars in the one can be referred to corresponding particulars in the other »[2]. In the case of a mirror, this relation is made precise when we interpret the mirror's reflective properties in geometrical terms. We are then able to identify mathematical relations between incident rays of light and reflected rays, or between images and reflected objects. Only when we have taken this additional step does a mirror become an apt metaphor for the representational

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1. « Interim non ideo dicendum est substantiam indivisibilem ingredi compositionem corporis tanquam partem, sed potius tanquam requisitum internum essentiale. Sicut punctum, licet non sit pars compositiva lineae, sed heterogeneum quiddam, tamen necessario requiritur, ut linea sit et intelligatur. », *Nouvelles lettres et opuscules inédits de Leibniz*, éd. A. Foucher de Careil (Paris, 1857), 320. For further discussion, see D. Rutherford: « Leibniz's "Analysis of Multitude and Phenomena into Unities and Reality" », *Journal of the History of Philosophy* 28, 1990, p. 525-52.

2. « Sufficit enim ad expressionem unius in alio, ut constans quaedam sit lex relationum, qua singula in uno ad singula respondentia in alio referri possint », C, p. 15.

nature of a monad. And, significantly, this aptness is tied to the formal property of expression rather than to our ordinary experience of mirroring.

From these examples, we can draw several lessons concerning Leibniz's view of the proper role of metaphor in philosophy. In general, Leibniz assigns a secondary status to metaphors based solely on a similarity of attributes. He employs such metaphors for heuristic purposes, but if, as with our ordinary notion of mirroring, we can say nothing more than that *A* is like *B* in respect to *F* (e.g., monads are like physical mirrors in respect to reflection), the metaphor is likely to be of limited philosophy value. The metaphors Leibniz prizes most highly are those based upon structure-preserving analogies. « Metaphysical point » is a good metaphor for the monad, because monads play the same formal role as points in grounding composite entities. « Living mirror » *becomes* a good metaphor, when it is interpreted in terms of the formal relation of expression, whereby it signifies a law-like relation between the elements of two domains. With respect to structure-preserving analogies, it is no surprise that Leibniz finds his most fertile trove of metaphors within geometry and other branches of mathematics. Included here are the metaphorical uses of prepositions such as "in", which rest on analogies between spatial relations and relations of ontological dependency[1].

No matter how apt a metaphor, however, there is bound to be some slippage between it and the reality it is intended to communicate. For Leibniz, this is an inevitable consequence of the fact that metaphors purport to convey what is purely intelligible in terms of sensible objects and relations. Leibniz stresses how, when taken literally, the conflation of these domains can lead to significant philosophical errors. In principle, then, one might think that the most accurate presentation of his philosophy would be one in which the heuristic function of metaphor was minimized, and the content of his doctrines was communicated directly, without reliance on sensory imagery. Yet how could this be done? As argued above, to the extent that such a presentation took a linguistic form, it could not be seen as abandoning metaphor altogether. According to Leibniz, *all* word meaning, including that of metaphysical terms, originates as empirical meaning, from which it is transferred to supersensible objects and relations. At best, then, one might envision a scenario in which a philosophy was articulated exclusively in terms of dead metaphors, *i.e.*, metaphors that had ceased to

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1. Other examples abound. In letters to the Electress Sophie, Leibniz explains the representive nature of the monad by comparing it to a spatial point in which an infinity of rays converge, with every pair determining a unique angle (GP VII 554, 566-7). Another prominent instance is his use of the mathematical notion of a « law of the series » to describe the primitive active force of substance (A VI III, 326; GP II 262-4).

rely on our recognition of an analogy between sensible and intelligible things. We have seen how this has occurred in the case of terms such as *spiritus* and *anima*. As it functions as a technical term in Leibniz's philosophy, *perceptio*, defined formally as « *multorum in uno expressio* » (GP II 311), might be regarded similarly.

Pursuing this line of thought brings us back to Leibniz's dream of an ideal philosophical language. This would not be a language that was entirely free of metaphor, but it would be one in which metaphor did no significant work in conveying the content of philosophical concepts. These would be grasped directly as distinct intellectual ideas, and words would be no more than conventional signs indicating entailment relations among ideas. Such a language would have the advantage that reasoning carried out within it would be a purely mechanical process, in which there would be no latitude for error. Thought would be « blind thought », in which we were led to the correct conclusions by the very form of the language (A VI ivA 918-20).

Throughout his career, Leibniz remained fascinated by the idea of a formal presentation of his philosophy. In practice, though, he also recognized the limitations of such an approach. Blind thought can lead a reasoner to formally correct conclusions, but unless the reasoner begins with an understanding of the relevant concepts, there is no comprehension of the conclusions reached. In his efforts to defend and build support for his philosophy, it is precisely such comprehension that Leibniz aimed to promote. Consequently, blind thought alone could not suffice for his purposes [1]. When interlocutors failed to see the truth of Leibniz's conclusions, he could only attempt to convey that truth by appeal to what was more familiar to them. In doing so, he inevitably fell back on the heuristic function of metaphor to convey the purely intelligible in terms of the sensory or imaginable.

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1. Cf. *NE* II.xxi. 35 : « On raisonne souvent en paroles sans avoir presque l'objet même dans l'esprit. Or cette connoissance ne sauroit toucher, il faut quelque chose de vif pourqu'on soit emû. Cependant c'est ainsi que les hommes le plus souvent pensent à Dieu, à la vertu, à la felicité ; ils parlent et raisonnent sans idées expresses ; ce n'est pas qu'ils n'en puissent avoir, puisqu'elles sont dans leur esprit. Mais ils ne se donnent point la peine de pousser l'analyse » (A VI vi 186).