

Non alter, sed etiam Leibnitius

Reply to Dascal's Review *Ex pluribus unum?*

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I am glad to be able to use this opportunity to respond to Marcelo Dascal's detailed review of volume VI,4 of the Academy edition published in the last issue of this journal (*Leibniz Review* 13: 105–54). I do not do this in order to enter into the dispute between strong and soft reason, an attempt which would invite certain defeat, not least due to the excellent rhetoric displayed by my opponent. I would rather like to illuminate some points in a different way, based on the sources. There is also the possibility that those who could not read my German Introduction or the Latin original documents might retain the impression the reviewer was trying to create. For them, being supplied only with his English translations, it will be difficult to investigate the reviewer's arguments. On the other hand it will not be easy for me to weaken these arguments in a sufficient way now, one year after their publication.

What is one to do if a well-known authority on Leibniz like Marcelo Dascal tries to present a *new Leibniz* with the full power of his rhetoric and decides to use the publication of volume VI,4 of the Academy edition for this purpose? In fact he considers my Introduction to be opposed to his view of Leibniz, seemingly thinking it was therefore in need of correction or revision. What is one to do if the Introduction to volume VI,4 was not even written with the intention of ascribing to Leibniz a *radical reason rationality*, even though Dascal's campaign for his *soft rationality* is directed against this intention? Certainly not defending one kind of rationality, nor dismissing the other.

Prefatory remarks

The point of a historical and critical edition like that of Gottfried Wilhelm Leibniz's *Saemtliche Schriften und Briefe* is to provide texts and their variants, together with their sources, editions and translations, ordered chronologically and by subject, supplemented by commentaries and various indices, introduced by an explanation and justification of the particular arrangement chosen, all together with a brief introduction to their contents. The job of the Introduction, which is the main target of Dascal's criticism, is not to pave the way for further

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interpretations, and it also cannot be as complete as in the case of particular editions containing selected works of Leibniz. Interpretation and appraisal of the edited sources is the job of present and future research. It is evident that our grouping of the texts into six thematic sections could not have been achieved without preliminary research. This research could have led to other results, but this does not imply that the grouping is either arbitrary or even tendentious. Taking the systematic point of view it would have been perfectly possible to create a section on *Epistemology* with subsections like *Scientia generalis* (*SG*) and *soft rationality* (p. 143). From the historical point of view, however, it seems more sensible to ask where Leibniz himself placed the emphasis of his research. From this point of view it seemed promising to use his great project of a *SG* as a focus for more than half of his miscellaneous writings of this period. That we also had to include sections on metaphysics, physics, theology, ethics, and jurisprudence is understandable when considering the breadth of Leibniz's interests. The fact that various pieces from these different disciplines (apart from metaphysics) have to be treated as test versions for the *SG* adds some evidence to the claim that Leibniz intended to include them in it. We assigned them to the different disciplines in order to bring out the interrelations with *SG*. Every arrangement has its defects; but any reader of the volume will be grateful to find pieces on the same subject in the same section. The suggestion to include a chronological index of all pieces (p. 112) (which had to be left out due to restrictions of space) was gladly taken up by us in the online version of volume VI,4, which is available since July 2004. The table of contents allows one to see which pieces are dated by Leibniz himself (p. 112); the same information is of course given at the beginning of each piece. Dates of composition inferred by the editor are put in square brackets.

Suggestion regarding the division of labour

Dascal criticizes that the Introduction favours a strictly logical conception of reason, ignoring if not suppressing any others (p. 118). The underlying aim of his review is to present a different picture of Leibniz. I am sympathetic to this attempt, but cannot accept that this is done by misrepresenting my interpretation, even, it will appear, with a sometimes fallacious interpretation of texts used as support. Dascal proposes a division of labour (p. 150) which strikes me as very sensible, if it really mirrors the intentions of Leibniz. While Leibniz's aim for the *SG* was to develop a procedure for evaluating (*ars judicandi*) the totality of our knowledge, based on the assumed analytic nature

of our thoughts and their results, so as to better increase it (*ars inveniendi*), his thoughts on the foundations of a new metaphysics and their consequences for natural philosophy and theology went in a completely different direction. Both were seen to serve a decidedly practical purpose. The aim of *SG* was the development and increase of our knowledge and the perfection of our mind, in order to achieve the common or public good. Metaphysics, on the other hand was supposed to secure the freedom of man and to clarify the place of the individual in the world and his relation to God. Furthermore it was also intended to provide the basis for resolving theological disputes.

To carry out the project of the *SG* it was necessary to develop a new system of logic. Its material part was supposed to be the *characteristica universalis*, which was intended to assign a symbol to every concept on the basis of the set of atomic concepts, which had yet to be discovered. Its formal part was meant to develop a theory of operations applicable to the characters, as well as producing a general calculus for the syntactic transformation of concepts and sentences. This would have contained and superseded traditional syllogistics. Apart from these projects (which Leibniz kept strictly secret; I will discuss the reasons for this later) he obviously engaged excessively in public activities, both within and outside of philosophy. All the writings intended for an outside audience show a different kind of reason at work than that associated with the *rigor metaphysicus* on the one side and on the other side the future ideal of the *Calculemus*.

When speaking of a *radical use of reason* I mean first of all the far-reaching rational implications Leibniz has drawn from the supposed analytic nature of our concepts and our mind, up to and including the idea of realizing a revolutionary new kind of demonstrative encyclopedia. But I also mean his revolutionary metaphysical theory of the individual, devised without regard for acceptance by a contemporary audience, his theory of the monad. What the monad does – and it is essential to see this clearly – is nothing else than to create the entire world and its past and future history from its own point of view. For it is precisely this that the metaphor of the living mirror and the assumption that there is nothing but monads and their perceptions and their *appetitus* is meant to establish. Furthermore the same is true of all non-actual possibilities, as long as they are mutually compatible, in one of the infinity of possible worlds. These were conceived by Leibniz in order to guarantee the freedom of man and of God, as well as the contingency of His laws and our world, in brief, to solve the problems of the *Théodicée*.

Publication strategy

Dascal considers my explanation for Leibniz keeping his writings on *SG* secret to be *far from compelling, to say the least* (p. 116). Leibniz should have realized that such a utopian project could have never been published. Dascal assumes that Leibniz had *decisive rhetorical reasons for non publication* without, however, giving any reasons for this (p. 117). Sure, Leibniz had nobody with whom he could discuss his plans for the *SG*, but in view of the massive extent of his correspondence this can hardly have presented a serious problem. To attribute Leibniz's failing to publish to weakness of character (p. 116) seems also not very plausible. It is more reasonable to ascribe to him the definitively bitter knowledge of being too far ahead of his day to be understood. He first experienced this with his work *De conditionibus*; it is even more obviously true for his invention of binary arithmetic and his logical systems. None of these would have made persecution as a heretic likely. His fear of endangering his great project by exposing himself to the ridicule of the ignorant was certainly a motive for his actions, but can hardly be called weakness of character.

Dascal also argues that Leibniz realized the impossibility of actually carrying out his gigantic project (p. 116). Leibniz himself claimed it would take centuries before anybody would take it up again and carry it to its conclusion (II,1 558), should it not fall into eternal oblivion (II,1 556). Dascal's argument seems to be supported by the decreasing amount of preliminary work on the project throughout the nineties, but can in fact be refuted by considering for example Leibniz's *Aurora* (GP7 54–56), the collections of definitions Leibniz instructed his secretary, Hodann, to assemble from 1702 to 1704 (LH IV,7D, cf. Cout. 437–510) and, most importantly, Leibniz's own statements made late in his life which demonstrate his desire to finally carry out the project. No doubt he was lacking the necessary leisure, as his time and energy belonged to the Duke of Braunschweig-Lünebourg and he was especially pre-occupied in putting together the history of the House of Guelph, which he had contracted to produce.

That Leibniz considered none of his preliminary works as *fit for publication* is nothing else than an unfounded conjecture. He makes this very clear in his *Recommandation* where he says *je serois bien aise de ne decouvrir cet artifice considerable, que lorsque je le pourray autoriser par quelques essais assez achevés, pour ne le pas prostituer à contretemps et sans effect* (VI,4

708.10–12). Nor is it right that he advertised his project in his public letters without properly publishing it (p. 116). In fact nobody ever got to see these *public* letters: although they were intended for potential collaborators and financial supporters they were in fact never sent or published. It is also wrong to assume that the *SG* was included in his plans for the Academy of Sciences, or that he publicised it amongst their members.

Even if Leibniz later had doubts about the prospects of ever realizing the *SG* he presumably never put these down in writing. On the contrary, as late as September 11, 1716 (the last year of his life), he mentions to Pierre Dancicourt his *dessein de rendre la philosophie démonstrative* (Erdmann 745). In March 1716, he complains to Biber that *mon grand ouvrage historique m’empêche d’exécuter la pensée que j’ay de mettre la philosophie en demonstrations ... car je voy qu’il est possible d’inventer une caracteristique generale, qui pourroit faire dans toutes le recherches capables de certitude, ce que l’Algebre fait dans les Mathematiques*. (Bodemann, Leibniz-Briefwechsel 15f.). Similar sentiments are expressed in a letter to Thomas Burnett of October, 30, 1710 *Si j’estois debarrassé de mon travaux historique, je voudrais me mettre à establir ces Elemens de la Philosophie generale et de la Theologie naturelle, qui comprend ce qu’il y a de plus important dans cette Philosophie pour la Theorie et pour la Pratique* (GP III 321). On February 11, 1697 he wrote to him expressing the hope that *Enfin si Dieu me donne encor pour quelque temps de la santé et de la vie, j’espere qu’il me donnera aussi assez de loisir et de liberté d’esprit pour m’acquitter de mes voeux, faits il y a plus de 30 ans, pour contribuer à la pieté et à l’instruction publique sur la matiere la plus importante de toutes*. (GP III 196f.) These quotations should be sufficient, I think, to show that Leibniz never gave up his secret project, which he described for obvious reasons in only very general terms. Up to end of his life he felt bound to his vow, not wanting to see that his labours were in vain and his plan become nothing but an utopian project.

Furthermore, to assume that Leibniz’s *Systeme nouveau* contained the *essentials* of his metaphysics (p. 116) hardly accords with the facts. This article contains only the necessary material for arguing against the Cartesians, and it was difficult enough for Leibniz to put the resulting discussion of his hitherto unknown system of pre-established harmony into the right context.

Desiderata

Marcelo Dascal misses the inclusion of further pieces on elementary mathematics and some not particularly polemical political writings (p. 109). We would in fact have welcomed the opportunity to include some further pieces, such as more writings on binary arithmetic or the *analysis situs*, or even parts of his memoranda for the emperor (in particular IV,4 26f., 44f., and 64f. are recommended reading). But apart from the fact the volume was already more bulky than it should have been we had to follow the internal agreement to publish each piece in only one of the series of the Academy edition. This ensures that the different series are sufficiently interrelated, as well as preventing an unnecessary and uneconomical inflation of the edition by duplicate pieces. The only exceptions to this rule are selected letters or at least parts of them which are distinguished by their particularly philosophical contents.

Erkenntnislehre

Most importantly, Dascal (and certainly many others as well) deplores the absence of a section dedicated to *Erkenntnislehre*. We did not think it right to include such a section, given that this discipline was not established during Leibniz's times. Even as late as 1827 W.T. Krug defines *Erkenntnislehre* as *the general philosophical theory of human cognition, also called metaphysics* (see his *Handwoerterbuch* (I, 705)). The term *Erkenntnistheorie* only makes its appearance in the 19th century and is soon projected by historiographers onto the history of philosophy. It is therefore hardly surprising that a term like *Erkenntnislehre* is not mentioned in the lists of disciplines put together by Leibniz himself (see N. 81, 126, and 158). The terms *gnostologia* and *noologia* mentioned in N. 126, following the tradition of G. Gutke and A. Calov, were considered to be basic parts of metaphysics. Leibniz's *ars inveniendi* cannot be regarded as a *Erkenntnislehre*, either, as it is a procedure which is to be developed on the basis of the synthesis of analysed concepts to which characters had been previously assigned. As such, it was intended to have a fixed function within his great project.

Even his *Meditationes De Cognitione, Veritate et Ideis* (N. 141), which was directed against Descartes and his followers and published in the *Acta Eruditorum* of 1684 for maximum impact was not restricted to epistemological problems. The work contains classifications of different kinds of ideas and a criticism of Anselm's ontological proof, both of which are put to the service of

metaphysics and *SG*, which in turn were based on an analysis of concepts or ideas. Leibniz's *Meditationes* do not develop an epistemology recognizing the value of dark and confused ideas (p. 142). It only describes what such ideas are by considering what we do with them. That we cannot do without *blind ideas* implies that we have to rely on what we have once realized distinctly, that we do not have to repeat the process of acquaintance all the time and that we can use symbols (like signs for the differential or integral) to stand for what we have once so realized. Dascal claims that Leibniz always considered the necessity of developing *softer helps* (p. 143) (whatever these may be), but unfortunately this is not backed up by any textual evidence.

Of course, Leibniz also seeks after the acquisition of secure knowledge starting from the *cogito*, in his case supplemented by *varia a me cogitantur*. But, like Descartes, he considers such meditations to belong properly to metaphysics, leading to the knowledge of *essentia rerum*. Even his early thesis (apparently anticipating Berkeley) that *esse nihil aliud esse quam percipi posse* stresses the ontological *esse* (VI,3 466.2), which depends for its existence exclusively on being perceived, at least by God. It is not an epistemological thesis and will later form the core of the theory of monads. Even at that early time Leibniz claimed that *nihil aliud esse est existere, quam habere rationem* (VI,1 452.6) and *qui cogitat aliquid esse, cogitat Deum esse, id est rationem rerum* (VI,1 452.5). Later in the *Nouveaux Essais* Leibniz will take up Locke's thread and give the impression of wanting to oppose a rationalistic and an empiristic epistemology. But his real aim is to convey his metaphysics to Locke and the Lockeanes between the lines.

The picture of radical reason

Dascal rightly observes that the *parameters of radical reason* (p. 118) characterize the enormous project of the *SG*, but in fact they characterize nothing else. This is an important point: the *SG* tries to realize primarily fundamental ideas. I must reject the accusation that my Introduction characterized this concept of reason as the *predominantly logical notion that underlies and informs the bulk of Leibniz's activities in the period covered by VI,4 thereby downplaying or not noticing at all elements that do not fit the favored picture*. Without any justification Dascal uses my Introduction as a launching pad for his idea of *soft rationality*, a concept which seems to be never properly explained. This kind of forced opposition would not have been necessary at all to describe the concept of soft rationality. The program of research Dascal

suggests (p. 119f.) is definitely worth pursuing, but I would have preferred if the description of his alternative approach did not involve accusing me of brushing essential points under the carpet. Of course the desiderata of Dascal's project do not allow for a strict formal treatment – in fact none of them can be subsumed under the problems the *SG* is supposed to solve. Apart from this it is necessary to draw a sharp distinction (which Dascal does not draw) between *SG* as a project of future research and the different preliminary studies which have to be carried out to realize it. Only the latter are the subject-matter of the present edition. But we cannot even apply Dascal's parameter to these preliminary works, let alone to Leibniz's other pursuits. These two have to be differentiated, although we need not claim that they are disjoint. But it is clear that neither dominates the other, although both contain a strong tendency to use all the possibilities of reason. But this does not go as far as Dascal's rhetorical fiction of a *radical reason model* would have it.

The right use of reason is characterized by its specific characteristics. This use is evidently different in the case of the development of the *Organon* – which is supposed to achieve an application of the new logic, and its perfection (in the form of the *SG*) – than in that of the cognition of things *cum rigore metaphysico*; it also differs when inventing new mathematical methods, when dealing with the phenomena of physics, dynamics, medicine and astronomy (incorporating not just causality but also finality). It is different again when organizing justice (natural law, revision of Roman law) or when settling religious disputes, when fighting atheism or scepticism without appealing to revelation but using the *right* logic and metaphysics; it is different when resolving controversies, when convincing opponents, different when doing historical work, when reading scientific works (following his motto of accentuating the positive contribution rather than the criticism), different when formulating ethical maxims, solving problems in engineering (concerning calculating machines, horizontal windmills etc.) and so forth. In all these cases, and in many others, Leibniz tried to succeed by conscious use of reason. He was perceptive enough not to try to tackle all problems with the machinery of formal logic; the ultimate aims of the *SG* have never hindered him from seeing clearly which task he had to tackle next.

All of Dascal's arguments are directed against the *picture of radical reason*, a picture which in the way he describes it has certainly not been painted by me. I am therefore in the strange position of defending something which does not exist, at least not separate from Leibniz's work on *SG* and its interrelations. It was never my intention to argue for such a theory of radical

reason, and even less to attribute to it the dominating force Dascal seems to see. *Soft rationality*, or something like it, is suitable in all cases of purely pragmatic or exoteric arguments. These two kinds of rationality would have different fields in which they operate, and there is really no point in pitching one against the other.

Nihil sine ratione. There is no distinction between stronger and less strong reasons. But it is the case that not all reasons are equally accessible to us. Even if God alone can know them, they nevertheless remain reasons which are to be given.

It is possible that the interrelations between *SG* and pieces from other disciplines I tried to bring out have caused this misunderstanding. But these interrelations concern only scientific propositions in a narrow sense, because Leibniz, being a good Aristotelian, only recognizes general knowledge as knowledge proper. As general knowledge it is also necessary, and its analysis can be achieved in a finite number of steps, being thereby in the realm of the provable. Another problem, which Leibniz did not ignore, is how many facts or experiences have to be treated to make the theory easier to convey. This can be seen from his research on the theory of probability, his treatment of historical facts including his palaeontology (*Protogaea*), as well as from his research into etymology and migration of peoples.

I wrote that Leibniz saw his own strength in all fields of inquiry in the radical use of reason, that is to say, going to the roots of all matters which he investigated. The aim of Leibniz's thoughts and deeds was to improve the world he was living in by the use of reason and trust in the truths of revelation. I also wrote that his conception of the *SG* resulted from his firm conviction of the analytic nature of our thinking and the rationality of tradition, which means that this rationality of the ancients could be brought out by the means of calculating reason, and not by reference to authorities. This was the aim of the project of the *SG*. Its analysis of concepts was supposed to show that primitive concepts are necessary for our understanding because we can only understand what is composed from these concepts. This was his underlying idea in the quest for simple ideas which would require no further explications and would therefore function as logical atoms. At least in the period covered in the present edition it does not seem that Leibniz ever had any doubts about the feasibility of this project. If it is possible to talk of radical reason at all, then in this context, and in this context only.

I remarked above that for Leibniz human and divine reason function in accordance with the same principles. They concern the same reality, so that everything follows just one reason. Everything obeys the principle of contradiction. Nothing happens without a reason; to act without a reason would mean acting against reason. I remarked finally that Leibniz also intended to base the discussion of religious conversion on a rational basis and made it clear that the final arbiter, the *judex controversiarum*, could only be the reason of an individual. He particularly grounded his hope in the assumed rationality of the catholic faith (N. 145).

Leibniz's endeavors to renew Roman law by his interpretation of the three principles *honeste vivere, neminem laedere, suum cuique tribuere* based on natural law also cannot be adduced as evidence for the *radical reason model*. The piece on the principle of *caritas sapientis* (N. 496), serves as evidence of how Leibniz wanted to bring it out, not by the power of assertion or rhetoric but by showing it to be part of a rational deduction and sequence of definition which he considered to be so important that he repeated it in the *Praefatio* of his *Codex iuris gentium diplomaticus* of 1693.

Dascal claims that the *Generales Inquisitiones* can be rightfully seen as the chief example of the picture of *radical reason* he describes (p. 133). This, however, is not a finished treatise but a series of different preliminary studies for the *SG*. His interpretation of tables, indices etc. as evidence of a non-demonstrative encyclopedia (p. 141) overlooks that these were only preliminary studies for the edition of the *SG*, which should definitely have taken the form of a demonstrative encyclopedia.

I hope that Dascal's claim (p. 139) I would have expected Leibniz (LXII, LXV, LXX) to have developed (or even intended to develop) *tools for actually computing or proving such [contingent] truths* is a misunderstanding only, rather than an imputation. For Leibniz, the chasm between necessary and contingent truths cannot be bridged. Nevertheless the sudden insight into their structural identity supplied Leibniz with the necessary light (*inexpecta lux*) for later developing his theory of monads. As I made clear only these structural properties are transferred by Leibniz from the necessary to the contingent truths: the inclusion of the predicate in the subject, implying its analyzability in infinitely many steps. This is a rational achievement which can hardly be overestimated, even though we have grown used to it by now. In any case it is more than a *handy and suggestive analogy, viz a metaphor*. Otherwise there would be no way of using the *notio completa* (which relies on God's knowledge of which attributes the infinite analysis of every substance entails) to

ground the metaphysics of possible worlds and the assumption of the choice of the best. Even if no such complete knowledge is possible for us this theory aims at a metaphysically far-reaching account which cannot be achieved by mere metaphors.

There is a distinction between using the principles of reason strictly and correctly where experience cannot guide us (*rigor metaphysicus*) and using a *weaker sort of reason* in everyday life in order to retain our ability for action in these circumstances. Nevertheless reason has to remain *radical* in continuing to look for roots and foundations. I do not think that I have presented Leibniz's rationalism in such an exaggerated way as to make it necessary to guard him against Voltaire's criticism by appeal to a *softer rationality* (p. 123). Without doubt the theory of the best of all possible worlds is the result of a strictly rational inquiry which can only be followed by knowing and accepting the assumptions on which it is based. This was neither possible for Voltaire (who was lacking any texts going beyond the *Théodicée*) nor is it possible for us but for other reasons. The idea of a weaker rationality is of no use in this context; using it we would not even have been able to formulate this theory, let alone argue for it.

The other picture

The four examples described briefly by Dascal which should serve as evidence of the *other* picture (p. 120) do in fact no such thing.

Dascal claims that the *Conversation du Marquis de Pianese et du pere Emery Eremite* (N. 400), is an *epistemologically important dialogue* intended to demonstrate that scepticism can be overcome. Unfortunately he does not mention that for Leibniz this feat could only be done by appeal to perfect, and not to *soft* reason. Before the dialogue reaches its practical part, Leibniz (who plays the role of the hermit) urges his opponent to perfect his mind. He manages to convince him that all arguments can be reduced to *pure form*, assuming one already had secure principles and an equally secure way of drawing inferences from them. Even in cases where uncertainty cannot be avoided we can at least seek to determine the degree of probability. Leibniz knew that many would be surprised by his proposal in favor of his new logic and of the strict standards of reasoning which he thereby demands. He was also aware that those not knowing him would use this as a pretext to have a low opinion of his scholarly abilities (VI,4 2263.19). He even argues for the existence of metaphysical proofs of geometrical rigor, while admitting that they cannot be easily incorporated into informal discourse (VI,4 2268.21).

Leibniz's *De Deo trino* (N. 404), follows the strategy familiar from his time in Mainz (compare VI,1 N. 15,4): we can *illustrate* the mysteries of religion, though we cannot prove them. Demonstrating their possibility must be sufficient for defending them against unjustified attacks. This, however, does not keep him from trying to come up with a proof that the host should not be worshipped in his *De hostia* (N. 394). His *De trinitate* (N. 416, 2346) constitutes a paragon of rational explication of the trinity by its reference to Euclid's axiom of identity and by analysis of the concepts *persona* and *natura divina*.

Dascal's claim that the third of the pieces he considers (N. 163) is a *true eclectic manifesto* does not survive scrutiny. Leibniz rather uses this opportunity to argue for the equal value of different disciplines and the mutual respect they owe one another. Its title *Spongia exprobatum* should not be translated as *a shield against censorship*, as Dascal thinks, but denotes a sponge which would absorb and neutralize the accusations different disciplines level against one another. In general we would not want to call Leibniz an eclectic. An eclectic accepts ideas uncritically by relying on the authority of the source. Leibniz adopts traditional positions, but never without transforming them, and never without demonstrating their truth within his philosophy.

Coming to the fourth point, Leibniz assumes taking *la place d'autrui* to be a maxim of politics and ethics which is aimed at guarding oneself and one's property from harm *quand il s'agit des se precautioner et de la defense* (IV,3 N. 137) by anticipating the other's action. It was primarily not conceived as a maxim for facilitating the course of discussions, although it certainly has its place in such a context as well and was later use by him with this meaning (VI,6 92.3).

Both pictures within the same text

Dascal uses the *Recommandation pour instituer la science generale* (N. 161) in order to show the importance of having *both pictures within the same text* (p. 123–125). But in fact the text to which he refers (VI,4 713.5) says exactly the opposite of what he wants it to say. Dascal translates: *I hold that one should distrust reason by itself* (p. 125). This is harsh statement to come from Leibniz, and appears in a completely different light if we consider the whole sentence and the reason for the *distrust*. Leibniz regrets *comme la methode de raisonner n'a pas encor atteint toute la perfection dont elle seroit capable ... je tiens qu'il faut se defier de la raison toute seule* (VI,4 713.3–5).

The reason we have to distrust, Leibniz says, is immature reason, reason blinded by passions and distractions, which is unable to enlighten itself. This is definitely not *radical reason*. In the same text we read some pages earlier (VI,4 706.5): *We should not excuse ourselves by claiming the achievement of such exactness to be impossible*. Even when dealing with probabilities it would still be possible to determine for any set of data which of these would be the most likely. Leibniz admits that this useful part of logic does not yet exist, but could be developed in the future. First steps towards this can be found in *De incerti aestimatione* (N. 31).

In order to understand Leibniz's plans for *SG* it is inadvisable to refer to hermeneutics. It would indeed be ridiculous to assume that Leibniz evaluated his own reading by the analytical standards he had in mind. He would not have got through a single page as the primitive concepts he required had not yet been determined.

Dascal asks where I mention Leibniz's principle to revoke tradition *ad notionem intelligibiles* (GM 6, 235) – what is the reason for this semantic leap? (p. 123) In fact he even forces us to take such a leap, as Aristotle puts it εἰς ἄλλο γένος. Leibniz's aim in this text is not the development of a hermeneutics or hermeneutical rules but explicitly to find patrons and collaborators for his project of a science based on analysis and a system of operations on characters. He planned to create the formal background (*initia*) of this science, and intended its contents to be treated in the same way as the samples (*specimina*) discussed by him should demonstrate.

It is evident that one could (and indeed should) consider the conception of the *SG* with a critical mind. The purpose of our Introduction was to describe this project in an unbiased way in order to show the place the different pieces which have come down to us would have occupied in its final, unfinished realization.

Purgatory

In what follows we are treated to an excellent, eight-page interpretation of the *Consideratio locorum quae pro purgatorio adducuntur* (N. 385) which illuminates Leibniz's hermetic abilities. Dascal presumably intends this detailed interpretation to serve as a model showing that pieces from *jurisprudence, politics, medicine and other disciplines* can be interpreted in a rational way without resorting to the *model of radical reason* Dascal ascribes to me. I would like to note that I never claimed that everything can be subsumed under this

radical reason. Nevertheless it was Leibniz's vision that once the *SG* was completed it would be able to solve all problems accessible to science. This, however, did not keep him from employing his reason when dealing with particular tasks which came his way.

Legal interpretation

As is not hard to guess *De legum interpretatione, rationibus, applicati-one, systemate* (N. 495, 2782–2791), deals with interpretation, more precisely with the interpretation of the *sententia legislatoris* which often deviate from the letter of the law. Dascal is happy to state the problem, but does not seem interested in the solution Leibniz proposes. The problem is not, to use Dascal's metaphor (p. 122), which flavor we give to the pudding, but how we test the ingredients to check whether it is fit for consumption. Leibniz is not that much concerned with interpreting what the legislator said, but what he had *in mente*: *non tam est interpres enuntiationis, quam ipsius enuntiantis* (VI,4 2783.11). But this is only the description of the problem. Dascal is content with this and asks his readers to suggest formal procedures for determining the *deontic counter-factual conditional* describing what the legislator would have said had the case been presented to him. But this is not what Leibniz demands, nor does the Introduction suggest this. Had Dascal actually eaten the pudding, instead of reserving its proof to a tentative sniff he would have realized that Leibniz's suggested solution to this problem is precisely the use of the analytic method. Leibniz stresses the need to find a common principle to serve as a ground for the laws to be interpreted (VI,4 2785.24). For him proving is nothing but demonstrating the true ground of a law (VI,4 2787.9): *locus perfecte demonstrandi unicus est definitio* (VI,4 2728.9). This, however, does not entail one would have to follow a legal decision reached solely by recourse to a formal system; rather, it would mean replacing reason by a machine – there would be no place for a future Solomon. In the paragraph concerned (VI,4 2783.1–10), Leibniz does not himself recommend the use of a calculus, but instead an inquiry into the *ratio communis*, in order to find the reason why the same predicate applies to different subjects, or which subject the predicate primarily (*primo*) applies to – so once again the employment of his analytic method. In case we cannot decide between the two options we are told to go for the simpler one, the one requiring the least conditions (*requisita*). Leibniz subsumes the (as he says, in his day still underdeveloped) theory of probability under this. It is not by accident that he ends this piece by advocating the

creation of a new and previously non-existent system of law. *Concinnare*, arranging them *nicely*, is what he has in mind he (as he did during his time in Mainz, (VI,2 N. 30)). *Qui universalia novit*, for one who knows the general truths, it would be easy to subsume the variety of cases Roman law contains under just a few more abstract ones. Leibniz's treatment of probabilities is in this respect a model of rational proceeding. We require a method for calculating probabilities. Comparing the reasons leads us to the one probability which has the best results or which is the easiest to assume, following the principle of simplicity – thereby following two rational principles, rather than making a random choice.

The grammar of reason

In his *Consilium de encyclopaedia nova conscribenda methodo inventoria*, dated July 25, 1679 (N. 81), Leibniz mentions grammar as the most important science to be developed in putting together the *new encyclopaedia*. By this he does not mean ordinary grammar, but rational grammar, which is to be developed as an *ars inveniendi* on the basis of the grammar of Latin (VI,4 344.1–19). This rational grammar is supposed to surpass human reason, *nullius linguae*, as Augustine put it (William of Ockham later took up this idea). This grammar was intended to facilitate the analysis and proper use of concepts. In the next step Leibniz wanted to develop a new logic from the practice of orators and writers, a sort of philosophical logic supplanting syllogistics. This procedure bears a similarity to that of the medieval treatises *De syncategorematis* which however he hardly knew. These treatises tried to develop a way of reducing the complexity of, as we say, natural argumentation. Leibniz's interest in the particles which constitute the formal part of grammar was directed at the same target. This is the way in which I interpreted the radical reduction of natural languages. Although he was initially more interested in the origin of languages (N. 14 15 19 20), Leibniz used the succeeding pieces (N. 21 22 81 100 101 155 167 168 186) to construct a *lingua philosophica* as a *lingua rationis* or *lingua mentis*, as William of Ockham would have called it. There is hardly any reason for connecting these pieces with the idea of *soft rationality*.

It is true that Leibniz's *Consilium* mentions a *blandior tranctandi ratio* (VI,4 342.17). But this is part of a piece of advice directed at mathematicians to present their results in a more *agreeable* manner. He had already communicated this thought to Tschirnhaus in the preceding year (II,1 413.25–27) as

well as to Malebranche in June 1679 (II,1 478.13–17): *je croy qu'on pourroit raisonner un plus familierement en mathematique où les choses se reglent d'elles mêmes, mais qu'on doit raisonner avec plus de rigueur en metaphysique, parce que nous manquons du secours de l'imagination et des experiences; et que le moindre faux pas y fait des mechans effects, dont il est difficile de s'appercevoir*. Leibniz's argument for this advice to replace the roughness (*asperitas*) of mathematics by a *blandior tractandi ratio* is the good example of other sciences *who supply the generally reluctant mind with trust in mathematics and fulfill the mind's desire of knowledge in an accessible manner* – a quite pragmatic reason, it seems. Leibniz's point was not to institute a lower standard of rigor in proof (an impossibility in itself), but the demand of a more accessible presentation of results. It might have been that this also was his intention in the *Dialogus de arte computandi* from 1679 (edited by E. Knobloch, Stuttgart 1976).

Even though the *more agreeable* mode of presentation is also one adopted by Leibniz in his correspondence, his dialogues and public letters describing his *SG*, I do not think it to be sufficient evidence to argue for a *different Leibniz*, nor to contrast the rhetorical fiction of the *model of radical reason* with the concept of *soft rationality*, even less so when arguing that strong rationality completely obscures the conception of the weak one.

In any case, a *blandior tractandi ratio* always presupposes a strict conception of reason which tolerates it; it cannot be an ideal in itself. Of course only necessary truths are the proper domain of deduction: there would be no point in trying to use it to deal with empirically acquired knowledge or truths of revelation. Nevertheless Leibniz achieved the remarkable feat of developing the concept of a *notio completa substantiae singularis* by means of infinite analysis. This allows us to subsume all contingent truths under the principle of containment of the predicate in the subject, a principle which was originally only thought to be applicable to necessary truths. This infinite analysis is more than a nice metaphor (p. 140), as is demonstrated by the importance Leibniz himself ascribed to his discovery. In an almost elated fashion he describes his own path to the *inspectata lux* in his *De libertate, contingentia et serie causarum atque de providentia* (N. 326), a result of his mathematical studies of the infinite (VI,4 1654.19) which made him understand the fundamental distinction between necessary and contingent truths (VI,4 1655.18). This is, of course, entirely in keeping with a metaphysician's outlook.

Inclination

Dascal presents the core of the *picture of soft reason* as the famous maxim derived from popular astrology (*inclinor sans necessiter*) (GP VI 126), combined with the metaphor *trutina rationis*. But how exactly does this contrast with the picture of radical reason? The *rationes* themselves (or indeed God, the *summa ratio*) are primarily responsible for inclining the *mens* towards a certain course of action, while at the same time preserving his freedom, since they do not necessitate his acting. As substances are determined by actions, this holds for all substances. The principle of sufficient reason demands that there to be a reason for the result of every action, that is a reason for why substances act in the way they do. God knows about the inclinations of his creatures and can therefore be certain (*certum*) that they act the way they do without having forced them to do so. They could have acted differently, but they have acted in this way (this is exactly Leibniz's idea of contingency) and by doing this they unknowingly created themselves as inhabitants of the possible world they are in. As Leibniz puts it, they have created the basis for pleasing God. This is what Leibniz calls *hypothetical necessity*, not just *hypothetical truth* (p. 138).

For didactic purposes Leibniz sometimes changed his perspective, however without changing or correcting his opinion. We have to distinguish Leibniz's assertions about monads constituting themselves *ante creationem* and those created after God's decision to create the best of all possible worlds. God has complete knowledge *uno intuitu* of the former, otherwise he could not have made a fair selection of those which between them produce the best state of affairs. Regarding the latter, Leibniz asserts that God has no knowledge of their future actions (so as to not compromise their freedom), but that he has knowledge of the reasons which incline them towards certain actions, even though they do not necessitate them and it is at the same time certain that these actions will be brought about (VI,4 1449.19, 1452.20, 1460.4).

A purported proof

Referring to the *De obligatione credendi* (N. 387), Dascal (p. 144) puts Leibniz's proof, which is described as *ratiocinatio quae pro demonstratione venditatur*, into a dialectical context. Now, as Leibniz says himself, this proof does not allow for disagreement once the definitions are accepted. Dascal,

however, takes the *venditatur* to present a problem in regarding the proof as a proof, since it only mocks the *appearance of a demonstration* (p. 143–145). He argues that this phrase, together with the deleted words *<mihi> communicata* implies that Leibniz wanted to distance himself from the *purported* proof, although these words make it much more likely that Leibniz wanted to put forward the thereby anonymized piece for public discussion. Even less plausible is Dascal's suggestion that Leibniz only wrote this proof in order to convince himself of its content. The definitions which are given constitute premisses Leibniz accepts. They are not up for grabs, unlike, for example, the axioms of contemporary systems of modal logic, which are usually accepted only to try out their consequences. Putting this piece together with the *Examinatio religionis christiana* (p. 145) once more only serves a rhetorical purpose. It ignores the fact that both pieces pursue completely different goals. *De obligatione credendi* is not meant to be part of a theological debate; the proof is just an attempt to test the method of the *SG* in the case of a central theological problem. Leibniz could rely on John Chrysostom for the definition of *credere* (compare 2181.20–26 and 2190.13). Regarding the definition of *obligatio* Dascal's reference to p. 181 of Grua's edition does not help much. Section IX of the *Textes inédits* only treats a differently defined obligation from civil law without sanctions in case of omission, as does N. 501 (VI,4 2833.27).

When Dascal remarks that the *new logic* based on rhetorical methods and principles *remains to be developed* (p. 154) he cannot rely on Leibniz as evidence for this. Of course it would be interesting to develop such a logic based on observations of Leibniz's interactions with correspondents and opponents. However, what Leibniz himself regarded as a *logica nova* can most easily be seen from the *Generales Inquisitiones* (N. 165) as well as from some later calculi such as N. 173 and N. 177 to 179. None of these pieces mentions the use of rhetorical principles or dialectic methods. It is well known that Leibniz used many different methods to explain and illustrate his abstract theories. His frequent use of metaphors as well as his clever adaptations of classical mythology are evidence for this. This is not just the case at the end of the *Théodicée* but also at the end of *De libertate, fato, gratia Dei* (N. 309), which continues the story of Deucalion and Pyrrha in the most admirable fashion; he also uses such devices in *De insula utopica* (N. 207), by describing a society where his *SG* is already realized. Of course his dialogues are just another example of the same desire to communicate his ideas to a wider audience, even if they all remained unpublished.

Although the position which Marcelo Dascal opposes in his review by no means corresponds to that which I presented in my Introduction to VI,4 – the reason why I felt obliged to write this reply – the ideas he puts forward, particularly concerning soft reasoning, are certainly worthy of further consideration. His call to *pick up the challenge* of re-thinking Leibniz's intellectual inheritance will, I hope, be taken up by many future scholars.

Concluding remarks

Leibniz, and not just Leibniz alone, should be assessed by what he planned and achieved and not by the tasks he could not carry out. The first step which leads the human mind to new pastures is of immense value and is neither diminished by stumbling, nor by the fact that others may go further at later times. Standing on the shoulders of giants we should not look down on them.¹

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