INTRODUCTION

§ 1 HARMONY AS METAPHYSICAL GRUNDBEGRIFF

The impetus for this investigation can be shown in part by way of a brief thought experiment. Imagine for a moment that we set out to equip a standard metaphysical toolbox, that is, to gather a set of concepts sufficient for tackling most common metaphysical problems. Which concepts would merit inclusion? Following Plato's great metaphysical treatises, the *Sophist* and the *Parmenides*, we would likely start with being and non-being, change and rest, sameness and difference, oneness and multiplicity. Looking to Aristotle, we would add the ten categories: substance, quantity, quality, relation, place, time, posture, having, action and passion, as well as several variations on the theme "cause". Following both of these thinkers and a host of others, we would do well to throw in form and matter, necessity and contingency, universality, particularity and individuality, composition and division, corporeality and incorporeality, eternity, perfection and finitude. For handling most metaphysical jobs, one could reliably count on a toolbox so equipped.

Leibniz goes further, insisting that harmony be included in his toolbox of foundational metaphysical concepts, or *Grundbegriffe*. Harmony, as this book will make clear, is a notion without which Leibniz's metaphysics cannot proceed. Though Leibniz often explains harmony by reference to other fundamental concepts, it is itself an irreducible and incliminable notion.

Harmony's absence from our standard metaphysical toolbox notwithstanding, it is in one respect not too surprising that Leibniz places such great emphasis on it. A survey of the tradition growing out of Pythagoras, including authors such as Heraclitus, Empedocles¹, Plato², and Epictetus³, reveals harmony's association with certain theses – namely that the universe has a discernible rational order, that some kind of union or sympathy obtains among beings, and that the world is fundamentally beautiful and good – with which Leibniz, widely known for being a rationalist, for his theory of windowless yet mutually mirroring monads, and for defending the thesis that we live in the best of all possible worlds, readily agrees.

- On the place of harmony in the thought of Pythagoras and other Presocratic philosophers, see The Presocratic Philosophers, 2nd ed., edited by G. Kirk, J. Raven, and M. Schofield, Cambridge 2007, passim. On Pythagoras' harmony of the spheres, see also Aristotle: Metaphysics A 985b–986a.
- 2 Timaeus 36a-e.
- 3 *Discourses* I.12.16. Here, though Epictetus uses neither the term ἀρμονίη nor ἀρμονία, he does speak similarly of the "symphony of the whole" [συμφωνίας τῶν ὅλον].

In most respects, however, Leibniz's reliance on harmony stands out in the history of western philosophy. There is much that is striking and original in Leibniz's use of harmony as a Grundbegriff or constitutive principle. While much of this originality will come to light only in the course of this investigation, let me here initially qualify what is noteworthy in Leibniz's appeals to harmony. Of primary significance is the sheer breadth of problems Leibniz approaches and solves via this concept. Harmony bears a huge metaphysical burden for Leibniz, not merely describing the broad structure of the cosmos, but entering into "nuts and bolts" metaphysical arguments regarding the natures of causality, substance, the mind, the mind-body relationship, and good and evil. Also remarkable is the extent to which Leibniz's concept of harmony is truly metaphysical. By this I mean to distinguish Leibniz's use of harmony from principally aesthetic appeals to harmony. Though the harmonious is for Leibniz beautiful and pleasing, his characterization of a harmonious order does not principally rely on its aesthetic value per se. Leibniz certainly trades on harmony's having both aesthetic and mathematical dimensions. yet his treatment of harmony derives in no direct way from musical theory or from analyses of harmonic intervals à la Pythagoras. Harmony is for Leibniz at root not an aesthetic, but a logical and metaphysical principle.

In light of Leibniz's distinctive defense of harmony as a foundational metaphysical principle, this work is an investigation into his notion of harmony guided by two main questions. The first is the old Socratic *ti esti* question: what is harmony? In other words, what does harmony mean for Leibniz? The centrality of this question would go without saying, were it not tempting to answer it by looking away from harmony as such, thereby lessening its conceptual burden. For example, it is all too easy to reason that Leibniz's theory of preestablished harmony requires spontaneity, which in turn requires his notion of individual substance, which in turn requires his conceptual containment theory of predication, and thus to focus on the last of these as the truly important issue. While it would be foolish to suggest that we could understand what harmony means for Leibniz without considering his other theoretical commitments, one goal of this work is to focus, as much as possible, on the idea of harmony as such, to pursue persistenly the *ti esti* question. The second guiding question is the *pōs* question: how does harmony function in Leibniz's thought and what import does it have for his metaphysics?

These are not, of course, hitherto unasked questions. In order to better specify the *raison d'être* for this investigation and to introduce the thesis I will defend, it is necessary that we first address in the remainder of this introduction two additional questions: 1) what is entailed in classifying harmony as a *Grundbegriff*? and 2) why is harmony a *Grundbegriff* for Leibniz in the first place?

§ 2 WHAT IS ENTAILED IN CLASSIFYING HARMONY AS A GRUNDBEGRIFF?

In his seminal investigation into Leibniz's early thought, *Die Philosophie des jungen Leibniz* (1909), Kabitz isolates five Leibnizian *Grundbegriffe*, concepts essential to Leibniz's thinking from the time of his first writings. These are, in Kabitz's estimation, (1) panlogism, (2) the independent existence of individuals, (3) universal harmony, (4) the quantitative and qualitative infinity of the universe, and (5) the mechanical hypothesis⁴. The first and fifth of Kabitz's *Grundbegriffe* are rather general theses easily attributed to Leibniz; panlogism means that the world has a discernible rational order and the mechanical hypothesis points to Leibniz's insistence that all phenomena be explained in terms of the new mechanical science of the 17th C. Kabitz locates the fourth *Grundbegriff* in Leibniz's belief that matter is infinitely divided and in his fascination with the layers of complexity in the world. As for the independent existence of individuals, Di Bella has helpfully muddied the waters by examining the complexity in Leibniz's notion of "individual", both in terms of the relationship of the individual to its world in and in terms of the correlation between Leibniz's ontological and conceptual understandings of "individual".

We are left to discuss the third *Grundbegriff*, universal harmony. In order to articulate my reservations with Kabitz's analysis of harmony, let me draw a distinction between a *concept* and a *conception*. In so doing, I follow roughly the distinction Dworkin makes in his legal theory⁶. To paraphrase Dworkin, a single concept or ideal can admit of multiple conceptions, i.e., multiple definitions or operative understandings of that ideal. For example, equality is a concept enshrined in the American legal tradition. However, what has counted as equality, what equality has been taken to mean, and how equality has manifested itself in the life of the nation have all changed over time. Citing equality as an American *Grundbegriff* therefore tells only a small part of the story of its place in the tradition.

That harmony is a *concept*, an ideal, Leibniz adopts early in his intellectual development is an unimpeachable thesis. Thus far, Kabitz has it right. Yet Kabitz tacitly commits himself to the much stronger thesis that Leibniz maintains a substantially unaltered *conception* of harmony throughout the whole of his career. That Kabitz assents to this stronger thesis can be gleaned from his assertion that, though not present in the mind of the young Leibniz, the theory of preestablished harmony was latent in Leibniz's earliest theory of universal harmony (when viewed in conjunction with the other *Grundbegriffe*)⁷. Put otherwise, Kabitz sees Leibniz's mature appeals to harmony as implicit in his earliest writings, with no significant intervening changes in the basic conception of harmony.

W. Kabitz: Die Philosophie des jungen Leibniz, Heidelberg 1909, pp. 127-134.

⁵ S. Di Bella: The Science of the Individual: Leibniz's Ontology of Individual Substance, Dord-recht 2005.

⁶ R. Dworkin: *Taking Rights Seriously*, Cambridge 1977, pp. 134–136.

⁷ W. Kabitz: op. cit., p. 133.

One upshot of the present investigation is that it demonstrates the inadequacy of Kabitz's view. Given the progress in Leibniz scholarship over the past century and the accumulated literature on Leibniz and harmony, however, challenging Kabitz alone would not justify this book: one could charge that in Kabitz I am uncharitably and unfairly criticizing an outdated interlocutor. Yet the thesis of continuity in Leibniz's conception of harmony is by no means unique to Kabitz. To the contrary, it has been regularly affirmed in more recent, and otherwise excellent, studies of Leibniz and harmony. Mugnai writes that the essential meaning Leibniz attributes to the concept of harmony in his early works remains unchanged throughout later developments in his thought⁸. Leinkauf, much the same as Kabitz, declares Leibniz's earliest definition of harmony, "diversitas identitate compensata" a fundamental and enduring theorem of Leibniz's thought⁹. Piro similarly claims that all of Leibniz's definitions of harmony can be condensed into the unified formula "varietas identitate compensata" 10. Carlin writes that though "the terminology he used to define harmony sometimes varied from writing to writing, the idea seems to have remained fixed in [Leibniz's] writing from early to late"11. In addition to these transparent endorsements of the continuity thesis, Leibniz scholarship routinely takes the thesis for granted by juxtaposing, without qualification, excerpts treating harmony from texts spanning Leibniz's career. In all likelihood, Kabitz's continuity thesis is the consensus view, but at the very least it is a prevailing view which has not been subject to explicit scrutiny.

This book applies some overdue scrutiny and aims to debunk the common assumption of continuity in Leibniz's conception of harmony. Harmony is undeniably for Leibniz a foundational concept, but I shall argue that Leibniz's conception of it evolves in a meaningful and noteworthy way. So, in response to our question, classifying harmony as a *Grundbegriff* does entail the thesis that harmony serves as a constitutive concept in Leibniz's thought from his earliest writings, but it should not be taken to mean that there is continuity in Leibniz's conception of it.

§ 3 WHY IS HARMONY A GRUNDBEGRIFF IN LEIBNIZ'S THOUGHT?

Making the case for development in Leibniz's thinking on harmony requires that we take a historical, chronological approach to Leibniz's writings. The question of why harmony serves Leibniz as so important a *Grundbegriff* will be answered fully only by analysis of the concrete contexts in which Leibniz appeals to harmony throughout his career. At this early juncture, however, I want to address the question of why

- 8 M. Mugnai: "Der Begriff der Harmonie als metaphysiche Grundlage der Logic und Kombinatorik bei Johann Heinrich Bisterfeld und Leibniz", in: Studia Leibnitiana V/1 (1973), p. 72.
- T. Leinkauf: "Diversitas identitate compensata'. Ein Grundtheorem in Leibniz' Denken und seine Voraussetzungen in der frühen Neuzeit", in: Studia Leibnitiana XXVIII/1 (1996), p. 58.
- 10 F. Piro: Varietas Identitate Compensata: Studio sulla formazione della metafisica di Leibniz, Napoli 1990, p. 9.
- 11 L. Carlin: "On the Very Concept of Harmony in Leibniz", in: *The Review of Metaphysics* 54 (1), p. 100.

harmony factors into Leibniz's nascent thinking by looking at his writings from his student days in Leipzig and Altdorf in the 1660s. From these texts, we can ascertain why harmony appeals to the young Leibniz and establish the basis from which he will develop his own conception. I shall treat Leibniz's initial inquiries only briefly since, although they certainly harbor metaphysical presuppositions, they pre-date Leibniz's assumption of a metaphysical project in earnest, and my main concern is the role of harmony in Leibnizian metaphysics.

Why is harmony a *Grundbegriff* in Leibniz's thought? For starters, harmony as both idea and ideal was simply part of Leibniz's intellectual *milieu*. Much has been written on possible forerunners to his theory of harmony. The writings of the Ramist encyclopedists of the University of Herborn, particularly Johann Heinrich Alsted (1588–1638) and Johann Heinrich Bisterfeld (1605–55) have been shown to have especially shaped Leibniz's early thought on harmony¹². Leinkauf has stressed that in addition to this German reformed tradition, a tradition of Renaissance Platonism including Nicholas of Cusa (1401–64), Marsilio Ficino (1433–99), and Charles de Bovelles (1479–1567) influenced Leibniz's ideas on diversity, identity, and harmony¹³. One could add to this list Johannes Kepler's astronomical treatise *Harmonice mundi* of 1619 and Marin Mersenne's musical treatise *Harmonice mundi* of 1619 and Marin Mersenne's musical treatise *Harmonice universelle* of 1636 as works attesting to the interest in harmony among 17th C. intellectuals.

I do not wish to rehash in detail the extensive research that has been done on Leibniz's sources, nor do I wish to make a case for privileging one influence above others. My interest lies more in what Leibniz does with harmony than with where he got the idea. Nonetheless, a brief look to Bisterfeld helps to answer why Leibniz embraces harmony as a *Grundbegriff* and what purpose the concept serves in his early thought¹⁴. For Bisterfeld, there exists a *panharmonia* or what he sometimes calls *immeatio*, among all things (A VI.1, 153, 158). All things are in concourse, in society, with all others, each individual standing in a variety of complex relations to all. Bisterfeld views this *panharmonia* as the created expression of the divine ἐμπεριχώρηςις, that is, the union or society between the three persons of

- See: (1) M. Antognazza: "Immeatio and Emperichoresis. The Theological Roots of Harmony in Bisterfeld and Leibniz", in: *The Young Leibniz and his Philosophy*, edited by S. Brown, Dordrecht 1999. (2) M. Antognazza: *Leibniz on the Trinity and the Incarnation: Reason and Revelation in the Seventeenth Century*, New Haven 2007. (3) M. Antognazza: *Leibniz: An Intellectual Biography*, Cambridge 2009. (4) M. Antognazza: "Debilissimae Entitates? Bisterfeld and Leibniz's Ontology of Relations", in: *The Leibniz Review* 11, pp. 11–22. (5) H. Hotson: *Commonplace Learning*, New York 2007. (6) W. Kabitz: *op. cit.*, pp. 6–10. (7) L. Loemker: "Leibniz and the Herborn Encyclopedists", in: *Journal of the History of Ideas* 22 (3), pp. 323–338. (8) L. Loemker: *Struggle for Synthesis*, Cambridge 1972. (9) C. Mercer: *Leibniz's Metaphysics: Its Origins and Development*, New York 2001. (10) K. Moll: *Der junge Leibniz*, vol. 3, Stuttgart-Bad Cannstatt 1996. (11) M. Mugnai: *op. cit.* (12) D. Rutherford: *Leibniz and the Rational Order of Nature*, New York 1995, pp. 36–40.
- 13 T. Leinkauf: op. cit.
- 14 Among the writings we have from Leibniz's time as a student in Leipzig and Altdorf (1663–66) is a collection of the notes Leibniz made to Bisterfeld's *Philosophiae Primae Seminarium* (1657). See *Notae ad Joh. Henricum Bisterfeldium* (A VI.1, N. 7). In my remarks on Bisterfeld, I rely chiefly on this work and on the scholarship of Kabitz, Loemker, Mugnai, and Antognazza cited in n. 12, above. For full citations to Bisterfeld's works, consult these studies.

the Christian Trinity. Most important for the young Leibniz, I think, is the way this theological belief in the likeness of God and creation founds a positive program for logic and philosophy. For Bisterfeld, the task of philosophy is to reconstruct in the mind the *panharmonia* or *immeatio* of the world. "Omnis multitudo", Leibniz quotes him, "et potest et debet revocari ad unitatem" (A VI.1, 158). In other words, the relations between things must be thoroughly explored and catalogued, such that the structure, order, and unity of the world are rendered transparent. Bisterfeld's theory of *panharmonia* is thus closely bound up with a belief in *panlogism*, i.e., the thoroughgoingly rational structure of the world, which structure is accessible to human reason.

The significance of Bisterfeld for Leibniz can be gleaned from the latter's first logical work, the *Dissertatio de Arte Combinatoria*, published in Leipzig in 1666. In this text, Leibniz makes his first attempt at laying out the method for a universal science. One thesis is that, beginning from a set of primordial, indefinable "first terms", one could, through a series of combinations and permutations, construct the entire edifice of human knowledge. Leibniz does not in this work provide an exhaustive list of these first terms, but he does supply an exemplar list of geometrical terms to show how his method would proceed. Take the following selection from his key: 9 = Pars; 14 = Numerus; 15 = Plura. Using these first terms, Leibniz proceeds to define "Quantitas" as " $14 \tau \tilde{\omega} v 9 (15)$ ", i. e., the number of parts. He then uses this definition of "quantitas" and the primitive term "idem" to define "aequale" as 'of the same quantity'. He in turn employs equal in defining "greater", "less", "parallel", and so on (A VI.1, 200).

Leibniz's presuppositions in his early combinatorics that concepts can be treated as numbers and that thinking is essentially calculation undoubtedly owe much to Hobbes' beliefs that ratiocination is computation and that demonstration proceeds by substituting terms with their definitions, *salva veritate*¹⁵. Yet the significance of Bisterfeld is seen in the link Leibniz draws between the quantitative art of combinations and the idea of harmony. Just before presenting the geometrical examples referenced above. Leibniz remarks in *de Arte Combinatoria*:

Uno saltem verbo indigitabimus omnia ex doctrina metaphysica relationum Entis ad Ens repetenda esse ... Hoc vidisse arbitror, præter morem compendiographorum solidissimum Joh. Henr. Bisterfeld in Phosphoro Catholico, seu Epitome artis meditandi ed. Lugd. Bat. anno 1657., quæ tota fundatur in immeatione et περιχωρήσει, ut vocat, universali omnium in omnibus, similitudine item et dissimilitudine omnium cum omnibus, quarum principia: Relationes. Eum libellum qui legerit, usum artis complicatoriæ magis magisque perspiciet (A VI.I, 199).

Though harmony is not explicitly mentioned in this passage, we know the idea of *panharmonia* is closely related in Bisterfeld's thinking to *immeatio* and περιχώρηςις. More significant for our purposes, the terms similitude and dissimilitude which appear here figure prominently in Leibniz's earliest discussions of harmony. The point I wish to stress is that the young Leibniz sees in his art of combinations the means

¹⁵ De Corpore, Bk I (Computatio sive Logica). For a discussion of Leibniz and the principle of "substitution salva veritate", see H. Ishiguro: Leibniz's Philosophy of Logic and Language, Ithaca 1975, Ch. 2.

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of modeling the relations of all things with all things. The primitive first terms of thought are the means of recalling multitudes, borrowing Bisterfeld's language, back to unity (or to at least a more unified state, given that the plurality of first terms precludes absolute unity). Conversely, by proceeding from first terms to compound definitions, we can model the logical complexity of the world, the relationship between the whole and its parts¹⁶.

In sum, looking to Leibniz's Leipzig and Altdorf writings, we do not find any explicit definition given for the concept "harmony". Yet Leibniz says enough to indicate why harmony appeals to him, why it enters his thinking as a *Grundbegriff*. Given Leibniz's aspirations of establishing a universal calculus, what he later calls an "Alphabetum cogitationum humanarum" (A VI.4, 265), the idea of harmony nicely expresses the goal of such a project: to bring order to – to make consonant – diverse concepts in hopes of penetrating the rational structure of God's creation. This, I posit, is Leibniz's first discernible belief regarding harmony: harmony expresses the goal, the aspiration – we might even say the *telos* – of thought. This belief, for Leibniz as for Bisterfeld, is of a piece with the theological belief that harmony adequately characterizes the structure of creation. I thus take as the starting point for this investigation of Leibniz on harmony not any articulated conception of harmony, but rather the logico-theological premise that thought seeks harmony; harmony is the satisfaction of reason.

§4 CONSPECTUS

Having to this point explored why Leibniz admits harmony as a *Grundbegriff*, I turn in the next chapter to examining harmony's role in Leibniz's nascent metaphysical inquiries, specifically those from 1669–1674. No sooner does Leibniz take up a concrete metaphysical project than does he place harmony at the center of his thought. Defining harmony as mutual compensation between identity and diversity, Leibniz – in these early texts from his years in Mainz and his first years in Paris – invokes the concept in discussions of natural law, theodicy, philosophy of mind, and the metaphysical foundations of physics. These texts go a long way toward revealing why Leibniz increasingly values harmony as a metaphysical tool and the conclusions for which he wishes to argue on the basis of harmony. Though I shall maintain that Leibniz needs to develop a more useful, determinate conception of harmony to achieve his purposes, these early uses of harmony tell us much about Leibniz's commitment to the concept.

Chapter three presents the crux of my argument and in many ways serves as the centerpiece of the study. I provide evidence of a significant shift in Leibniz's conception of harmony during his stay in Paris in the mid-1670s. Leibniz comes to define harmony not in terms of identity and diversity, but in the more restrictive

Bisterfeld is not Leibniz's sole ally in this project. In the Dissertatio de Arte Combinatoria, Leibniz praises Kepler for his efforts in Harmonicae mundi to explore the relationships between geometrical figures, to show how more complex figures are composed of lesser, and to thereby "penetrate" the secrets of nature (A VI.1, 187).

language of simplicity and plenitude. Though at first blush simplicity and plenitude may seem synonymous with unity and diversity respectively, I will argue that given Leibniz's presentation, these two definitions are not co-extensive. There is, that is, discernible development in his conception of harmony.

To be clear, in my analysis of the Paris texts, I will not be claiming to have unearthed some hitherto unknown Leibnizian definition of harmony. Most readers of Leibniz are familiar with his language of simplicity and plenitude and many scholarly debates over how Leibniz construes the harmony of the world are conducted in these terms. The novelty in my analysis is twofold. One, it makes clear the development in Leibniz's thinking regarding harmony and does not elide Leibniz's two conceptions of harmony. This allows us to assess the relative adequacy of the two conceptions, to ascertain Leibniz's likely motives for changing his definition of harmony, and to come to a more accurate picture of the development of Leibniz's metaphysics. Two, I provide a new interpretation of the relationship between simplicity and plenitude and thereby shed new light on the metaphysical consequences of Leibniz's revised conception of harmony. I posit that his refined conception of harmony provides, and is meant to provide, Leibniz with a potent means of defending the centrality of rational agents in an objectively good order of creation.

In the second half of the book, I turn to what are commonly considered Leibniz's middle and late periods, the metaphysics of which are most familiar from the *Discours de métaphysique* and the *Monadologie* respectively. In his mature writings, Leibniz retains the conception of harmony he developed in the Paris period. We see development therefore not with respect to our first guiding question, the *ti esti* question, but with respect to our second guiding question regarding the import of harmony for Leibniz's metaphysics. In other words, the second half of the book looks to how the conception of harmony outlined in Chapter three shapes Leibniz's mature metaphysics.

Chapter four sets out to clarify the connection between harmony *qua* criterion of creation, on the one hand, and harmony *qua* account of causality, via Leibniz's famous doctrine of preestablished harmony, on the other. I argue that my interpretation of Leibniz's conception of harmony is needed to make clear how the latter follows from the former. This chapter also explores the relationship between Leibniz's understanding of universal harmony and his attempts to revive the notion – widely discredited in the 17th C.– of final causality. In discussions of final causality, Leibniz introduces a notion of optimization which, I suggest, can be seen as an expression or application of his conception of universal harmony.

Chapter five examines what Leibniz's defense of preestablished harmony against its early critics, on the one hand, and his late writings on intermonadic union, on the other, reveal about his final metaphysics of harmony. In the closing chapter, I explore how and why we should view Leibniz's final metaphysics as a metaphysics of harmony.

In sum, the first half of the book is devoted to defending a thesis of development in Leibniz's conception of harmony and to advancing a new interpretation of this conception. The second half of the book seeks to show that our interpretation can shed light on Leibniz's mature metaphysics, specifically on the relationship

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between Leibniz's commitment to universal harmony – which is closely allied with his contention that we live in the best of all possible worlds – and his commitment to the peculiar hypothesis of preestablished harmony.

Before proceeding, a methodological remark is in order. I have already noted that our development thesis mandates that we approach Leibniz's texts chronologically. Still needing to be addressed, however, is the selection of texts and the scope of this investigation. Our interest is not in every instance where Leibniz mentions harmony. Leibniz is fond of speaking of harmony between systems, between various approaches to a given issue, between diverse schools of thought. Thus he will speak, for instance, of the harmony between Aristotelianism and mechanism, between natural law and positive law, between theoretical and experimental physics, between the Catholic, Lutheran, and Reformed confessions. In these cases, "harmony" means that seemingly opposed systems must be mutually consistent if it can be shown that each expresses some truth. The "harmonization" of these philosophical schools follows from the unity of truth. Harmony in this sense is an important methodological principle for Leibniz, the basis for what is sometimes seen as his irenicism; harmony in this sense is relevant to the present investigation just because it is relevant to any study of Leibniz's metaphysics, since Leibniz's desire to reconcile diverse schools of thought colors and motivates much of his thinking. To be clear, however, the harmonizing of various systems is not the object of this study. Our interest is in how harmony intervenes in arguments for particular metaphysical (and in some cases epistemological) positions. Therefore, we restrict our focus to those texts where either harmony explicitly enters as a premise in Leibniz's arguments or a compelling case can be made that harmony is presupposed in Leibniz's reasoning. Leibniz's philosophy is surely remarkable for its efforts to find agreement or harmony among various systems, but equally remarkable and equally worthy of our attention is Leibniz's use of harmony as an operative principle – as a tool, to recall our initial metaphor – in the very construction of his metaphysics.