NICOLAS DE CUES ET G.W. LEIBNIZ : INFINI, EXPRESSION ET SINGULARITÉ
Edited by Anne-Lise Rey et Frédéric Vengeon

Reviewed by Ohad Nachtomy

This volume consists of an introduction and seven articles (all in French, whose titles can be translated as follows): "Mathematics and Theology: the infinite in Nicholas Cusanus" by Jean Celeyrette; "The missing link" by Pierre Magnard, which seeks to restore the gap between Nicholas Cusanus and the moderns through the work of Charles de Bovelles (ignored by many historians of ideas); "Perfection, harmony, and divine choice in Leibniz: in what sense is the world best?" by Paul Rateau; "Mathematical and metaphysical infinity: on how to use Leibniz to read Cusanus (and others)" by David Rabouin; "Leibniz and the perception of the future" by Marc Parmentier; "The power of infinity and the paradoxes of singularity. Infinity and contraction in Nicholas Cusanus", by Frédéric Vengeon; and "The paradoxes of singularity: infinity and perception in G.W. Leibniz" by Anne-Lise Rey.

As the editors of this very interesting collection state, its aim is to compare the philosophical systems of Nicholas Cusanus and that of Leibniz. The method of comparison they propose is very interesting as well: On the one hand, they are not seeking to merely establish causal links from Cusanus to Leibniz (although they provide decisive textual evidence that Leibniz read Cusanus). On the other hand, they also wish to avoid an examination of the systems in abstraction from their historical context. Instead, what the editors of this volume seek to highlight are the philosophical relations between the systems of Cusanus and Leibniz.

An attempt to compare a premodern/medieval metaphysics with one that relates directly to the metaphysical systems of Descartes and Spinoza might raise some eyebrows. It goes without saying that the 15th century's metaphysics of Cusanus and that of Leibniz respond to very different contexts. The editors are well aware of this gap and their methodological approach reflects the way they address this difficulty. Their comparative project is based on the conviction that, in spite of the historical gaps, Cusanus and Leibniz's systems present profound homologies. The homologies the editors have in mind are summed up as follows: Each thinker presents a metaphysics of the infinite (as pointed out by the articles of Celeyrette and Rateau); an expressive ontology within the framework of *complicatio/explicatio* (see Rey's article); a valuation of singularity in its relation to its source (Vengeon's article treats this point) (147).

The main rationale for taking up this comparative approach, however, is the hypothesis that both systems (Cusanus' and Leibniz's) respond to a similar metaphysical problem: the relations between the finite and the infinite, seen as the relation between a metaphysical expression of the infinite, on the one hand, and the valuation (*valorization*) of created singularity, on the other (148). I think that singularities (in the plural) would be more adequate here, as what the editors refer to is the singular character of a multiplicity of created things.

This central point, regarding the relations between the infinite and the finite is nicely brought out in Vengeon's article. For example, Vengeon writes:

> In the 15th century Nicolas Cusanus has produced a metaphysical gesture which seems to us decisive for early modern metaphysics and particularly for Leibniz's philosophy: he develops a metaphysics of created singularity stemming from an affirmation of the infinity of its source (*Principe*). The power of divine infinity reinforces the value of each singular creature thanks to an expressive disposition of the infinite in the finite.[1] (235)

> [Cusanus'] cosmological infinitism follows from a metaphysical speculation on the infinite. The universe is thought of as a degradation of divine infinity in a potential infinity, which defines itself through privation of limit(s) rather than through a negation of every limit. The infinite expresses itself in an indefinite series of finite beings.[2]

> The operation by which the infinite expresses itself in the finite [realm] is called *contractio*. The infinite suffers no partitioning but manifests itself by a kind of reduction that does not operate on a single plan but on multiple levels.[3]

As Cusanus wrote:

> Contraction signifies contraction of something, for example, in such or such a being. Thus God, who is One, is the one in the universe, while the universe is in the ensemble of things of the universe in a contracted manner.[4]

The *contractio/explicatio* metaphor is surely a powerful one. It is also clear that seeing the created world as a contracted expression of the One/Infinite God, manifested in a multiplicity of singular things, each expressing God's essence in a unique way, evokes the Leibnizian way of conceptualizing the relations between the infinity of God and the way it expresses itself in created things.

In addition, Vengeon observes that Nicolas Cusanus has formulated a principle of the identity of indiscernibles centuries before Leibniz. But, unlike Leibniz, who based the principle of indiscernibles on that of sufficient reason, Cusanus has founded it on the (principle of) the degradation of the infinite in the created world. (241) Vengeon cites the following passage as evidence for Cusanus' early formulation of the principle:

> It is evident that one cannot find two things or more similar and equal to one another to a point that one could still find others that would be more similar to infinity.[5]

Even if this formulation is not crystal clear, Vengeon is right in observing that,

> This is a [...] formulation of the principle of indiscernibles, which would play a fundamental role in the expressive metaphysics of Leibniz. The two thinkers affirm the infinite variety of reality but do not rely on the same principle: for Nicholas Cusanus, it is the impossibility of infinite equality between two finite beings which necessitates this differentiation; for Leibniz, it is the economy of the principle of sufficient reason that prevents that two things differ without a reason (and for this reason, two absolutely similar things would be identical). (242)

Such passages make it clear that this comparative enterprise is extremely pertinent and suggestive. At the same time, I suspect that for some Anglophone historians of philosophy, some of this jargon may seem somewhat vague. Some of the vagueness disappears in reading the articles, but a certain degree of vagueness is inherent in the philosophical systems concerned (and that of Cusanus is certainly extremely difficult to explicate). Even if the editors could be a bit more explicit as to what they mean by terms such as singularity, the individual articles and the comparative enterprise taken here are extremely useful and would grant a perceptive reader many valuable insights. Some of the articles may remain a bit too suggestive (and not sufficiently explicative) for some, but herein also consists its main merit: reading through the articles, at least for a Leibniz scholar such as myself, is not only suggestive of many interesting research directions, but is also very informative, provocative and, I would say, inspiring. The collection shows once again that looking at relatively unknown sources and, in this case, Cusanus, sheds new light on Leibniz's philosophy not only in the sense of revealing some of its sources but also in the sense of disclosing some of its complex metaphysical structure. It also shows that there is a lot to learn from the vigorous research in the history of philosophy currently done in France by a very competent generation of scholars.

Given the limited space here, I will exemplify this point a bit further by looking more closely at Anne-Lise Rey's article on infinity and perception in Leibniz. Anne-Lise Rey begins her article with the following question:

> How does Leibniz's notion of perception allow us to better understand the relation between the singularity of a [created] substance, seen as a position in the world, and the perfection of God?[6]

This is a beautiful question. To which Rey has a sophisticated answer, integrating not only many Leibnizian texts but also showing how medieval texts, in general, and those of Nicolas Cusanus, in particular, shed new light on one of Leibniz's rather obscure positions, namely the view that the very structure of reality admits of degrees and can be sorted out according to different levels of perfection.

Rey's hypothesis is that perception provides the means by which we can understand the relation between the infinity of God and the singularity (that is, the uniqueness of individual substances) when perception is understood through Leibniz's notion of action as conceptualized in his dynamics. This complex response is based on Leibniz's view that the essence of an individual substance is its power of action and that the power of action of each individual substance admits of degrees – degrees that can, at least in principle, be measured and thus provide a measure of reality.

Seen against the medieval background concerning the latitude (or breadth) of forms (sections II and III), Rey observes that, "a central issue in the conceptualization of action is that action can be seen as a measure of the real in the sense that it allows to distinguish degrees of reality in things through their relations to other things". "This motive", she writes, "constitutes a principle for differentiating the real that brings out the complex relation between perception and perfection. Singularity is conceived as the assignment and identification of a degree of perfection in each real thing and is expressed in the order of the world in the infinity of its relations" (252).[7]

Rey goes on to relate this motive to the individual's law of series. According to Leibniz, the law of series prescribes the activity of each individual and thus contains all its future states and constitutes its persisting principle (264). If the active principle is, through its action, an expression of the law of order, its role in the definition of substance for Leibniz seems to "consist is the progression of perception in each monad". As we know, perceptions, for Leibniz, vary according to whether they are more distinct and less confused or more confused and less distinct. Rey connects this variation of perception with variation of perfection, so that degrees of perception express degrees of perfection, according to their capacity to express the harmony of the world or the infinity of relations that make it up (265). Thus the mark or reality of things is reduced to their perceptive and expressive capacity (265).

This expression, she concludes, is the development of the law of the series which contains the series of expressive relations: each expression appears then as the singular mark of a degree of perfection through which the perfection of God manifests itself (265-66). This conclusion seems consistent with important strands of Cusanus' metaphysical picture and evokes in particular his reasoning for the impossibility of two perfectly similar created things.

I think that Rey's conclusion is not only sound and correct but that it may also be extended a bit further. In particular, I think it can be extended not only to interrelations among substances, thus accounting for Leibniz's notion of aggregate (264), but also to intra-relations that define the very nature of Leibnizian substance. It seems to me that the degree or measure of reality is not merely the capacity to express the harmony in the world but it is also an expression of the relations of domination and subordination within substances (or monads). This implies that degrees of perfection and reality can be related to (and explicated in terms of) the place an individual holds within the hierarchical structure Leibniz sees as defining its very nature, that is, its nested structure.[8]

In short, I fully agree with Rey's reading of the internal law of a substance but I would like to add to her story Leibniz's view of the nested structure of each individual substance. This picture would extend the notion of degrees of perfection in terms of activity, so that the activity of substances is to be understood not only as perception but also in terms of domination and subordination relations, according the individual's place within the structure.

I would also add that this conception coheres with the connection between degrees of perfection and degrees of reality. The result is interesting and consistent with many other Leibnizian points, namely, that created singular substances are partially infinite and partially perfect, which agrees with Cusanus's picture of the created world as a contracted Maximum. And this is where one can see once again the great value of this volume's attempt to relate Leibniz and Cusanus' views in a way that sheds light on both.

One of the most interesting points arising from the comparison between Cusanus and Leibniz, is this: Cusanus formulates very clearly a distinction that plays an important role in Leibniz, viz., the distinction between the absolute infinity (or maximality) of God, which does not admit of degrees, and the world of contracted maximality, which does admit of more or less. This distinction can be very fruitfully fleshed out in Leibniz (following Galileo and Spinoza) as a distinction between quantitative versus non-quantitative senses of infinity. This is an extremely interesting point that is not sufficiently emphasized in this volume.

The translation of abstracts into English is very welcome but should be done with a bit more care (see for example the translation on page 253). In any event, such a minor shortcoming should not deter any Leibniz scholar from studying this most interesting and valuable collection of articles. I very much hope that this volume will encourage other scholars to further investigate the philosophical relations between Leibniz and Cusanus.

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[1] Nicolas de Cues effectue au XVe siècle un geste métaphysique qui nous paraît décisif pour la métaphysique classique et particulièrement pour la philosophie de Leibniz : il élabore une métaphysique de la singularité créée à partir de l'affirmation de l'infinité du Principe. La puissance de l'infinité divine renforce la valeur de chaque créature singulière grâce à un dispositif d'expression de l'infini dans le fini (235).

[2] L'infinitisme cosmologique découle d'une spéculation métaphysique sur l'infini. L'univers est pensé comme une dégradation de l'infinité divine dans une infinité en puissance, qui se définit par une privation de limite et non par une négation de toute limite. L'infini s'exprime dans la série indéfinie des êtres finis.

[3] L'opération par laquelle l'infini s'exprime dans le fini est appelée contractio. L'infini ne souffre ni morcellement ni partition mais se manifeste par une sorte de réduction qui n'opère pas sur un seul plan mais sur une multiplicité de niveaux.

[4] « Contractio dicit ad aliquid, ut ad essnedum hoc vel illud. Deus igitur, qui est unus, est in uno universo. Universum vero est in universis contracte. Et ita intelligi poterit, quomodo deus, qui est units simplicissima, exsistendo in uno universo est quasi ex consequenti mediente universo in omnibus, et pluramitas rerum mediante uno universo in deo. » Ddi, II, 4, Ph.-th. W., Bd 1, p. 36.

[5] «Et quoniam aequalitatem reperimus gradualem, ut unum aequalius uni sit quam alteri secundum convenientiam et differentiam genericam, specificam, localem, influentialem et tempora- lem cum similibus, patet non posse aut duo aut plura adeo similia et aequalia reperiri, quin adhuc in infinitum similiora esse possint. » Ddi, I, 3, Ph.-th. W., Bd 1, p. 14

[6] Comment la perception permet-elle de comprendre le rapport entre la singularité d'une substance saisie comme positionnement dans le monde et la perfection divine ?

[7] Ce motif constitue un principe de différenciation du réel qui met en scène le rapport complexe qui lie la perception à la perfection. La singularité se conçoit alors comme l'assignation et l'identification d'un degré de perfection en chaque réalité par lequel s'exprime l'ordre du monde dans l'infinité de ses relations.

[8] Nachtomy, O., "Leibniz on Nested Individuals", *British Journal for the History of Philosophy*, Vol 15, no. 4 (2007): 709-728. Smith, J., *Divine Machines: Leibniz's Philosophy of Biology* (Princeton: Princeton University Press, 2011).