

HANNES AMBERGER, M.A.

SPATIUM ENTITATIVUM.
LEIBNIZ'S NOTES ON JOHANN HEINRICH BISTERFELD*

ABSTRACT: With striking parallels to Leibniz's later thought, Johann Heinrich Bisterfeld (1605-1655) describes the world as united by a nexus of universal harmony – an idea ultimately motivated by epistemological premises. The young Leibniz, accordingly, is an enthusiastic reader of Bisterfeld's texts – while at the same time critically modifying his ideas: The universal harmony that epistemology postulates is, for Leibniz, not based on physical space and the mechanical interactions taking place there, but rather on the non-physical *spatium entitativum* identified with God himself. Thus nuancing the relationship between metaphysics and physics, Leibniz anticipates a key problem of his later thought.

ZUSAMMENFASSUNG: Wie später Leibniz, beschreibt Johann Heinrich Bisterfeld (1605-1655) die Welt als durch einen universalen Nexus der Harmonie verbunden – und fundiert das letztlich in epistemologischen Prämissen. Der junge Leibniz ist dementsprechend ein begeisterter Leser seiner Texte, akzentuiert Bisterfelds Ideen dabei aber kritisch: Ihm zufolge stiftet nicht etwa die mechanische Wechselwirkung im physischen Raum die epistemologisch postulierte universelle Harmonie, sondern ein nichtphysisches, mit Gott selbst identifiziertes *spatium entitativum*. Indem er so das Verhältnis von Physik und Metaphysik neu austariert, nimmt er eines der entscheidenden Probleme seines späteren Denkens vorweg.

KEYWORDS: *spatium entitativum*; Leibniz; Bisterfeld; Space; Eucharist; Mechanism

* This article profited greatly from helpful remarks by Prof. Dr. Thomas Leinkauf (Münster) and Prof. Dr. Francesco Piro (Salerno), as well as the anonymous reviewers for this journal. I am particularly grateful to Tracey Ager (Westport, Ontario), Stefan Großnick (London), and Ionuț-Valentin Cucu (Berlin) for linguistic revisions of my text.

This article concerns the enigmatic term *spatium entitativum*, which Leibniz introduces in his marginal notes on Johann Heinrich Bisterfeld's metaphysical manual *Primae Philosophiae Seminarium*, published in 1657. These notes apparently date back to Leibniz's student years (about 1663-1665),¹ and neither Bisterfeld, nor the *spatium entitativum* ever reappear in his later writings. However, these notes offer an intriguing insight into the way the young philosopher reads the texts of other authors: combining a clear-sighted exegesis with critical originality, in a manner that seems to anticipate his philosophical approach in later years.

Leibniz, as Maria Rosa Antognazza stressed, was not merely “a progressive westerner stranded in an intellectual backwater”.² While he was very well read in and deeply influenced by contemporary Western European thought, he was also a native in the colourful intellectual world of all the diverse pre-Cartesian philosophical schools still alive in the universities and libraries of the seventeenth-century Holy Roman Empire. A less well-known example from this panorama is the German encyclopaedist Johann Heinrich Bisterfeld (1605-1655), a university philosopher and statesman and an adept of the Calvinist school of Herborn, who, like his father-in-law Johann Heinrich Alsted, spent most of his adult life in the service of the Bethlen and Rákóczi princes of Transylvania. Beginning with Willy Kabitz's seminal work from 1909, scholars have noted numerous parallels between Leibniz and Bisterfeld.³

¹ “Seine knapp gehaltenen Randbemerkungen könnten schon in die Jahre 1663 und 1664 gehören” (A VI.1, XV). “Die beiden Schriften Bisterfelds hat Leibniz schon in seiner Leipziger Studienzeit besessen (vgl. I,4, 681). Zumindest die erste [Seminarium] hat er schon vor dem Einbinden gelesen und gleichzeitig mit Bemerkungen versehen”; he quotes it in his marginal notes on Daniel Stahl from 1665/65 (A VI.2, 548, cf. *ibid.* p. 543).

² M.R. Antognazza, *Leibniz. An Intellectual Biography*, Cambridge, University Press, 2009, p. 9.

³ W. Kabitz, *Die Philosophie des jungen Leibniz. Untersuchungen zur Entwicklungsgeschichte eines Systems*, Heidelberg, Winter, 1909, p. 6 sqq; L.E. Loemker, “Leibniz and the Herborn Encyclopedists”, in I. Leclerc (ed.), *The Philosophy of Leibniz and the Modern World*, Nashville, Vanderbilt University Press, 1973, p. 276-297; M. Mugnai, “Der Begriff der Harmonie als metaphysische Grundlage der Kombinatorik und Logik bei Johann Heinrich Bisterfeld und Leibniz”, *Studia Leibnitiana*, 5, 1973, p. 43-73; M. R. Antognazza, “Bisterfeld and immetatio. Origins of a key concept in the early modern doctrine of universal harmony”, in M. Mulsow (ed.), *Spätrenaissance-Philosophie in Deutschland. Entwürfe zwischen Humanismus und Konfessionalisierung, okkulten Traditionen und Schulmetaphysik*, Berlin, De Gruyter, 2009, p. 57-83. On Bisterfeld and the Herborn school in general cf. also: J. Kvacala, “Johann Heinrich Bisterfeld”, in *Ungarische Revue*, 13, 1893, p. 40-59, 174-197; P. Rossi, *Clavis Universalis. Arti della memoria e logica combinatoria da Lullo a Leibniz*, Bologna, Mulino, 1983, trans. S. Clucas,

Leibniz's notes on Bisterfeld are too scarce and too early to clearly discern which ideas Leibniz directly took from Bisterfeld. His admiration for the Transylvanian philosopher, however, is clear,⁴ and there are enough similarities to classify Bisterfeld at least as one typical example of a decisive layer in Leibniz's background.⁵ These parallels are not limited to philosophy in the narrower sense: The overall intellectual programme of Bisterfeld's milieu, Martin Mulsow shows, comprised metaphysics and logics as well as theological apologetics, pedagogy and political reform and thus was not entirely dissimilar to Leibniz's.⁶

In Bisterfeld's metaphysics and natural philosophy, we find strong parallels to Leibniz: For Bisterfeld as for Leibniz, Massimo Mugnai points out, the "universal relation and connection of all things to all things" is a key motive.⁷ The universe, for Bisterfeld, is characterized by a "panharmony and universal communication of things",⁸ in such a way that some sort of

Logic and the Art of Memory. The Quest for a Universal Language, London, Continuum, 2000; M. Mulsow, "Sociabilitas. Zu einem Kontext der Campanella-Rezeption im 17. Jahrhundert", in *Bruniana & Campanelliana*, 1, 1995, p. 205-232; Id., "Bisterfelds *Cabala*. Zur Bedeutung des Antisozianismus für die Spätrenaissancephilosophie", in Id., *Spätrenaissance-Philosophie*, p. 13-41. Works by Bisterfeld cited in this article include: *Phosphorus Catholicus, seu artis meditando epitome*, Leiden, Verbiest, 1657; *Prima philosophiae seminarium*, ed. Adrian Heereboord, Leiden, Gaasbeeck, 1657; *Bisterfeldius redivivus, seu oper[a] posthum[a] Joh. Henrici Bisterfeldi*, 2 vols., The Hague, Vlacq, 1661.

⁴ The *Seminarium* is a "praeclarissimum opusculum, et cui par in hoc genere non vidi", the *Phosphorus* an "ingeniosissimus libellus" (notes on the title pages, A VI.1, 151 / 160), its author is "praeter morem compendiographorum solidissimu[s]" (A. VI.1, 199).

⁵ A similarly cautious assessment of Bisterfeld's role is given by D. Rutherford, *Leibniz and the Rational Order of Nature*, Cambridge, University Press, 1998, p. 37.

⁶ Mulsow ("Sociabilitas", p. 207-208) sees Bisterfeld in the context of the Protestant millenaristic movement eponymous for R. H. Popkin's *The Third Force in Seventeenth-Century Thought*, Leiden, Brill, 1992. "Für Popkin zieht sich ein roter Faden von den Überlegungen, die Joseph Mede zu einer infalliblen Auslegung der biblischen Prophetien angestellt hat, zur Kabbala-Rezeption und dem Platonismus von Cambridge, von den missionarischen Aktivitäten Hartlibs, Durys und Comenius' zu den spiritualistischen Ideen von Leibniz und Newton". The core of the movement is "[die] universal[e] Erneuerung und Versöhnung des Weltkreises als Vorbereitung auf [das] Zeitenende". A felicitous characterization of Leibniz's overall scope of interest is offered in Antognazza's *Biography*, esp. in the introduction p. 1-14. On the Herborn School and the *Third Force* Author Comenius cf. *ibid.*, p. 30-46.

⁷ "universell[e] Beziehung und Verbindung 'aller Dinge mit allen Dingen'", M. Mugnai, "Harmonie", p. 50. Mugnai quotes Leibniz's *Dissertatio de arte combinatoria* (1666): "quae [sc. Bisterfeld's *Phosphorus Catholicus*] tota fundatur in immeatione et περιχωρήσει, ut vocat, universali omnium in omnibus" (A VI.1, 199, p. 22 sq). On *immeatio*, cf. Antognazza, "Bisterfeld and *immeatio*".

⁸ "Panharmonia et catholica communicatio", *Seminarium*, p. 89.

connection can be found from any being to any other being. With a metaphor that anticipates Leibniz's imagery – he ultimately borrows it from Campanella and Bacon⁹ – Bisterfeld even states that all beings, living or not, 'perceive' one another. As in Leibniz's mature thought, Bisterfeld points out that each being has its *potentia activa*, without which it would be "idle and vain" and unable to enter into *unio et communio* with other beings. "Thus, it would be a useless member in the commonwealth of beings", Leibniz carries on Bisterfeld's 'sociological' imagery in the margin¹⁰ – his interest in these metaphors again seems to prove the common ground between the two authors even beyond philosophy.¹¹ For Bisterfeld, this universal cohesion of the world is expressed in the absence of vacuum, a *fuga vacui* causing most physical phenomena.¹²

Equally resonant of Leibniz are Bisterfeld's epistemology and pedagogy: Based on innate *species* of things, and patterns of thought, it is possible to reduce all concepts to a catalogue of primitive concepts.¹³ Thus, by induction and deduction one can proceed from any given concept to any other.¹⁴ From here, it is not a far way to Leibniz's own decisively aprioristic epistemology and his *ars inveniendi*.

There is yet a more decisive parallel between the two thinkers. Neither for Bisterfeld, nor for Leibniz, the two fields mentioned, metaphysics and epistemology, are independent of each other. Quite on the contrary, Thomas Leinkauf points out, Bisterfeld's epistemology implies as a necessary premise that also the ontological structures of the world are rational.¹⁵ "Unless the polymorphic and diverse multitude of things can be

⁹ Mulsow, "Sociabilitas", p. 222.

¹⁰ Bisterfeld: "Secus foret otiosum et frustra"; Leibniz: "et esset membrum Reipublicae Entium inutile", *Seminarium*, p. 65, and A VI.1, p. 155.

¹¹ Bisterfeld, when explaining that the 'natural place' of a being coincides with his role in the universe: "Bonum enim publicum seu totius, non repugnat bono privato seu partium" (*Aphorismi Physici*, p. 155, in: *Bisterfeldius redivivus I*). Cf. also Bisterfeld's remarks on the 'symbiotic' character of all beings, *Seminarium*, p. 35-36. Another point where Leibniz's interest in this imagery becomes visible is his comment on *Seminarium* p. 103, A VI.1, 156, and on *Seminarium* p. 161-162, A VI. 159 n. 37.

¹² Bisterfeld, *Aphorismi Physici*, p. 118 in *Bisterfeldius Redivivus I*.

¹³ *Artificium Definiendi Catholicum* p. 4; 15-19, in *Bisterfeldius Redivivus I*. Cf. Rossi, *Logic*, p. 142-144.

¹⁴ Bisterfeld, *Phosphorus Catholicus*, p. 23-27.

¹⁵ Th. Leinkauf, "Diversitas identitate compensata. Ein Grundproblem in Leibniz' Denken und seine Voraussetzungen in der Frühen Neuzeit" in *Studia Leibnitiana*, 28, 1996, p. 58-83; 29, 1997, p. 81-102, here p. 88-92.

reduced to some well-ordered community, then to paucity, and ultimately to unity, there will be no order between them, but mere confusion and chaos, and no certain cognition”.¹⁶ This principle is to be found in the first chapter of Bisterfeld’s metaphysical *Seminarium*, and the rest of the work seems to be structured in order to fulfil this epistemological postulate: The unity and ordered structure of the world is the necessary condition of possibility for its cognition. While Leibniz’s metaphysics certainly cannot be deduced from his epistemology in a similarly unilinear manner – “Leibniz’s philosophy is not”, Daniel Garber aptly points out, “a linear argument, with a beginning, middle, and end” –, I do believe that at least one of the many argumentative threads in this “complex of interrelated and mutually reflecting positions, principles, and arguments”¹⁷ is closely akin to Bisterfeld’s approach: Panperception and *fuga vacui* are the way Bisterfeld’s universe fulfils his postulate of a universal unity and order, in the same way as the pre-stabilized reflection of the universe in the individual substance is the metaphysical counterpart to Leibniz’s *notio completa* logic.

So far, we have been able to see quite a lot of parallels: Both authors are interested in Universal Science, postulate an harmonious order, discernible *a priori*, of the universe, and model, as the capstone of their philosophical system, their notion of being in such a way that it fulfils these epistemological demands, so that – as Thomas Leinkauf summarizes – *reality can be equalled to harmony*.¹⁸ – But where are the differences between the two authors? What does Leibniz ‘make’ of Bisterfeld’s account of an animate world?

In Bisterfeld, metaphysical principles find a direct expression in the universe. The impossibility of vacuum, for example, is a direct consequence of the metaphysical principle of universal coherence and harmony.¹⁹ And even substantial forms and (non-rational) souls can be explained

¹⁶ “Nisi enim omnigena omnimodaque rerum multitudo ad ordinatam quandam communitatem, ac proinde ad paucitatem tandemque ad unitatem, revocari queat, nullus erit earum ordo, sed mera confusio et chaos; earundemque certa cognitio nulla”. Bisterfeld, *Seminarium*, p. 2.

¹⁷ D. Garber, “Leibniz and the Foundations of Physics: The Middle Years”, in K. Okruhlik-J. R. Brown, *The Natural Philosophy of Leibniz*, Dordrecht-Boston-Lancaster-Tokio, Springer, 1985, p. 27-130.

¹⁸ Th. Leinkauf, “Harmonie und Realität. Eine systematische Einführung”, in Id.-S. Meier-Oeser, *Harmonie und Realität. Beiträge zur Philosophie des späten Leibniz* (“Studia Leibnitiana”, Sonderhefte 51), Tübingen, Steiner, 2017, p. 9-22.

¹⁹ Bisterfeld, *Seminarium*, p. 36.

mechanically, as a light and subtle sort of matter, whose fluctuation keeps the coarser bodies moving.²⁰ It is in this context that Leibniz's notes critically nuance Bisterfeld's argument by introducing the enigmatic notion of *spatium entitativum*, 'entitative space'. It appears thrice, scattered through the whole work, in Leibniz's notes on Bisterfeld's *Primae Philosophiae Seminarium*, a metaphysical manual with a highly systematic and deductive structure.

The first note in which Leibniz uses the term concerns vacuum. For Bisterfeld as for Leibniz, harmony is an essential property of things. "Everything coheres in a perfectly close and delightful manner", Bisterfeld therefore states in one of the paragraphs in question, "neither in the physical, nor in the spiritual world, there is any vacuum whatsoever".²¹ Leibniz feels the need to add clarity here: "sc. *entitative*, licet corporaliter" – "that is to say, [there is no vacuum] *entitatively*, [on the other hand] corporeally – it is not out of the question. For there is no *entitative space* except for the indivisible God".²² The 'indivisible God' is 'entitative space' – how should we understand this?

When the term appears for the second time, it relates to the locality of things. An important principle for both Leibniz and Bisterfeld is the unity of every being – every being is necessarily *one* being. Bisterfeld draws the following conclusions from this principle: "Every being is present to itself. No being is absent from itself. No being is distant from itself. Therefore, it is indeed contradictory to state that one and the same finite being, for example an angel or a man, is at one and the same time in several adequate places". Leibniz remarks at this point: "Wrong. Entitative space is one thing, corporeal space another".²³ The unity of every single being, for him, implies that it cannot be at different places in the *entitative* sense – physically that is not absolutely impossible.

²⁰ Bisterfeld, *Aphorismi Physici*, p. 143-146, in *Bisterfeldius Redivivus I*.

²¹ "Hinc, nullum in natura, vel spirituali, vel corporea, datur vacuum, sed omnia arctissime suavissime inter se cohaerent", *Seminarium* p. 36.

²² "sc. *entitative*, licet corporaliter. Non [e]n[im] datur Spatium Entis, nisi Deus indivisibilis. Et nescio quid extra, principium Existentiae, ubi Consistentia est coniunctio cum certa distantia in Spatio Entitativo", A VI.1 153 n. 8.

²³ Bisterfeld: "Ex unitate oritur nobilis quaedam nobilissimorum axiomatum sylva [p. 69] [...] VII. Ratione praesentiae. 1. Omne ens est praesens sibi ipsi. 2. Nullum ens abest a seipso. Unde revera contradictorium est, unum idemque ens finitum, v. g. Angelum vel hominem, esse uno eodemque tempore in diversis locis adaequatis [p. 81 f]". Leibniz's note: "falso. aliud est spatium Entitativum, aliud Corporale". A VI.1, 155 with n. 21 and VI.2, 520.

The third example gives us another, still mysterious hint of how to understand the term. When Bisterfeld defines ‘existence’ as “the mode of a being in virtue of which it is really to be found in the *rerum natura*”, Leibniz’s marginal note translates this *rerum natura* as the *spatium entitativum*.²⁴ As we see here, *spatium entitativum*, in some sense, seems to mean the totality of all existing things; in other contexts, we saw above, it can be equalled with God himself. Leibniz nowhere provides a clearer and less ambiguous definition – these are his personal notes, after all! Only a contextualization of the term can help us to understand it better.

Entitativus is an adjective derived from *entitas*, used in scholastic literature since at least Duns Scotus. The context in which it typically appears is the *actus entitativus* that Scotus, in the dualism of actuality and potentiality, ascribes to the totally unformed *materia prima*: While Thomas Aquinas²⁵ and others contend that prime matter is sheer potentiality, *potentia pura*, and has no actuality whatsoever, Scotus differentiates between *actus formalis* and *actus entitativus*: Clearly, unformed matter by definition has no claim to the former status, but since it is a positive entity, it can be described as *actus entitativus*.²⁶ The same distinction is made, for example, by Leibniz’s scholastic reference Suárez,²⁷ and is echoed in one of his own manuscripts.²⁸ The common ground with the notes on Bisterfeld, however, seems to be limited to the lexical level.

More parallels to Leibniz’s usage of the term – and even a *spatium entitativum* – can be found in the terminology of Erhard Weigel (1625-1699),²⁹ professor of mathematics in Jena. While for us today the only surviving direct source on this is Weigel’s 1673 work *Corporis Pansophici Pantologia*, published after the presumed date of Leibniz’s notes on Bisterfeld, Leibniz studied with Weigel in Jena in summer 1663 and apparently became acquainted with his terminology, which he cites already

²⁴ Bisterfeld 161 f: “Existencia est modus entis per quem revera est in *rerum natura*”; emphasized by Leibniz, comment “scilicet Spatum Entitativum, aut vita communis m[etaphy]sica”. A. VI.1, 159 with n. 37 and VI.2, 520.

²⁵ Cf. the *Index Thomisticus*, <<http://www.corpusthomicum.org/it/index.age>>, s.v. *potentia pura*, for a complete overview (retrieved 2nd November 2018).

²⁶ Duns Scotus, *Sent.* II.12.1, *Opera Omnia* XII, Paris, Vives, 1893, 563.

²⁷ F. Suárez, *Disputationes Metaphysicae* XV, 9, 5-6, Venice, Colosinus, 1605, p. 391. For a more critical reception of the concept in the 17th century, see the Collegium Conimbrigense’s commentary *In Physicam Aristotelis*, I.9.3.1, vol. I, Cologne, Zetzner, 1625, p. 199.

²⁸ *De distinctionibus seu fundamentis divisionum*, 1682-1696, A VI.4 B, 1147.

²⁹ I owe this decisive information to one of the anonymous reviewers of this article!

in the following year.³⁰ The typical context in which *entitative* is used by Weigel is the differentiated subdivision of terms – a subject to which large parts of the work are devoted: If there are several aspects according to which a term can be subdivided, *entitative* denotes the most general one. The relationship between *prior*, *posterior*, and *simul*, for example, may be understood *entitative*, *quotitative*, *quandicative*, and *ubicative*. While ‘quotitative’, ‘quandicative’, and ‘ubicative priority’ refer to numbers, time and space (1 precedes 2, past precedes future, one thing can be placed above or below another), ‘entitative’ priority or posteriority refers to the entities themselves, meaning that the being of one thing is “either presupposed by, or follows from, or is simultaneously implied” by that of another. “In this sense the cause is prior in the interaction of nature, the effect posterior, even in case they are simultaneous with respect to time and space”.³¹ *Entitative*, in Weigel, thus denotes generality: *Prior entitative* is a thing that has precedence not in this or that aspect, but by its whole essence. This helps us to understand Weigel’s *spatium entiativum morale*. Here, as well, we will see, the word *entiativum* has an abstractive role.

An *ens civile*, or *morale*, in Weigel’s definition, is an entity that “depends in its being on a consensual attribution by humans leading a social life” – that is, institutions and structures of the society.³² While such entities “from a formal point of view add nothing solid to the interaction of natural things” or constitute measurable material facts, these *entia moralia* “often have a far greater effect on our actions than the natural things themselves, as those who break laws even against their will experience frequently”.³³ Now, as our intellect “understands everything by an analogy

³⁰ “Et Clarissimus *Weigelius*, Prof. Mathematicum Jenensis, Praeceptor, Fautorque meus colendus tria summa genera Entitum constituit: *Naturale*, *Morale*, et *Notionale* [...], et uti actioni naturali seu motui *Spatium* substratum sit, spatium quoddam morale esse *Statum*, in quo quasi motus naturalis exerceatur”: *Specimen quaestionum philosophicarum ex jure collectarum*, Leipzig, Wittigau, 1664, A VI.1, 94. Leibniz’s other citations in this work usually name a specific book and not just the scholar – so he seems to have heard about Weigel’s terminology orally.

³¹ “*Entitative*, quod essendi consequentia vel praesupponitur, vel sequitur, vel concurrat. Ita causa prior est in naturae commercio, causatum posterius, etsi tempore et loco sint simul”: E. Weigel, *Corporis Pansophici Pantologia*, Jena, Bauhofer [1673], p. 74, similarly *ibid.*, p. 76, 79.

³² “*Ens civile* est quod habet essentiam civilem, s. quod in esse suo dependet a consensuali hominum Socialem vitam ducentium imputation”, *ibid.*, p. 20.

³³ “[...] licet illa, si formaliter spectentur, naturalium rerum commercio nihil solidi superaddant”; “nostris actionibus efficacissime imparant, et effectum in vita communi

to body, [...] it perceives also this work, which has been constituted willingly by a second, moral, creation, as some *world* of its own, for distinction sake termed *moral* [...]”. The entirety of moral things thus presents us a *spatium entitativum morale*, “a moral entitative space, [...] in which moral things are placed and are seen to interact with one another, according to a *before* and *after* commonly called *dignity*”.³⁴ This social universe, just like Aristotle’s physical world, is subdivided into several spheres of different rank, has an empyreum (the ecclesiastic sphere) as well as a sky and a sublunar world (political and private spheres). As we see, *space* here is a metaphor for a system of a very different sort than the physical universe – a *moral* one –, and *entitative* is the verbal signal for the level of abstraction that makes this metaphorical use of the term possible: As we deal not with physical, but with *entitative* space, therefore not with bodies, but with *entities as entities*, we can also find a ‘spatial’ order for the non-physical *entia civilia*. So far, Leibniz seems to follow Weigel.

Concerning the notion of space, important developments had taken place in the renaissance tradition that was well known to Bisterfeld, Weigel, and Leibniz:³⁵ Thinkers like Tommaso Campanella, Francesco Patrizi, and Pierre Gassendi began to regard space as a substantial being of its own, a *primum factum* and precondition to material creatures, as whose ‘container’ it functioned, its *receptaculum*, as Leibniz himself put it³⁶ – a concept that anticipates Newton’s concept of absolute space, which

multo maiorem saepe, quam ipsae res naturales, habent, quod ii, qui peccarunt, etiam inviti saepius experiuntur”: E. Weigel, *Universi corporis pansophici caput summum*, Jena, Bauhofer, 1673, fol. a2 v.

³⁴ “Quemadmodum igitur intellectus alias omnia per proportionem ad corpus apprehendit, quod in Pantognosia prolixius explicabimus; ita quoque hoc morali quadam creatione secunda per voluntatem ita constitutum opus ceu peculiarem quendam MUNDUM, distinctionis gratia dictum MORALEM, [...] concipit”. “Abstractus autem Entium civilium Complexus et Commercium illud s. consortium personarum et rerum civilium praecise conceptum, qs. *Spatium entitativum morale* largitur, h. e. Statum illum naturalem *Vitam Civilem* dictum, in quo res morales locum habere et secundum *Prius* et *Posterius*, quod vulgo dicitur DIGNITATE, se mutuo concernere concipiuntur”: Weigel, *Pantologia*, p. 21 sq.

³⁵ As early as 1677 (*Spatium et Motus revera relationes*, 1677 (?), A VI. 4 C, 1968-1970), Leibniz is an advocate of a ‘relational’ rather than an ‘absolute’ understanding of space, but the container theory of space is mentioned several times in his earlier writings: Letter to Thomasius, April 1669, A II.1 (2006), 34; *De origine rerum ex formis*, April 1676, A VI.3, 519; *Definitiones cogitationesque metaphysicae*, 1678-81, A VI.4 B, 1397; *De mundo praesenti*, 1684-1686, A VI.4 B, 1509.

³⁶ *De mundo praesenti*, 1684-1686, A VI.4 B, 1509.

Leibniz later so vigorously attacked.³⁷ Given this premise, it seems natural to describe also the totality of non-physical entities as situated in a non-geometrical ‘container’ analogous to physical space – Tommaso Campanella’s *mundus archetypus* and *mentalis*, for example, function in a similar way.³⁸ Accordingly, Weigel’s and Leibniz’s *spatium entitativum* seems to be a ‘container’ in which things are situated related to each other not according to three-dimensional geometry, but according to a different, abstract system. Leibniz and Weigel, however, use this spatial metaphor in different contexts: Weigel’s *spatium entitativum morale* denotes the relationship of social, institutional entities according to social parameters. Leibniz’s *spatium entitativum*, on the other hand, seems to denote the relationship of creatures according to their original concept in the mind of God and thus their own innermost nature. We remember that social and metaphysical categories are very close to one another for Leibniz at that period. But nonetheless, this seems to be the point where Leibniz parts ways with Weigel and develops his argument in a more original way. In our attempt to make sense of his notes on Bisterfeld, we are now thrown back towards the scarce and dubious hints found in his own work.

As it seems, Leibniz here tries to reconcile his theological and scientific views with Bisterfeld’s metaphysical system. As for his differentiation between ‘corporeal’ and ‘entitative’ vacuums, Hubertus Busche argues that a physical vacuum is the necessary precondition for the atomism Leibniz held back then:³⁹ By admitting to a vacuum on the ‘corporeal’ level, but rejecting it on the ‘entitative level’, he can uphold an atomistic conception of the physical universe under Bisterfeld’s premises. Concerning the problem of multipresence, it seems plausible that both Bisterfeld and Leibniz have Eucharistic theology in mind. It is a premise of the Catholic and the Lutheran doctrines of the Eucharist that a given being – the body

³⁷ Th. Leinkauf, “Der Begriff des Raumes in der Diskussion um 1600”, *Kunsttexte*, 1, 2011, <<https://edoc.hu-berlin.de/handle/18452/8282>>, passim (retrieved 2nd November 2018).

³⁸ These two being the hierarchically higher analogous counterparts to the more geometrical *mundus mathematicus*, *mundus materialis*, and *mundus situatus*: Tommaso Campanella, *Universalis philosophiae seu metaphysicarum rerum iuxta propria dogmata*, Paris 1638, lib. 1, cap. 1, art. 11, p. 248-249. Cf. the summary in E. Grant, *Much Ado about Nothing. Theories of Space and Vacuum from the Middle Ages to the Scientific Revolution*, Cambridge, University Press, 1981, p. 194.

³⁹ H. Busche, *Leibniz’ Weg ins perspektivische Universum. Eine Harmonie im Zeitalter der Berechnung*, Hamburg, Meiner, 1997, p. 147.

of Christ – can be present at several places simultaneously. In other sections of his book, Bisterfeld explicitly deduces from his philosophical premises the rejection of this and other *theologoumena* adverse to his Calvinist creed;⁴⁰ the Rome-friendly Lutheran Leibniz seems to suspect such an intention also here and accordingly modifies Bisterfeld's argument in a way that is more compatible with his own beliefs.⁴¹

Leibniz's early ideas on Eucharistic theology – spelled out in manuscripts a few years later, 1668-1669 – do indeed help us to understand in what sense *rerum natura* and even *Deus indivisibilis* can be equalled with *spatium entitativum*. The substance of a being, Leibniz argues there, is something more than the body that we see: Substances, according to Aristotle, are entities that have a principle of action in themselves; bodies need to be moved from outside; therefore, in order to be a complete substance, a body must be united to a mind. This union, Leibniz thinks, is what changes in Eucharistic Transsubstantiation: The bodies placed on the altar, originally linked to the idea of bread and wine in the Divine mind, are instead linked in the act of consecration to the mind of Christ and thus become His body and blood, without any change of their outward appearance. The same body of Christ can be simultaneously present on several altars (as well as in heaven), because all of these hosts and chalices are linked to the same mind. *In Deo sunt* – 'God contains' (!) – *infinitae Ideae realiter diversae*,⁴² each of whom determines the essence of a different being. I think that this is precisely what Leibniz means by *spatium entitativum*: An 'ideal topography' of different ideas in the mind of God, which – rather than the physical differentiation – determines what a thing really, substantially, 'entitatively' is.

Specific scientific and theological problems here lead to a fundamental shift in the notion of being. Leibniz, it seems, reads Bisterfeld's work neither as a quarry for isolated ideas, nor as a manual of philosophical

⁴⁰ Cf. the parallel account on locality, *Seminarium*, p. 176-177. Bisterfeld often has theological controversies in mind when building his philosophical arguments, cf. *ibid.*, 64, p. 110-111.

⁴¹ Eucharistic theology often offers Leibniz an opportunity to develop new metaphysical ideas. For a later example, cf. Th. Leinkauf, "The vinculum substantiale and the Impact of Metaphysics in Leibniz' Late Philosophy", in Id.- Meier-Oeser, *Harmonie und Realität*, p. 179-199.

⁴² Cf. the *Demonstrationes Catholicae*, 1668 (?), A VI.1, 508-514. A summary and interpretation of the Eucharistic theology is given by Ch. Mercer, *Leibniz's Metaphysics. Its Origins and Development*, Cambridge, University Press, 2001, p. 83-93.

commonplaces. Rather, he is enthusiastically interested in Bisterfeld's system as a whole – but adopts his argument under premises that are very much his own. “There is no space of being except for the indivisible God. And I do not know what else is the principle of *existence*, if *consistency* is a connection with a certain distance in *entitative space*”.⁴³ *Existencia* and *consistentia* are Bisterfeld's own systematically defined technical terms describing the relational nature of all beings.⁴⁴ This shows how accurately Leibniz reconstructs Bisterfeld's argument, even using terminology specific to its author – and then continues by introducing his own idiosyncratic concept: He follows Bisterfeld's argument for a universal cohesion of all things, but places this cohesion in ‘entitative’, not in corporeal space.

Leibniz here strictly separates metaphysics and physics. The metaphysical unity and harmony of the world necessarily required for its cognition does no longer directly lead to a physical cohesion. Bisterfeld's metaphysical argument does not, in Leibniz's view, necessarily entail the impossibility of a physical vacuum; according to Bisterfeld's premises explained so far, Leibniz thinks, it “is not entirely out of the question” that it exists. Leibniz emphatically subscribes to Bisterfeld's epistemological postulate of the unity of the world, but objects that it must be fulfilled in a different, non-physical manner, which he baptizes with the awkward, untranslatable, and mysterious scholastic barbarism *entitative*.

Already here, therefore, Leibniz seems to anticipate some aspects of a project that we can trace more clearly from the late 1660s until the very last years of his life: He tries to combine a mechanistic physics with a metaphysics allowing for an almighty God and immortal souls and capable to serve as the philosophical fundament for Christian dogma. His argumentative strategy in this endeavour seems to be the same for most of his life – from his *Confessio naturae contra atheistas* (1668/1669) through the *Discours de Métaphysique* (1686)⁴⁵ until his last letter to Clarke in 1716⁴⁶: He follows the mechanistic postulate to keep the interactions of bodies free of all supernatural – and indeed of any non-physical – influence, but then tries to prove that this mechanistic world is possible only under the premise of the existence of spiritual substances: God and

⁴³ See above, n. 26.

⁴⁴ *Consistentia, est entitas, per quam ens est ad Ens; per quam ens cum aliquo et respective esse concipitur.* (*Seminarium*, p. 31).

⁴⁵ *Discours de Métaphysique* X, A VI.4 B, 1543.

⁴⁶ G VII, p. 417 sq.

created souls.⁴⁷ Physics and metaphysics are two different, parallel but independent 'realms',⁴⁸ which never interfere with one another – but the physical realm is ultimately grounded in the metaphysical one. This approach also allows him to give older philosophical concepts – most famously the scholastic Substantial Form – a new, in his view, more rational interpretation.

Though we cannot know precisely how much of this concept was already behind Leibniz's notes on Bisterfeld, several points are strikingly similar: Introducing a strict separation between physics and metaphysics, Leibniz, with recourse to Weigel's terminology, reconstructs in a free, eclectic manner the system of an older philosopher, preserving his metaphysical outlook and his epistemological premises, but at the same time creating more room both for Christian dogma and mechanistic physics. While the specific form of the argument, the notion of *spatium entitativum*, was determined by problems only relevant for the catholicizing atomist that Leibniz was during this short phase of his biography, the core of the problem remains in the very centre of his philosophy for the rest of his life.

REFERENCES:

- Antognazza, Maria Rosa, "Bisterfeld and *immetatio*. Origins of a Key Concept in the Early Modern Doctrine of Universal Harmony", in Martin Mulrow (ed.), *Spätrenaissance-Philosophie in Deutschland. Entwürfe zwischen Humanismus und Konfessionalisierung, okkulten Traditionen und Schulmetaphysik*, Berlin, De Gruyter, 2009, p. 57-83.
- Antognazza, Maria Rosa, *Leibniz. An Intellectual Biography*, Cambridge, University Press, 2009.
- Bisterfeld, Johann Heinrich, *Phosphorus Catholicus, seu artis meditandi epitome*, Leiden, Verbiest, 1657.
- Bisterfeld, Johann Heinrich, *Primae philosophiae seminarium*, ed. Adrian Heereboord, Leiden, Gaasbeeck, 1657.

⁴⁷ Cf. e. g. *Discours de Métaphysique* X, A VI.4 B, 1543. An important metaphor on the subject is that of the 'two realms' of physics and metaphysics, most famously in the *Monadology*, §§ 79/87, G VI, 620/622; other examples offered by D. Garber, "Leibniz: Physics and Philosophy", in *The Cambridge Companion to Leibniz*, ed. N. Jolley, Cambridge, University Press, 1994, p. 270-352, here: p. 327, 330-331.

⁴⁸ A metaphor that Leibniz frequently uses from the 1690s on – most famously in the *Monadology*, §§ 79/87, G VI, 620/622; other examples offered by Garber, "Leibniz: Physics and Philosophy", p. 327, 330-331.

- Bisterfeld, Johann Heinrich, *Bisterfeldius redivivus, seu oper[a] posthum[a] Joh. Henrici Bisterfeldi*, 2 vols., The Hague, Vlacq, 1661.
- Busche, Hubertus, *Leibniz' Weg ins perspektivische Universum. Eine Harmonie im Zeitalter der Berechnung*, Hamburg, Meiner, 1997.
- Commentariorum Collegii Conimbricensis Societatis Iesu in octo libros Physicorum Aristotelis Stagiritae Prima Pars*, Cologne, Zetzner, 1625.
- Garber, Daniel, "Leibniz and the Foundations of Physics: The Middle Years", in Kathleen Okruhlik, James Robert Brown, *The Natural Philosophy of Leibniz*, Dordrecht-Boston-Lancaster-Tokio, Springer, 1985, p. 27-130.
- Garber, Daniel, "Leibniz: Physics and Philosophy", in *The Cambridge Companion to Leibniz*, ed. Nicholas Jolley, Cambridge, University Press, 1994, p. 270-352.
- Grant, Edward, *Much Ado about Nothing. Theories of Space and Vacuum from the Middle Ages to the Scientific Revolution*, Cambridge, University Press, 1981.
- Kabitz, Willy, *Die Philosophie des jungen Leibniz. Untersuchungen zur Entwicklungsgeschichte eines Systems*, Heidelberg, Winter, 1909.
- Kvacsala, Janos, "Johann Heinrich Bisterfeld", *Ungarische Revue*, 13, 1893, p. 40-59, 174-197.
- Leinkauf, Thomas, "Diversitas identitate compensata. Ein Grundproblem in Leibniz' Denken und seine Voraussetzungen in der Frühen Neuzeit", *Studia Leibnitiana*, 28, 1996, p. 58-83; 29, 1997, p. 81-102.
- Leinkauf, Thomas, "Der Begriff des Raumes in der Diskussion um 1600", *Kunsttexte*, 1, 2011, <<https://edoc.hu-berlin.de/handle/18452/8282>> (retrieved 2nd November 2018).
- Leinkauf, Thomas, "Harmonie und Realität. Eine systematische Einführung", in Id.-Stephan Meier-Oeser, *Harmonie und Realität. Beiträge zur Philosophie des späten Leibniz* ("Studia Leibnitiana", Sonderhefte 51), Tübingen, Steiner, 2017, p. 9-22.
- Leinkauf, Thomas, "The vinculum substantiale and the Impact of Metaphysics in Leibniz' Late Philosophy", in Id.-Stephan Meier-Oeser, *Harmonie und Realität. Beiträge zur Philosophie des späten Leibniz* ("Studia Leibnitiana", Sonderhefte 51), Tübingen, Steiner, 2017, p. 179-199.
- Loemker, Leroy E., "Leibniz and the Herborn Encyclopedists", in Ivor Leclerc (ed.), *The Philosophy of Leibniz and the Modern World*, Nashville, Vanderbilt University Press, 1973, p. 276-297.
- Mercer, Christia, *Leibniz's Metaphysics. Its Origins and Development*, Cambridge, University Press, 2001, esp. p. 63-129.
- Mugnai, Massimo, "Der Begriff der Harmonie als metaphysische Grundlage der Kombinatorik und Logik bei Johann Heinrich Bisterfeld und Leibniz", *Studia Leibnitiana*, 5, 1973, p. 43-73.
- Mulsow, Martin, "Sociabilitas. Zu einem Kontext der Campanella-Rezeption im 17. Jahrhundert", in *Bruniana & Campanelliana*, 1, 1995, p. 205-232.
- Mulsow, Martin, "Bisterfelds *Cabala*. Zur Bedeutung des Antisozianismus für die Spätrenaissancephilosophie", in Id., *Spätrenaissance-Philosophie in Deutschland. Entwürfe zwischen Humanismus und Konfessionalisierung, okkulter Traditionen und Schulmetaphysik*, Berlin, De Gruyter, 2009.

Spatium entitativum. *Leibniz's Notes on J. H. Bisterfeld*

- Rossi, Paolo, *Clavis Universalis. Arti della memoria e logica combinatoria da Lullo a Leibniz*, Bologna, Mulino, 1983, trans. Stephen Clucas, *Logic and the Art of Memory. The Quest for a Universal Language*, London, Continuum, 2000.
- Rutherford, Donald, *Leibniz and the Rational Order of Nature*, Cambridge, University Press, 1998.
- Scotus Duns, *Opera Omnia XII*, Paris, Vives, 1893.
- Suárez, Francisco, *Disputationes Metaphysicae XV*, 9, 5-6, Venice, Colosinus, 1605.
- Weigel, Erhard, *Universi corporis pansophici caput summum*, Jena, Bauhofer, 1673.
- Weigel, Erhard, *Corporis Pansophici Pantologia*, Jena, Bauhofer [1673].

HANNES AMBERGER, M.A.
Università degli Studi di Salerno
hannes.amberger@uni-muenster.de