문학석사 학위논문

Leibniz's Notion of Compossibility

라이프니츠의 공존가능성

2016년 2월

서울대학교 대학원

철학과 서양철학 전공

김 진 성 (Raymond Kim)

Leibniz's Notion of Compossibility

지도교수 이 석 재

이 논문을 문학석사 학위논문으로 제출함
2016년 2월

서울대학교 대학원
철학과 서양철학전공
김 진 성 (Raymond Kim)

김진성의 문학석사 학위논문을 인준함
2016년 2월

위 원 장 _____ (인)

부위원장 _____ (인)

위 원 _____ (인)

Abstract

In this thesis, I evaluate the different interpretations of Leibniz's notion of compossibility. Scholars have distinguished two ways to explicate Leibniz's position. On the one hand, proponents of the "logical" interpretation argue that compossibility implies a logical relation between substances' complete concepts. That is, nothing more than the consideration of complete concepts is required. On the other, proponents of the "lawful" interpretation argue that relations of lawfulness and orderliness are necessary in evaluating compossibility claims. James Messina and Donald Rutherford argue that neither the "logical" nor "lawful" interpretation is an adequate account of Leibniz's position, and propose a novel interpretation of compossibility. I argue, however, that this novel interpretation is flawed. Messina and Rutherford's reason for rejecting the "lawful" interpretation is as much as a reason to reject their interpretation, or so I argue.

Key Words: Leibniz, Compossibility, Incompossibility

Student Number: 2012-22485

Table of Contents

0. The Problem

The notion of compossibility in Leibniz's philosophy has two related functions. On the one hand, it explains why not all possible substances are actual. Leibniz claims that not all possibles are compossible such that they cannot all exist together. On the other hand, it partitions all possibles into distinct possible worlds, where each possible world is constituted by a collection of compossible substances.

For Leibniz, the actual world is contingent. God freely chose to create the actual world because it is the best of all possible worlds. But God could have chosen differently. But in order for Leibniz to maintain that the actual world is contingent, he must show why not all possibles are actual.[1] For, if the actual world contained all possibles such that nothing is possible but that which exists, then the actual world would be absolutely necessary, which, in Leibniz's view, is tantamount to Spinozistic necessitarianism.

Leibniz admits that he was once "very close to the view of those [i.e., Spinoza] who think that everything is absolutely necessary," but abandoned this view because,

> The consideration of possibles, which are not, were not, and will not be, brought [him] back from this precipice. For if there are certain possibles that never exist, then the things that exist, at any rate, are not always necessary, for otherwise it would be impossible for others to exist in their place, and thus, everything that never exists would be impossible.[2]

Leibniz claims that there are possible things that can never exist in the actual world because they are incompossible with the set of actual substances. While Sherlock Holmes, or any fictional character, is possible in itself, since the notion of such individual does not imply a contradiction, Sherlock Holmes does not exist in the actual world because he is incompossible with it. He would be a member of a different possible world, one that God could have chosen instead of the actual

---

[1]The problem of contingency in Leibniz is complex and he offers various responses to the problem. For a more detailed discussion, see Adams, 9-110.

[2]AG, 94

world. But because God chose the actual world, substances incompossible with the set of actual substances, such as Sherlock Holmes, while possible, do not exist.

But what is the basis of compossibility? That is, what are the necessary and sufficient conditions for possible substances to be compossible such that they can exist in the same possible world? The question is vexed amongst Leibniz's commentators, and interpretations are largely divided as either "logical" or "lawful".[3] The proponents of the "logical" interpretation claim that the compossibility relation between substances is, as the name suggests, a logical one. Possible substances can exist in the same possible world if and only if their natures or essences (complete concepts) are logically consistent. Should the supposed conjunction of any two complete concepts result in logical inconsistency, then the corresponding substances would be incompossible such that God cannot co-actualize them in the same possible world.

The proponents of the "lawful" interpretation, by contrast, reject the claim that complete concepts of substances, considered by themselves, provide the basis for compossibility. In their view, complete concepts alone are insufficient in determining substantial compossibility. The proponents of this interpretation, rather, think that laws will partition possible substances into different possible worlds. Incompossibility claims can only be evaluated by considering complete concepts in relation to some set of world-ordering laws.

In what follows, I will provide an overview of the debate concerning Leibniz's notion of compossibility and evaluate the strengths and weaknesses of the interpretations offered on Leibniz's behalf. I will not present a novel resolution, but rather argue in favor of the "lawful" interpretation of compossibility and defend it from recent criticism. In Chapter 1, I will examine the "logical" interpretation of compossibility, and identify its central weakness. In Chapter 2, the focus will be on the solutions offered by the proponents of the "lawful" interpretation. Lastly, in Chapter 3, however, I will address a recent criticism against the "lawful" interpretation, and argue

[3]The expressions 'logical' and 'lawful' are introduced by Wilson.

that this criticism is not only problematic for the objectors but also unconvincing.

1. The 'Logical' Approach

According to Leibniz, every (concrete or possible) individual substance has a corresponding complete concept, which contains all that is true of an individual substance that is sufficient to pick out that individual, in the divine intellect. In a letter to Antoine Arnauld, Leibniz explains:

> When one considers in Adam a part of his predicates, for example, that he is the first man, set in a garden of pleasure, from whose side God fashioned a woman, and similar things conceived *sub ratione generalitatis*, in a general way (that is to say, without naming Eve, Paradise, and other circumstances that fix individuality), and when one calls Adam the person to whom these predicates are attributed, all this is not sufficient to determine the individual, for there can be an infinity of Adams, that is, an infinity of possible persons, different to one another, whom this fits … It is not possible for there to be two individuals entirely alike, or differing only numerically. Therefore, we must not conceive of a vague Adam, that is, a person to whom certain attributes of Adam belong … rather, we must attribute to him a notion so complete that everything that can be attributed to [Adam] can be deduced from it."[4]

It appears that complete concepts must play a prominent role in discussions about the compossibility of individual substances. The extent to which they determine incompossibility, however, is unclear and debated. The proponents of the interpretations that will occupy the following pages argue that complete concepts are not only necessary but also sufficient in determining the compossibility of individual substances. That is, all that is required to see

[4]AG, 72-73

whether or not any two possible substances are compossible or not is to see whether or not the supposed conjunction of their complete concepts amounts to logical inconsistency.

In this chapter, I will sketch out two influential 'logical' solutions to the problem of Leibnizian compossibility. The first will be Benson Mates' account, and the second Nicholas Rescher's. Despite the advantages offered by these two solutions, I will show that the entailment of 'world-bound' substances is problematic with certain aspects of Leibniz's philosophy.

1.1 Benson Mates' Solution

Benson Mates takes Leibniz's claim of the reducibility of relations to entail that a complete concept only contains the primitive and positive properties that ground all the derivative properties of an individual substance, which denotes exactly one actual, or possible, individual.[5] Any two substances are compossible for Mates, then, when the conjunction of any two complete concepts fails to produce a contradiction.

> A pair of individual concepts, A and B, are compossible if no contradiction follows from the supposition that there are corresponding individuals for both of them – that is, if the statements 'A exists' and 'B exists' are consistent with one another.[6]

For Mates, the compossibility relation is fully determined by the complete concepts of individual substances alone: nothing else but the supposition of two complete concepts in conjunction is needed to see whether or not the corresponding individual substances are compossible or not. If the conjunction of the two complete concepts implies a contradiction, then the corresponding individual substances are incompossible.

Mates, however, notes that his way of understanding compossibility may allow the inference that complete concepts that belong to different possible worlds to be compossible with

---

[5]Mates, 63; "We may note also that sometimes Leibniz characterizes the complete concept of an individual, for example, Adam, as composed not of all the properties of that individual but of a core of "basic" (presumably simple) properties from which all of the others follow."

[6]Mates, 75-76. See note 36

one another. Mates worries that "it might be thought that in taking compossibility as a binary relation Leibniz was overlooking the fact that a set of concepts might be pairwise satisfiable without being satisfiable as a whole."[7] If so, Mates contends, "one might suppose that, just as we can easily find three distinct statements *P*, *Q*, and *R* such that although *P* is consistent with *Q* and with *R*, yet *Q* and *R* are inconsistent with one another, so also we could expect to find three different individual concepts such that the first was compossible with the second and with the third, but the second was not compossible with the third."[8] Mates, however, thinks that the above inference does not extend to Leibnizian complete concepts because of the universal expression thesis, which states that "each individual substance expresses the whole universe in its own way, and that all its events, together with all the circumstances and the whole sequence of external things, are included in its notion."[9]

For Mates, the claim that substances mirror or express their respective worlds imply that complete concepts that belong to different possible worlds are incompossible. The reasoning is that, if an individual substance expresses its entire universe, then it implies that that substance stands in relations to its world-mates. Since for Mates complete concepts contain only the primitive and positive properties of substances, which are sufficient to individuate substances, the relational properties of substances will be derivative of these properties. Consider, for example, the complete concept of the actual Adam, which contains the primitive and positive properties that are sufficient to individuate this particular individual. According to Mates, the universal expression thesis implies that Adam stands in relations with all his world-mates, including his wife, Eve. Adam's relation to Eve, and, conversely, Eve's relation to Adam, are grounded in the properties contained in their respective complete concepts. Were Adam to have a different spousal relation to, say, a counterpart of Eve, Eve*, then he would no longer be Adam but a different individual that falls under a different complete concept. Therefore, since Adam would not be the

[7] *Ibid.*.
[8] Mates, 76
[9] AG, 41

same individual had he not been the husband of Eve, and Eve would not be the same individual had she not been the wife of Adam, Mates concludes that Adam and Eve could not have existed without each other.

On Mates' account, every individual substance is 'world-bound' to a single maximally consistent possible world.[10] This result follows from Mates' reading of Leibniz's universal expression thesis: that every individual substances expresses its world implies that the corresponding complete concepts of individual substances will involve information about world-mates. In other words, if a substance's individuating properties involve information about its world-mates, then it seems that that individual substance would need its world-mates to exist as *that* individual substance. For example, since Adam's complete concept contains the properties that can only ground relations to the substances that Adam expresses, the supposition of Adam's existence entails the existence of Eve along with all of the substances that he expresses, and the non-existence of any substance with whom he lacks an expression relation. Adam cannot exist apart from his world-mates, and, whatever set of substances that God creates, it'll be a set that is maximally compossible.

Mates' way of understanding compossibility clearly explains why not all possible substances are actual. Since the compossibility relation partitions the totality of possible substances into mutually exclusive and exhaustive equivalence classes, God will have genuine options in his choice of worlds, none of which will contain all possible substances. However, there are some worries. Mates himself notes how it is unclear how any two complete concepts in conjunction can imply logical inconsistency if complete concepts contain only the primitive (simple) and positive properties of substances. Leibniz himself seemed to have been confounded by this.

---

[10]Mates understands a possible world to be a maximally consistent set of compossible substances. He writes, “We are also told by Leibniz that the actual world is maximal, in the sense that it contains everything compossible with what it contains, and there is no reason to doubt that this holds for other possible worlds as well” (Mates, 77).

> It is as yet unknown to men, whence arises the incompossibility of diverse things, or how it can happen that diverse essences are opposed to each other, seeing that all purely positive terms seems to be compatible *inter se*.[11]

Understanding complete concepts to include only primitive and positive properties makes it difficult to say that incompossibility results from logical inconsistency between complete concepts. For one, a positive property is one that does not involve an negation of any other property. Suppose for simplicity's sake, that there are two complete concepts, A and B, each containing a single positive, *p* and *q*, respectively. On Mates' proposal, the reason that the corresponding substances of A and B are incompossible is because the supposition of the conjunction of A and B involves a contradiction. In other words, A and B are incompossible because the properties of A and B, *p* and *q* respectively, contradict one another. However, if the properties, *p* and *q*, as positive properties, involve no negation of any other property (specifically one another), then it seems difficult to see how any contradiction can result on the supposition of the conjunction, *p* & *q*.

The inclusion of relational properties in complete concepts would be one way to get logically inconsistency between complete concepts. However, Mates thinks the properties in complete concepts have to be primitive, as relational properties would violate Leibniz's reducibility of relations thesis.[12] This may, however, be more a problem for Leibniz than it is for Mates, since Leibniz does tell us that there are "*no purely extrinsic denominations*, denominations which have absolutely no foundation in the very thing denominated."[13] Some commentators, notably Nicholas Rescher, find Leibniz's claim of the reducibility of relations, without qualification, to be deeply problematic for his metaphysics. Rescher notes that Leibniz "cannot afford to abolish the reality of relations because without them he could not get one of the key

---

[11]G VIII 194; Translation Russell's; 364; appendix 121

[12]Mates, 76; Mates notes the problem of explaining compossibility while taking seriously Leibniz's reducibility of relations. He writes, "Commentators have wondered how the existence of one individual could preclude that of another, especially since Leibniz denies the reality of relations."

[13]AG, 32

building blocks of his metaphysical system", namely, substantial incompossibility.[14] Thus, while Mate's reading of the notion of compossibility offers a simple way to understand how possible substances are incompossible, one difficulty is that it doesn't seem clear how any logical inconsistency between complete concepts can be generated by properties that are included in them.

1.2 Nicholas Rescher's Solution

Like Mates, Nicholas Rescher also takes complete concepts alone to be sufficient to determine substantial compossibility. Rescher, however, thinks that Leibniz needs relations in order to explain the incompossibility of substances, and includes them into complete concepts. The inclusion of relational properties in complete concepts, Rescher argues, is consistent with the reducibility of relations thesis if we understand it as a metaphysical, and not a logical, thesis in Leibniz's philosophy. He writes, "Leibniz is concerned to establish not the logical eliminability of relations but their metaphysical dispensability at the level of individual substances."[15] Rescher understands the motivation for Leibniz's reducibility of relations is to deny the *metaphysical* reality of relations as real existences at the level of substances, that is, relational properties that have "one leg in one [substance] and the other in the other", so to speak.[16] Leibniz never intended, Rescher argues, the "logical reduction of a relation into something nonrelational."[17] According to Rescher, "relations – while from a certain point of view indeed 'ideal' – nevertheless have a solid foothold in undoubted reality in the modifications of substances."[18] However, they are not real things in themselves, "but a dependent reality correlative with the inherence in the related terms."[19] That is, relations "exist in and through the characteristics of real things, being embeddable in the makeup of substances."[20] On this reading, relations will not be, then, purely extrinsic denominations, existences that are independent of substances and their properties, but

[14]Rescher, 70
[15]Rescher, 79
[16]AG, 339
[17]Rescher, 74
[18]Rescher, 71
[19]*Ibid.*
[20]Rescher, 82

entities that always derive their reality from the modifications of singulars.[21]

Rescher thinks that the reducibility of relations thesis, properly understood, does not pertain to the relations between substances. It describes, rather, a grounding relationship between facts about substances. Relational facts, such as "Adam is the father of Cain", will be grounded in, and, therefore, extractable from the features of Adam's and Cain's non-relational descriptive content contained in the respective complete concepts. Adam's complete concept will contain two facts, namely, (1) being a father, and (2) being a father *in virtue of* Cain's being a son. In Cain's complete concept, there will be the facts (1) being a son, and (2) being a son *in virtue of* Adam's being a father.[22] Thus, the relational fact, "Adam is the father of Cain", can be extracted by considering the predicational facts about the relata. Incompossible substances are ones whose complete concepts contain logically contradictory relational properties. For example, if the complete concept of Adam contains the property of being the father of Cain, and a counterpart of Cain, Cain*, contains the property of being the son of Noah, then to suppose that both are actualized together will imply logical inconsistency.

Rescher agrees with Mates on the significance of the universal expression thesis. For Rescher, that individual substances express their respective worlds implies that substances' relations are embedded in the complete concepts.

> The idea that each substance mirrors the whole universe from its own point of view is meant to suggest that it itself bears within its own qualitative makeup the imprint of the nature of its fellows."[23]

Rescher thinks that relations "are and have to be impressed with the inner design of the propositional structure of their defining descriptions."[24] By this, Rescher understands substantival relations as concept-internalized in such a way that "relations are included within the

[21]Rescher, 83
[22]Rescher, 72
[23]Rescher, 80
[24]*Ibid.*

concept of a thing and nowise independent of it: the defining notions of substances embody grappling hooks into the environing world."[25] Since neither Adam's complete concept nor Cain*'s express one another, the relational fact, "Adam is the father of Cain*", cannot be extracted from their complete concepts.

Since every individual substances's "qualitative makeup" includes their relations, every individual substance is world-bound, that is, a member of exactly one maximally consistent possible world.[26]

> We also arrive at a "one-substance, one-world" doctrine: every substance has imprinted in its defining nature (its complete individual concept) an internalized representation of its entire environing world. No substance can – even in hypothesis be pried loose from its world environment and transposed into some other possible world. No possible substance can populate two distinct possible worlds, and no member of one can be compatibly united with any other member of any other.[27]

Since there is a conceptual linkage between compossible complete concepts, compossible substances cannot exist separated from each other. Possible substances' ability to "constitute a possible world – their synoptic compossiblity – is a global and comprehensively systematic feature of a group of possible individuals", therefore, "each substance within a possible world carries within itself an ineradicable imprint of all the rest."[28]

> In consequence of these conceptual interconnections of substance with all the others of its world, a substance stands to these others in a *rigidly unalterable*

---

[25]Rescher, 79

[26]Rescher, 7; "Possible worlds are therefore existentially saturated: once a possible world is constituted in conception, there is never any possibility of adding further possible substances to its content. The description of the world precludes any prospect of additions: there cannot be any possible substance that is not already a member of a given possible world and yet is compossible with the substances of the world in question … Possible worlds are by nature – that is, as *worlds* – necessarily maximal manifolds of existences."

[27]Rescher, 6

[28]Rescher, 81

> *association*. To change the description of a substance (however slightly) in any way – even in thought – is to alter all the others as well; it is to "change the subject" as it were, by bringing into consideration an entirely different framework of things, another possible world altogether.[29]

Since on Rescher's account, individual substances will be individuated by the totality of their relations, a substance's concrete relations to its world-mates are hypothetically necessary features of that substance.[30] In other words, insofar as God chooses to actualize Adam, for Adam to be the very substance denoted by his complete concept, he will necessarily have the concrete relations to its world-mates.

1.3 World-Bound Substances

One common feature of both Mates' and Rescher's respective accounts is the entailment of world-bound substances: Every individual substance is a member of only one maximally consistent possible world. As Mates explains, "Since Adam exists, there is no nonactual possible world *W* such that Adam would have existed if God had created *W*."[31] In other words, Adam is bound to an absolute world-environment such that he only exists in a world in which Eve, Cain, and the rest of his world-mates exist. Adam could not be actualized in a different world-environment where, for example, Eve is not present. This is because Mates and Rescher both agree on the significance of Leibniz's universal expression thesis: Adam's expressing his entire universe implies that Adam's complete concept involves information about his world-mates.

On Mates' and Rescher's respective readings, every individual substance is world bound because no individual substance can exist without it world-mates. Since God's knowledge of Adam necessarily involves Adam's world-mates, they suggest that it is logically impossible for Adam to exist apart from its world-mates and that the existence of Adam will entail the existence

---

[29]Rescher, 6; (emphasis added.)

[30]Rescher, 83; "Since its relations are always built into the complete individual notion that is identifiably definitive of a particular substance, there is no way of tampering with the relations of a substance: Its concrete relations are always hypothetically necessary features of it as the very substance it is."

[31]Mates, 78

of hiss world-mates. However, not only are there no texts (as far as I am aware) that explicitly commit Leibniz to this position, but there is evidence that, rather than logical necessity, it is God's considerations of harmony that results in God's creating a substance's world-mates in creating that very substance.[32]

In addition, there is evidence that substances do not depend on one another in the way Mates and Rescher suggest. For example, Leibniz tells us that, "each substance is like a world apart, independent of all other things, except for God."[33] And, in a letter to Des Bosses, "[A] monad, like a soul, is, as it were, a certain world of its own, having no connections of dependency except with God."[34] Passages such as these seem to support the notion that Leibnizian substances are ontologically independent existences that do not *per se* depend on one another such as to exclude or entail one another. If Leibnizian substances are indeed independent in this sense, then it seems that it should be possible for any individual substance to exist separated from its world-mates. However, Mates and Rescher both take the formal natures of substances to involve their relations to other created substances either indirectly (Mates) or directly (Rescher) such that it is logically impossible for an individual substance to exist apart from its world-mates. Aware of this inconsistency, Mates thinks that Leibniz abandoned the traditional notion of ontological independence as he developed his universal expression thesis.[35]

A further problem with world bound substances is that, as Robert Adams notes, Leibniz's statements regarding pre-established harmony suggest against it. Leibniz denies causal influence between created substances, holding that substances themselves are the genuine causes of all their states. In explaining the appearance of causal dependence in the physical world, Leibniz invokes his doctrine of pre-established harmony:

> God from the beginning constituted both the soul and the body with such wisdom

[32]See Adams, 102 – 106.
[33]AG, 47
[34]AG, 199
[35]Mates, 192, 221

> and such workmanship that, from the first constitution or notion of a thing, everything that happens through itself [*per se*] in the one corresponds perfectly to everything that happens in the other, just as if something passed from one to the other.[36]

Adams notes that "in explaining the pre-established harmony Leibniz repeatedly says that only the action of God can cause created substances to correspond to each other's perceptions."[37] Leibniz even takes this difficulty of accommodation to be a proof of a being with infinite knowledge and power, namely, God.

> For since each of these Souls expresses in its way what goes on outside, and cannot have this through any influence of other particular Beings, or rather must draw this expression from the resources of its own nature (or this internal reason of the expression of what is outside) from a universal cause on which all these Beings depend and which makes the one perfectly agree and correspond with the other. This is not possible without an infinite knowledge and power, and by so great an artifice, especially with respect to the spontaneous agreement of the machine with the actions of the reasonable soul, that [Bayle] doubted, as it were, whether it did not surpass all possible wisdom, saying that the wisdom of God did not seem to him too great for such an effect, and recognized at least that the feeble conceptions that we can have of the divine perfection had never been put in such high relief.[38]

However, Adams points out that such a proof would not be a very convincing proof at all were it the case that it is impossible for God's creating a world where accommodation fails to obtain. He writes,

> But the harmony or correspondence of the perceptions of created substances with

---

[36]AG, 33
[37]*Ibid.*
[38]NE 440f.; Adams, 106

> each other could hardly be such a powerful proof of God's infinite wisdom and power if no creator could have created a world that lacked such a correspondence as Des Bosses pointed out to Leibniz in 1715. The use of the pre-established harmony to prove the greatness of the creator seems therefore to presuppose that among the possible worlds that God could have actualized were some in which created substances fail to correspond with each other's perceptions. Accordingly, Leibniz responded flatly to Des Bosses that God 'was able absolutely [to create one of those monads that now exist without creating all the others], but was not able hypothetically, given that he decided to do everything most wisely and harmoniously'.[39]

Because Mates and Rescher claim that complete concepts contain information regarding world-mates, they cannot admit a possible world in which there is no correspondence (expression relation), since they take no correspondence between any two substances to imply their incompossibility. But Leibniz's proof of an omniscient and omnipotent being based upon the difficulty of achieving this correspondence would not be cogent if we view it in light of Mates' and Rescher's respective accounts. Leibniz's proof requires the presupposition that there are possible worlds in which individual substances *fail* to correspond to each other amongst the choices that God could have created, something that neither Mates nor Rescher can grant on their respective readings.

The 'logical' solutions of Mates and Rescher offer a simple and clear notion of compossibility, one that can perform all the functions that Leibniz clearly needs it to perform in his metaphysics. If the supposition of any two complete concepts imply logical inconsistency, then the corresponding individual substances cannot exist together in the same world. However, a reason against adopting their views is the entailment of world-bound substances, which seems

[39] *Ibid.*

not only to conflict with Leibniz's commitment to the doctrine of ontological independence but also his account of pre-established harmony as well.

2. The 'Lawful' Approach

The proponents of the "lawful" interpretation hold that compossibility is determined by lawful constraints. The motivation for arguing for a 'lawful' interpretation, Margaret Wilson explains, is that there is "good textual reason to suppose that Leibnizian incompossibility has *something* to do with laws."[40] For example, in his correspondence with Arnauld, Leibniz writes:

> There were an infinity of possible ways of creating the world, according to the different designs which God might form, and each possible world depends upon certain principal designs or ends of God proper to itself, i.e., certain primitive free decrees (conceived *sub ratione possibilitatis*), or laws of the general order of this possible universe, to which they belong, and whose notion they determine, as well as the notions of all individual substances which belong to this same Universe.[41]

Passages like this one seem to suggest the important role of laws in determining substantial compossibility. This raises important questions. First, in what way does the notion of 'law' determine compossibility? Second, *which* law(s) determines compossibility?

The "lawful" interpretation has a distinct advantage over the "logical" interpretation, namely, it can accommodate Leibniz's claims in the "world apart" passages. The proponents of the "lawful" interpretation deny that complete concepts, considered by themselves, are the basis of compossibility. In their view, independent of any lawful constraints, the existence of an individual substance will neither exclude nor entail the existence of any finite substance.

The plan of this chapter will be as follows. In [2.1], I will begin with Bertrand Russell's interpretation, which claims that any two substances are incompossible in the case that there is no

---

[40] Wilson, 127
[41] G. II. 51; See Russell, 79

general law to which both conform. Margaret Wilson argues that Russell's emphasis on "general" laws (or lawfulness *simpliciter*) fails to offer a non-vacuous notion of compossibility. However, I will argue that Wilson misreads Russell, and that Russell actually offers a view of the notion of 'law' that is equivalent to the notion that Wilson adopts for her reading, which we will examine in [2.2]. In [2.3], we will consider J. A. Cover and John O'Leary-Hawthorne's "lawful" reading, which takes lawful harmony as determining compossibility, and, in [2.4], I will present evidence in favor of the view that the basis of compossibility for Leibniz is lawful harmony. Then I will consider a recent interpretation of compossibility that challenges both the "lawful" and "logical" interpretations on the notion of 'connectedness'.

2.1 Bertrand Russell and General Laws

One clear departure that Bertrand Russell takes from the 'logical' interpretations is that he takes all possible substances to be *per se* compossible: the formal natures of individual substances do not *per se* exclude or entail one another's existence. The motivation for the *per se* compossibility of all possible substances stems from Russell's understanding that there are no necessary connections between contingent predicates. Each contingent predicate, Russell thinks, is necessarily connected with the complete concept of a substance, but no two contingent predicates are necessarily connected with each other. The possibility that "each separate contingent predicate might also have belonged to a different substance", Russell argues, would seem to entail that "any collection of possible existents must be compossible, since their coexistence cannot be self-contradictory."[42]

But, given the *per se* composssibility of all possible substances, how are substances incompossible? After citing the passage from the Arnauld correspondence above, Russell concludes,

> This passage proves quite definitely that all possible worlds have general laws,

[42] Russell, 67

> which determine the connection of contingents just as, in the actual world, it is determined by the laws of motion and the law that free spirits pursue what seems best to them. And without the need for some general laws, any two possibles would be compossible, since they cannot contradict one another. Possibles cease to be compossible only when there is no general law whatever to which both conform. What is called the "reign of law" is, in Leibniz's philosophy, metaphysically necessary, although the actual laws are contingent. If this is not realized, compossibility must remain unintelligible.[43]

Russell emphasizes the importance of the Principle of Sufficient Reason in the compossibility of substances. He writes, "Although this or that sufficient reason is contingent, there must be *some* sufficient reason, and the lack of one condemns many series of existents as metaphysically impossible."[44] Russell's solution turns on the metaphysical necessity of a sufficient reason for a possible world's existence, which is cashed out as the obtaining of general laws. For Russel, *per se* compossible substances cannot co-exist in the same possible world if and only if they fail to conform to general law(s).[45]

However, Margaret Wilson argues that Russell's emphasis on general laws suffers from a fatal flaw. The condition under which *per se* compossible substance can fail to be compossible, namely, failing to instantiate *any* general law, is metaphysically impossible to satisfy in Leibniz. She refers to §6 of the *Discourse on Metaphysics* (DM), where Leibniz claims that absolute irregularity or unlawfulness is metaphysically impossible.

> Thus, what passes for extraordinary is extraordinary only with some particular

---

[43] Russell, 79

[44] Russell, 67; (emphasis added.)

[45] Margaret Wilson argues that Russell's solution is able to accommodate the textual evidence that emphasizes the importance of laws in partitioning possible worlds "without (ultimately) giving up the "analytic" understanding of (in)compossibility" (Wilson, 129). She argues that Russell's emphasis on lawfulness under general laws, as being metaphysically necessary, indicates that incompossible substances, substances that lack a metaphysically necessary sufficient reason for existing together, are those whose co-existence is absolutely or logically impossible. See Wilson, 128-129.

order established among creatures; for everything is in conformity with respect to the universal order. This is true to such an extent that not only does nothing completely irregular occur in the world, but we would not even be able to imagine such a thing. Thus, let us assume, for example, that someone jots down a number of points at random on a piece of paper, as do those who practice the ridiculous art of geomancy. I maintain it is possible to find a geometric line whose notion is constant and uniform, following a certain rule, such that this line passes through all the points in the same order In which the hand jotted them down … Thus, one can say, in whatever manner God might have created the world, it would always have been regular and accordance with a certain general order.[46]

In light of this passage, Wilson infers that, for Leibniz, "*any* putative group of possibilities must conform to some law or other; [therefore] the Russellian formulation turns out to be *vacuous* on Leibnizian principles."[47] In other words, to say that substances are incompossible if and only if they fail to conform to general laws requires, as an assumption, the possibility irregularity or unlawfulness. However, as Wilson points out, it is *metaphysically* impossible to satisfy such a condition, thereby substantial incompossibility would never obtain.

I, however, think that Wilson misreads Russell. Although her interpretation is correct if Russell did indeed took *general lawfulness* as the basis of compossibility, I don't think that this is the case. One reason is that Russell writes that, "All possible worlds have general laws, *analogous* to the [actual] laws of motion; what these laws are, is contingent, but that there are such laws is necessary."[48] I think this passage indicates that, contrary to Wilson, Russell is not talking about lawfulness *simpliciter*. Russell's choice of adjective to describe the laws relevant for compossibility is unfortunate, but in this passage Russell seems to take the "general" laws that partition possible worlds to denote something close to or equivalent to "laws of motion" or laws

[46]AG, 39
[47]Wilson, 130
[48]Russell, 77 (emphasis added.)

of nature.[49] In addition, in the passage that Wilson cites, Russell states in the first sentence: "This passage [from the correspondence with Arnauld above] proves quite definitely that all possible worlds have general laws, which determine the connection of contingents *just as*, in the actual world, it is *determined by the laws of motion*." In the actual world, the connection of contingents is determined by the laws of motion that are true in the actual world. Russell's point is that, similarly, all possible worlds will necessarily have contingent laws of nature that connect possible substances *just as* the laws of nature connect substances in the actual world.

Therefore, I don't think that Russell is saying that general laws (in the broadest sense denoting mere lawfulness) is what partitions possible substances into different possible worlds: "Hence two or more things which cannot be brought under one and the same set of general laws [*qua* laws of nature] are not *compossible*."[50] His point is that, although laws of motion (or laws of nature) themselves are contingent, every collection of possible substances that constitute a possible world necessarily has contingent laws of motion (or laws of nature). So contrary to Wilson, when Russell claims that a "necessity for *some* sufficient reason of the whole series," such that "the lack of one condemns many series of existents as metaphysically impossible," he is *not* saying that collections of substances that fail to obtain any lawful relation whatsoever lacks a sufficient reason for their existence. Rather, that any series that does not conform to some contingent law of motion (or laws of nature in the standard sense) such as to constitute a possible world *is* metaphysically impossible.

Then, it seems that Russell is claiming that substances are compossible if and only if they can conform to "general" laws (e.g., contingent laws of motion or nature). Whatever collection of substances that do not conform to such laws will be incompossible, that is, lack a sufficient reason to exist in the same possible world. For Leibniz, the actual world is governed by morally necessary laws of nature. So insofar as God chooses such (actual) laws, only possible substances

[49]I would be remiss to not point out that Russell thinks that the general laws include such things as moral laws (e.g., law that substances act by final causes).
[50]*Ibid.* (emphasis Russell's.)

that conform to those laws will be actualized. There are, nevertheless, unactualized but possible laws of nature (e.g., the Cartesian laws of motion) and the possible substances that conform to those laws.

2.2 Laws as "Facts"

If Russell indeed took "general" laws to denote something like laws of motion, then Russell seems to view the notion of "law" in the same way that Wilson understands it. Her reading of "law" is based on the following passages from the Arnauld correspondence.

> For, since there is an infinity of possible worlds, there is also an infinity of possible laws, some proper to one world, others proper to another, and each possible individual of a world includes the laws of its world in its notion.[51]

And, so,

> For example, if this world were only possible, the individual notion of some body in this world, which includes the certain motions as possible, would also include our laws of motion (which are free decrees of God, but also only as possible).[52]

Wilson thinks that the "laws" mentioned in these passages refers to "something at least close to laws of nature in the standard sense."[53] She speculates, "the requirement that individuals, to be compossible, must conform to possible basic designs and primitive free decrees of God expresses a *metaphysical* condition that is not trivially satisfied by *just any* group of possible substances." In other words, God could only have a sufficient reason to create a world in which possible substances are linked by "fairly simple lawful generalities."

However, Wilson's view diverges with Russell's in one key way. Wilson points out that Leibniz, in the same letter to Arnauld, claims that "each individual substance concept contains in itself a set of world laws in a quite determinate way," which, she thinks, suggests that the laws of nature that govern substances' worlds are *included* in the complete individual concepts as certain

---

[51] AG, 71
[52] *Ibid.*
[53] Wilson, 131

kinds of "facts".[54] That is to say, complete concepts imply possible "facts" about the worlds in which they belong, and the substances that imply logically inconsistent "facts" will be incompossible. For example, if one concept of a certain individual, *S*, contains the "fact", $e = mc^2$, while the concept of another, *T*, contains the "fact", e = 2mc, then to suppose that both are created in the same possible world amounts to logical contradiction, $e = mc^2 \wedge e = 2mc$.[55]

Recall that Russell thinks that all possible substances are *per se* compossible because of the lack of necessary connections between the contingent properties of substances. The conjunction of any two possible substances (or their complete concepts) will not entail any logical inconsistency such as to preclude their co-actualization. For Wilson, however, any two incompossible substances will entail logical inconsistency in virtue of their complete concepts alone, since she argues that the laws of nature are *included* in the complete concepts as "facts".

However, by understanding the laws as included in complete concepts as "facts", one potential weakness of Wilson's reading is that it can entail that substances are world-bound. The potential problem hinges on the question of whether or not the laws of nature included in substances' complete concepts are essential to substances. If they are, then, on Wilson's reading, substances will be world-bound such that no individual substance can exist in a world with laws of nature other than the ones contained in its complete concept.[56] But the entailment of world-bound substances, as I have pointed out in the previous chapter, is in tension with Leibniz's claims in the "world apart" passages. Thus, if the laws of nature included in complete concepts are essential, then it would seem that, on Wilson's reading, every substance will be world-bound.

---

[54] *Ibid.*

[55] *Ibid.*

[56] The question of world-bound substances is one that is inextricably tied to interpretation of Leibniz's essentialism. The interpretation of Leibniz's essentialism is itself vexed, as we will see in the next section. The question is, what properties of substances are essential? The reason that the "logical" interpretations of Mates and Rescher seem to entail world-bound substances is because they take *every* property of a substance as essential to it (including relational properties). Wilson, however, does not indicate how she understands Leibniz's essentialism. The point here is that, should she adopt the view of Mates and Rescher, it would follow that substances are world-bound, as no substance will be able to exist in a possible world with different laws of nature than the ones it has.

Russell, on the other hand, does not have this worry. On his "lawful" view, "the plurality of substances is not necessary; it would have been possible for God to create only one monad, and this one might have been any one of the actual created monads."[57]

2.3 Hypothetical Compossibility

J. A. Cover and John O'Leary-Hawthorne agree with Wilson's interpretation that the "relevant facts about laws that generate incompossibility results are much richer than the general requirement of lawfulness."[58] They reject, however, Wilson's claim that the facts about laws to be contained in complete concepts because it conflicts with their reading of Leibnizian essentialism.

According to Cover and O'Leary-Hawthorne's strong essentialism, "each possible individual substance is constituted by a primitive form or law-of-the-series that determines a sequence of intrinsic denominations."[59] All that is essential to individual substances are their respective intrinsic denominations. Substances' relations, on the other hand, are not essential since Cover and O'Leary-Hawthorne take relational facts that obtain at a world to "supervene on the basic monadic properties included in the complete concepts instantiated at that world."[60] An individual substance's relations are determined only when its intrinsic denominations are paired with certain laws of expression that describe the "sequence of harmonious changes in substances at that world."[61] Therefore, on strong essentialism, an individual substance will have different relations depending on which laws of expression are paired with its intrinsic denominations. In effect, since the laws of expression that determine an individual substance's relations are not absolutely necessary, no individual substance is, according to Cover and O'Leary-Hawthorne, bound to any absolute world-environment.

---

[57]Russell, 80
[58]Cover and O'Leary-Hawthorne (henceforth, CO), 135
[59]CO, 131
[60]CO, 97
[61]CO, 105

Given this interpretation of Leibniz's essentialism, it seems imperative that the strong essentialist provide an account of how possible substances are incompossible. Since substances' relational facts co-vary with the laws of expression that are conjoined to their intrinsic denominations, as a result, all possible substances will be *per se* compossible. The strong essentialist claims that "for perceptual states of monads to mirror one another and harmonize as they do in the best of all possible worlds, it is sufficient simply that *there be* a relational law or set of laws made true by God's instantiating a certain set of intrinsic monadic histories."[62] In effect, God's instantiating any set of substances will necessarily produce a world in which substances mirror each other. (The degree of harmony that substances' will mirror or express one another will depend on *which* laws of harmony God chooses.) However, if we suppose, like Mates and Rescher, that a possible world is a maximally consistent set of compossible substances, and all possible substances are *per se* compossible, then it seems to follow that there is only one maximally consistent possible world, namely, the set of all possible substances. If there is a maximality constraint on possible worlds, and all possible substances are *per se* compossible, then it would seem that there would only be one maximally consistent possible world that God could choose.

Cover and O'Leary-Hawthorne deny the above inference from strong essentialism to Spinozistic necessitarianism by rejecting the premise of maximality (as understood by Mates and Rescher). In other words, they deny that a possible world, by definition, is a maximally consistent set of compossible substances, a definition they see as conflicting with Leibniz's modal claims about substances: "If each substance can, as Leibniz insists, exist as a world apart, independently of any others actual or possible, then each possible world is hardly maximal."[63]

They acknowledge, however, that "Leibniz believed that the actual world enjoys a sort of maximality."[64] But for Cover and O'Leary-Hawthorne, the actual world is maximal in the sense

[62]CO, 99
[63]CO, 135
[64]CO, 136

that it contains the "collection of finite substances that are maximally compossible with the laws of greatest harmony." The maximality that the actual world enjoys "stems from the maximal goodness of God's creative intentions – which, roughly, combines plenitude with lawful harmony."[65] They do not see any reason to infer that the maximality that the actual world enjoys implies that *all* possible worlds are likewise maximal. On their view, "maximality is at best morally necessary rather than a feature of every possible world." Given this understanding, it is possible for substances to exist as a "world apart" because "such a world is morally inferior and so, as he says in the Rorarius remarks, 'contrary to the designs of God' but nevertheless 'metaphysically possible,' since the designs of God determine moral necessity but not metaphysical necessity."

To the question of how *per se* compossible substances can be incompossible, Cover and O'Leary-Hawthorne appeal to hypothetically necessary laws of harmony.

> In most contexts, Leibniz is interested in what substances are compossible with God's designs for the best. He is thus for the most part interested in questions of what things are hypothetically compossible, where the hypothesis involves certain – albeit morally necessary – decrees of harmony. Of course not every world enjoys the laws of harmony that actually prevail. There are other possible, morally inferior, sets of decrees. And for each set of decrees God can make, He knows which sets of substances are compossible with each other together with those laws. [66]

According to Cover and O'Leary-Hawthorne, claims about incompossibility are ones about hypothetical incompossibility rather than incompossibility *per se*.[67] In other words, *per se* compossible substances will be incompossible on the hypothesis of certain sets of lawful decrees,

---

[65]*Ibid.*
[66]CO, 137
[67]*Ibid.*

where the relevant laws will be laws of expression that determine harmonious relations.[68] Possible substances are partitioned into possible worlds due to the fact that, "for each set of decrees God can make, [God] knows which sets of substances are compossible with each other together with those laws." Since Cover and O'Leary-Hawthorne take the laws of harmony that obtain in any given possible world to supervene on the substances that are members, the actual world would be the set of substances on which the best laws of harmony supervene. And on the supposition that God decrees the best (hypothetically necessary) laws of harmony, only those substances that will instantiate the laws will be created, and no possible substance that does not.[69]

2.4 Harmony, Compossibility, and Connection

I think that Cover and O'Leary-Hawthorne's reading of compossibility is attractive. There is no denying the great importance that the notion of harmony plays in Leibniz's thinking. Indeed, Leibniz identifies the greatest harmony as the *cause* of God's actions.

> For what exists is the best, or harmonious. This is established by an invincible demonstration, because the first and unique efficient cause of things is mind; the cause of mind, that is, the cause of its action, or the end of things, is harmony; and in the case of the most perfect mind, the cause is the greatest harmony.[70]

And, in the *Theodicy*, Leibniz claims that "it is of the essence of God's wisdom that all should be harmonious in his works."[71] As a result, the works of God are "the most harmonious it is possible to conceive."[72] He also tells us that "happiness is the state of mind most pleasing to the mind itself, but nothing is pleasing to a mind except harmony."[73] And, "since God is the most perfect

---

[68]See CO, 98-100

[69]There is overlap between Cover and O'Leary-Hawthorne's reading and the one that I have attributed to Russell. For Russell, I have argued, the contingent laws of nature are what determines compossibility claims. For Cover and O'Leary-Hawthorne, it seems to make no difference whether the (actual) laws of nature "include laws of harmony operative at our world (in conjunction with individual laws-of-the-series) or are determined by but not identical with them" (CO, 107).

[70]Sleigh, 101

[71] H, 173

[72] H, 157

[73] A VI 1, Sleigh, 29

mind, it is impossible that he is not affected by the most perfect harmony."[74]

These passages suggest, I think, that Leibniz ultimately took the basis of compossibility to be harmony. After all, in some places, Leibniz suggests that harmony places restrictions on God's will. For example, "we mustn't doubt that the happiness of minds is the principal aim of God and that he puts this into practice *to the extent that general harmony permits it*."[75] The idea here seems to be that, while it is metaphysically possible for God to create the world with more happiness, God did not create the world in that way because of certain restrictions of harmony. In addition, Leibniz even claims that the violation of harmony is the sufficient reason for why some things cannot exist together.

> [A] possible thing is something with some essence or reality, that is, something that can distinctly be understood. For example, a pentagon would remain possible even if we were to imagine that no exact pentagon ever was or would be in nature. However, one should give some reason for why no pentagon ever existed or would exist. The reason for this state of affairs is nothing but the fact that the pentagon is *incompatible* with other things that include more perfection, that is, with other things that include more reality, which, to be sure, exist ahead of the pentagon.[76]

Leibniz tells us that an exact pentagon in nature is "incompatible with other things that include more perfection" such that it cannot exist in the actual world. He then explains that this 'incompatibility' between an exact pentagon and existing things results because of the 'harmony of things'.

> For the pentagon is not absolutely impossible, nor does it imply a contradiction, even if it follows from the harmony of things that a pentagon can find no place

[74] A II 1, Sleigh, 3
[75] AG, 38; (emphasis added.)
[76] AG, 21; emphasis added..

> among real things.[77]

Later in the same text, he seems to suggest that it is hypothetically necessary that some possibles, such as an exact pentagon, do not exist in the actual world, in which a certain harmony has been established by God.

> For God, who foresees the future reasons why some things should exist rather than others, foresees them in their causes with certain knowledge. And indeed, he has certain knowledge of them and formulates propositions that are necessary, given that the state of the world has, once and for all, been settled, that is, given the harmony of things.[78]

Given that the harmony of the actual world has been established, Leibniz tells us, certain propositions are necessary on the hypothesis of harmony. In effect, certain propositions, such as "No exact pentagon exists in the actual world" is necessary on the hypothesis that God constructed the world with a certain kind of harmony. Supposing then, that the actual world is maximally harmonious, which obtains, as Cover and O'Leary-Hawthorne suggest, via the *best* laws of harmony, then it seems that it is hypothetically necessary that whatever doesn't conform to such laws will "find no place among real things."

However, on such explanations of why certain possibles cannot exist together, as Robert Adams points out, "it is not incompossibility but harmony that is called in to solve the fundamental problem.[79] However, one may think that the notion of compossibility must put constraints on which possible substances God can actualize independent of the notion of harmony. As Wilson puts it, "constraints of lawfulness and order of *some* kind are needed to define the "pre-established harmony." Invoking them to account for compossibility as well risks collapsing what seem to be intended as distinct concepts into each other."[80]

---

[77] *Ibid.*
[78] AG, 22
[79] Adams, 105
[80] Wilson, 126 (emphasis hers.)

But I don't think that the notion of incompossibility must be understood as independent of his notion of harmony. I think there are good reasons, least of all the texts that indicate that harmony is the reason why some things cannot exist in the actual world, to think that harmony ultimately determines whether or not possibles can exist together in the same world. Indeed, Adams speculates that perhaps "the appeal to incompossibility is just a covert appeal to considerations of harmony."[81] However, he continues,

> [Incompossibility] would be something more if Leibniz thought that the internal states of possible substances are perceptions that are *conceptually connected* with the existence and states of other substances, so that no individual in any possible world has exactly the same history of internal states as any individual in any other possible world."[82]

Mates and Rescher both take incompossibility to be something more than God's considerations of laws or harmony precisely because they understand the universal expression thesis to imply conceptual connections between compossible complete concepts. In effect, they interpret substantial incompossibility as logical incompatibility between complete concepts, independent of God's considerations of harmony. However, the problem is that Leibniz's statements in the 'world-apart' passages seem to be in tension with such connections between substances: "[A] monad, like a soul, is, as it were, a certain world of its own, having no connection of dependency except with God."[83] It is precisely the lack of these connections between the formal natures of substances that individual substances can be considered as ontologically independent existences. Therefore, a harmony independent notion of compossibility will be necessary only if Leibniz thought that there were conceptual connections between substances. Since the "world apart" passages strongly suggest that substances lack such connections, it doesn't seem that a harmony independent notion of compossibility is necessary.

---

[81]Adams, 105
[82]*Ibid*.; (emphasis added.)
[83]AG, 199

However, there is a recent interpretation of compossibility that suggests that there may be an alternative way of understanding the connection between compossible substances. James Messina and Donald Rutherford think that compossible substances do in fact have some kind of connection that is more robust than some contingent connection according to some set of contingent laws. What they have in mind are connections of space and time. They point to passages such as the following as suggesting that a general requirement of compossibility is relation or connectedness in a common order of space and time.

> I do not agree that "in order to know of the romance if 'Astrea' is possible, it is necessary to know its connections with the rest of the universe". It would indeed be necessary to know this if it is to be *compossible* with the universe, and as a consequence to know if this romance has taken place, is taking place, or will take place in some corner of the world, for surely there would be no place for it without such connections. And it is very true that what is not, never has been, and never will be is not *possible*, if we take the possible in the sense of the *compossible*, as I have just said.[84]

Compossibles, Leibniz seems to be claiming, require some kind of connection; the romance of Astrea's compossibity with the actual world depends on whether or not the events of the novel is connected within the actual world's spatiotemporal manifold ("has taken place, is taking place, or will take place in some corner of the [actual] world").

As a result, Messina and Rutherford argue that incompossible substances are those that don't share a single common order of space and time. This is because Messina and Rutherford identify "the relation of [lawful] connection as foundational to Leibniz's conception of a possible world," as suggested by §9 of the *Theodicy*:[85]

> For it must be known that all things are *connected* in each one of the possible

[84]L, 661
[85]Messina and Rutherford, 971 (henceforth, MR)t

> worlds: the universe, whatever it may be, is all of one piece, like an ocean: the least movement extends its effect there to any distance whatsoever, even though this effect becomes less perceptible in proportion to the distance.[86]

Messina and Rutherford take the connection between the substances of a possible world to be one of "mutual dependence among the states of substances, such that a change in any one substance is reflected in a corresponding change in every other."[87] In other words, the members of a possible world condition one another's existence according to certain contingent laws decreed by God. But in order for substances to condition one another's existence according to contingent laws, Messina and Rutherford think such substances must be ordered within a common spatiotemporal manifold, which they take as a necessary feature of a possible world.

They draw support for their claim from §8 of the *Theodicy*, where Leibniz writes:

> I call a *world* the entire series and entire collection of all existing things, lest it be said that several worlds could have existed at different times and different places. For they must be reckoned all together as one world or, if you will, as one *universe*. And even though one should fill all times and all places, it still remains true that one could have filled them in infinite ways, and that there is an infinity of possible worlds, from among which God must have chosen the best, since he does nothing without acting in accordance with supreme wisdom.[88]

In this passage, Leibniz begins by describing the actual world as one that is connected within a common order of space and time, but, as Messina and Rutherford point out, he "goes on to affirm that there is an infinity of possible worlds, which are distinguished (in part) by the ways in which things are spatially and temporally ordered within them."[89] As a result, Messina and Rutherford argue that, for any set of things to be considered as a single possible world in which substances

---

[86]H, 128
[87]MR, 970
[88]*Ibid.*
[89]*Ibid.*

are lawfully connected, each member of the set must be "spatiotemporally ordered with respect to every other member of the world, and nothing that is not a member of the world can have a spatiotemporal relation with respect to anything that is a member of the world."[90]

On their reading, the notion of a *world*, as understood, is central to their explanation for why some possible substances cannot exist together in the same world. Insofar as God creates a *world*, they argue, it must be one in which the members of such a world are ordered together within a common spatiotemporal manifold. In other words, possible substances can only be connected in such a way to condition one another's existence in a lawful way only if they are related with respect to a common spatiotemporal order. Possible substances that do not share a common spatiotemporal manifold will be incompossible. Thus, "[i]f spatiotemporal relatedness is necessary for membership in a world, then not all possibles are members of one world," and so not all possibles are compossible.[91]

Messina and Rutherford suggest that compossible substances must satisfy the condition of connectedness within a common spatiotemporal manifold. Only once this condition is satisfied can substances be said to lawfully condition each other. Messina and Rutherford argue for a connection between substances that is more robust than some contingent connection according to some law(s) but weaker than the conceptual connections suggested by the proponents of the "logical" interpretations. In their view, the "lawful" interpretation offers too weak of a conception of compossibility. Messina and Rutherford argue that taking some kind of lawful relation as determining compossibility fails to adequately rule out the possibility of God's creating all possible substances. As Wilson pointed out, if *some* kind of lawful relation will necessarily obtain between any collection of substances, then there will be some law(s) that will describe the set of all possible substances. That there is a possible world containing all possible substances, according to Messina and Rutherford, requires an explanation why God would not actualize such

[90]MR, 970-971
[91]MR, 972

a world, one which they think the proponents of the "lawful" interpretation fail to offer.

But they also argue that the connection between substances to be weaker than the one the proponents of the "logical" interpretation suggest. They take the "world apart" passages as strongly suggestive that substances are not world-bound. According to Messina and Rutherford, their interpretation offers a suitably restrictive notion of compossibility all the while servicing the "world apart" passages. However, I will argue in the next chapter that not only is their criticism of the "lawful" interpretation problematic, but also that their interpretation seems inconsistent. In my view, the "lawful" interpretations do provide an explanation for why God would not actualize all possibles even if such a world is possible.

3.0 Laws, Independence, and God

In Leibniz's writings, we find the following characterizations of the notion of substance: "[E]ach substance is like a world apart, independent of all other things, except for God."[92] And, "[e]ach [substance] is, as it were, a certain separate world, and they agree among themselves through their phenomena, having no other intercourse or connection *per se*."[93] Some of Leibniz's commentators interpret such passages as suggesting that Leibnizian substances are ontologically independent existences that do not *per se* depend on one another. They further think that such substances *can* exist independently from any finite substance, as a "world apart" (the "world apart" doctrine). This inference seems to be supported by Leibniz himself, who, in his correspondence with Des Bosses, claims that God was able "absolutely [to create one of those substances that now exist without creating all the others], but was not able hypothetically, given that he decided to do everything most wisely and harmoniously."[94]

It is important, however, to differentiate, on the one hand, the doctrine of ontological independence and, on the other, the "world apart" doctrine, and clarify the relationship between

[92]AG, 47
[93]AG, 201
[94]L, 611

the two doctrines because, although the two doctrines are closely related, they are distinct claims about substances. The doctrine of ontological independence states that substances are "self-sufficient" existences that do not have any "intercourse or connection *per se*" with any other finite substance such as to *per se* exclude or entail the existence of another.[95] The "world apart" doctrine claims that it is metaphysically possible for any individual substance to exist independently of any finite substance. The "world apart" doctrine *implies* the doctrine of independence. After all, if an individual substance can exist independently of any finite substance, then it follows that that substance's nature is such that it does not *per se* entail the existence of another. If a substance's existence *per se* entails the existence of other finite substance (their world-mates), then that substance can *only* exist with its world-mates,which will preclude the possibility of its existing as a "world apart".

The doctrine of independence, however, does not imply that substances can exist as a "world apart". It is a necessary, but not a sufficient, condition for the "world apart" doctrine; one can hold that substances are ontologically independent without accepting that substances can be created independently. For instance, if one were to hold that there is a maximality constraint on Leibnizian possible worlds such that, by definition, a possible world is a maximally consistent set of compossible complete concepts, then it will be metaphysically impossible for God to create an individual substance as a "world apart" even if it is the case that substances are ontologically independent.

While the doctrine of ontological independence alone does not imply the "world apart" doctrine, it would seem that it does imply that substances are *per se* compossible. That is, God can create any combination of possible substances without logical inconsistency. The doctrine of independence states that the formal natures of substances lack any reference to other finite substances such as to *per se* exclude one another's existence. Accepting this fact, proponents of

[95]AG, 144

the "lawful" interpretation hold that all possibles are *per se* compossible, although not in relation to certain law(s) that God decrees. In their view, it is only in relation to law(s) that *per se* compossible substances become incompossible. Therefore, if one accepts the doctrine of independence, the basis of compossibility cannot be the formal natures of substances considered in themselves.

Cover and O'Leary-Hawthorne accept that substances are ontologically independent and that all possible substances are *per se* compossible. In addition, they hold the "world apart" doctrine, and think that it is metaphysically possible for God to create any substance independently of any finite substance. Cover and O'Leary-Hawthorne reject the maximality constraint on possible worlds, and interpret maximality to mean something like "maximally compossible with the laws of greatest harmony."[96] Maximality, in other words, is a morally necessary feature of the best of all possible worlds, and not a metaphysical requirement of every possible world.

Per se compossibility, however, has one potentially devastating consequence from Leibniz's perspective, namely, a possible world can result from the set of all possible substances. If all possible substances are *per se* compossible, then it is possible for God to actualize all possibles. But should God create all possible substances, no possibles will be left unactualized, which is tantamount to Spinozistic necessitarianism. It is imperative for Cover and O'Leary-Hawthorne (and any proponent of the "lawful" interpretation), then, to show why God would not actualize all possibles even though it is possible for God to do so. The question is, then, what is stopping God from creating all *per se* compossible substances?

The rejection of the maximality constraint on possible worlds will be one response. That is, even though all possible substances can constitute a possible world, it would not be the *only* possible world. Such a world would be just one amongst the infinitely many possible worlds that

[96]COH, 136

God could choose to create. Even if it is supposed that God creates the set of all possible substances, since there would have been *alternatives* that could have been created, God's choice will not be absolutely necessary. Also, since Cover and O'Leary-Hawthorne take compossibility to be determined by whether or not possible substances instantiate the requisite hypothetically necessary laws of harmony, they can maintain that God would not create all possible substances because such a collection would, presumably, fail to instantiate the *best* laws. In other words, while it is possible for God to create all possible substances, it would be morally impossible for God to decree morally inferior laws of harmony.

James Messina and Donald Rutherford, however, think such explanations fail to resolve the problem at hand. They write,

> The compossibility relation is introduced by Leibniz to explain why God does not actualize all possible substances. Rescher and Mates have a ready explanation: there is no such possible world, because certain possibles exclude one another. Cover and O'Leary-Hawthorne's account of compossibility, by contrast, does not so much explain God's choice as presuppose it. Furthermore, it is not obvious that God would not choose to actualize a world consisting of all possible substances if such a world were indeed possible. Cover and O'Leary-Hawthorne assume that God's preference for harmony would trump his interest in diversity and plenitude when faced with a world containing all possible substances. Yet there is evidence that Leibniz's God is disposed to actualize as many possibles as he can, consistent with those possibles forming a single world.[97]

Messina and Rutherford seem to think invoking harmony or law to explain the incompossiblity of substances is not restrictive enough to block God's disposition to create as much as possible.[98] They base their views on such textual evidence as the following:

---

[97]MR, 966-967

[98]C. D. Broad argues that this *should* be Leibniz's position, see Broad 162.

> [A]ll possibles, that is, everything that expresses essence or possible reality, strive with equal right for existence in proportion to the amount of essence or reality or the degree of perfection they contain, for perfection is nothing but the amount of essence.
>
> From this it is obvious that of the infinite combinations of possibilities and possible series, the one that exists is the one through which the most essence or *possibility* is brought into existence."[99]

Given Leibniz's claim that God will create the possible series that contains with "the most essence or possibility", Messina and Rutherford argue that there needs to be "logical or metaphysical obstacles to God creating a world from all possible substances," for otherwise,"it is natural to assume that God *would* create such a world."[100] If it is accepted that individual substances' formal natures, considered by themselves, do not logically exclude one another as to preclude God's creation of all possibles, then it seems that, if God has the disposition to create as much as possible, *per se* compossibility will entail the actuality of all possibles.

This conclusion seems unacceptable insofar as we take the actuality of all possibles as non-negotiable from Leibniz's perspective. It appears, then, that substances cannot be *per se* compossible. But while Messina and Rutherford think that all substances cannot be *per se* compossible, they argue on their reading that God *can* create an individual substance as a "world apart". Given their criticism of Cover and O'Leary-Hawthorne, this seems to be an odd claim. After all, it seems that Leibniz's "world apart" doctrine implies that substances are ontologically independent such that no individual substance's nature will *per se* exclude or entail the existence

---

[99]AG, 150-151 (emphasis added.); Leibniz's notion of metaphysical perfection is a controversial. There are disagreements over what this notion amounts to in Leibniz's metaphysics, which can be attributed to Leibniz himself, who, at times, offers apparently inconsistent characterizations of metaphysical perfection. Messina and Rutherford seem to think that Leibniz's notion of perfection implies that God will create as much as possible. I will not challenge such an interpretation here, but rather assume that Leibniz's God is disposed to create as much as possible. For a more detailed discussion on this topic, see Gale, and Rutherford.

[100]MR, 967

of any other finite substance. And if no individual substance will *per se* exclude another's existence, then it would seem that substances will be *per se* compossible, given that the only *in*compossible substances are those that cannot be actualized together. So, how can Messina and Rutherford affirm the "world apart" doctrine all the while criticizing the "lawful" interpretations' holding *per se* compossibility?

Given Messina and Rutherford's objection and their reading of compossibility, it seems that they are committed to the following claims:

(1) God has the disposition to create as much as possible.

(2) It is metaphysically possible that God creates any individual substance as a "world apart" ("world apart" doctrine).

(3) Not all possibles are actual.

I will argue, however, that Messina and Rutherford cannot hold these three claims consistently. If substances can exist as a "world apart", and if God is disposed to create as much as possible, then it seems to follow that (3) must be false on their interpretation. Since the notion of compossibility is designed to secure (3), it follows that the conjunction of (1) and (2) must be false.

As Messina and Rutherford see it, the "lawful" interpretation fail to offer a "suitably restrictive notion of compossibility."[101] That is, "if the compossibility relation is to serve as the basis of a satisfying response to Spinoza, it cannot be 'up to God' which possible substances are compossible with one another." Their criticism, therefore, is that the "proponents of the lawful reading simply assume that God would not choose to actualize a world consisting of all possible substances, rather than explain why he could not do so."[102] However, it seems to me that Messina and Rutherford are neglecting a central feature of Leibniz's understanding of the relation between God and the laws he decrees. For Leibniz, the laws that God chooses are morally necessary and chosen on the *basis of final causes*. The laws are intrinsically pleasing to God, which is why God

[101] *Ibid.*
[102] *Ibid.*

chose the actual laws rather than another possible set of laws. If we take this view of God's choice, then the "lawful" interpretations do, in fact, explain why God would not create all possible substances, or so I will argue.

The plan of this chapter will be as follows. In [3.1], the focus will be Messina and Rutherford's arguments on how their interpretation can accommodate the "world apart" passages. In [3.2], I will challenge Messina and Rutherford and argue that it is metaphysically possible on their interpretation that God actualizes all possible substances. Then, in [3.3], I will argue that Messina and Rutherford's interpretation will *also* imply the actuality of all possibles if it is the case that God has the disposition to create as much as possible. I will conclude in [3.4] by arguing that Messina and Rutherford's objection fails to undermine the solution offered by the proponents of the "lawful" interpretation.

3.1 The "World Apart" Doctrine

Messina and Rutherford argue for an interpretation of compossibility that places an emphasis on the notion of a *world*, understood as "an abstract relational structure according to which God conceives of possibilities of existence," which they claim is conceptually prior to that of compossibility: any two substances are compossible if and only if they can be conceived by God to exist together in the same world, which will be determined by substances' essential relations of space and time.[103] And although they accept that every individual substance is a member of exactly one possible world, that is, world bound, they deny that God is, therefore, logically necessitated to create a substance's world-mates insofar as he creates that substance. God *could* create an individual substance as a "world apart".

Their strategy for securing (2) depends on their distinction between "what God can do absolutely and what God can do in meeting the objective of actualizing a world."[104] They infer this distinction from the two ways they think God can conceive of any possible substance.

[103]MR, 969
[104]MR, 973

> In conceiving of a substance as possible, God conceives of both the internal states by which it would be modified were it to exist and the ways in which its states would be related, were that world to exist. God's conception of the internal states of any substance presupposes nothing about the internal states of its worldmates; he conceives of the substance as a 'world apart'. By contrast, God's conception of a substance's extrinsic denominations necessarily involves an idea of how it would be related to the other members of its world, in particular, the ways in which their states would be 'connected'. Substances are connected in a world in accordance with contingent, causal laws that God freely decrees in choosing to actualize that world. Thus, in conceiving of the extrinsic denominations of a substance, God conceives of possible free decrees he would exercise in bringing its world into existence."[105]

Messina and Rutherford believe that (2) can be secured because God *can* create a substance independently by simply refraining from exercising the free decrees that will create that substance's world. To create a substance apart from its world-mates, "God has only to decide not to enact the free decrees associated with the creation of that world and instead to enact different free decrees associated with the existence of a solitary substance."

Messina and Rutherford think that "the content of a substance's complete concept is identified with God's *prevolitional* knowledge of the substance, i.e., the knowledge God has of its properties independently of his knowledge of his own actual free decrees."[106] Since God's knowledge of individual substances is divorced from the knowledge of his free decrees, "God knows a possible substance as an individual in knowing the intrinsic properties (e.g., perceptual states) it would have were it to exist and the relational properties it would have were the other members of its world to exist."[107] The difference in God's knowledge of a substance, they argue,

---

[105] *Ibid.*
[106] *Ibid.*
[107] *Ibid.*

"is explained by his knowledge of the different free decrees that would be exercised in them, not by the content of the relevant complete concept(s)." [108] Therefore, "if God chooses to create a world, specified in terms of the free decrees that define its contingent causal structure, he is committed to creating all and only those substances that comprise that world." However, God *can* create an individual substance independently of its world-mates by refraining from exercising the free decrees contained in its complete concept needed to create its world. In other words, by actualizing the substance as conceived by only its intrinsic properties. "There is no reason to think God would do this," Messina and Rutherford point out, but nevertheless, "it remains something that God *could* do."[109]

I think, however, Messina and Rutherford's criticism of Cover and O'Leary-Hawthorne's interpretation is just as applicable to their own. This is because, I think that their acceptance of the "world apart" doctrine, in conjunction with (1), the claim that God has the disposition to create as much as possible, will entail the actuality of *all* possible substances. It seems to me that their reading implies that all possible substances will be *per se* compossible, and that all possibles can be actualized together if God chooses to create *every* possible substance by solely its intrinsic denominations. But if it is possible for God to create all possible substances in this way, and if we suppose that (1) is true, then it appears that God will create *all* possible substances, which will leave no possibles unactualized. My task then will be to substantiate the following two claims. First, it is metaphysically possible for God to create *all* possible substances on Messina and Rutherford's interpretation. Second, God *will* create all possible substances given (1).

3.2 The Possibility of Spinozism

Recall that Messina and Rutherford accept that God can conceive of, and therefore create, an individual substance as a "world apart" because "God's conception of the internal states of any substance presupposes nothing about the internal states of its worldmates."[110] On the assumption

[108] *Ibid.*
[109] *Ibid.*
[110] MR, 973

that God *can* conceive of any individual substance by solely their internal states, that is, limit his knowledge of any individual substance to its essential intrinsic denominations, then it seems it is possible for God to conceive of *any* two possible substances' existing together. Suppose, then, that God conceives all possible substances in this way. Then it seems that God *could* create all possibles because substances conceived in this way will not *per se* exclude one another. All that God would have to do to create all possible substances will be to enact the free decrees that will actualize every possible substance with only their intrinsic denominations.

The mere *conceivability* of the actuality of all possible substances, I think, already is sufficient to entail that it is metaphysically possible for God to create all possible substances on Messina and Rutherford's interpretation. This is because, as Messina and Rutherford themselves point out, what is conceivable and what is metaphysically possible for Leibniz are coextensive: "[F]or Leibniz the set of things that God cannot conceive is coextensive with the set of things that God cannot do."[111] After all, they think any individual substance can be created as a "world apart" *because* God can conceive of any individual substance by its intrinsic denominations alone, independently of its extrinsic denominations. By the same token, it seems that God can conceive all possible substances as actual by limiting his knowledge of every possible substance to its intrinsic denominations, which entails that God can create all possible substances in this way.

But there is a further reason why I think it is metaphysically possible for God to actualize all possibles on Messina and Rutherford's interpretation. It seems that Messina and Rutherford take every individual substance to have its relational properties essentially. This is because they think that "any substance is *partly defined through the relations* it bears to the other substances in its world."[112] This seems to mean that a substance's relational properties are amongst that substance's essential properties.

But the claim that substances have their relations essentially seems to be inconsistent with

[111]MR, 969
[112]MR, 972 (emphasis added.)

their strategy for securing (2). Messina and Rutherford think that substances can exist without their relational properties because "nothing in Leibniz's complete concept theory precludes God from actualizing a substance apart from its world-mates and hence without the relational properties specified by its complete concept."[113] They (if I am reading them correctly) seem to have the following intuition. Since all the properties contained in Adam's complete concept, including his relational properties, are essential to him, this entails that Adam exists in only one possible world (i.e., the actual world). Adam will be world-bound. However, Adam's relational properties' existence necessarily depends on the existence of his spatiotemporally defined possible world. So, insofar as God chooses to create Adam without also creating his world, they think Adam can exist without his relational properties. In other words, they seem to deny that it is the case that any substance, should it exist, *necessarily* exists with its essential relational properties. A substance can exist without its essential relations insofar as God refrains from creating the world on which their existence depends.

This view, however, seems to be problematic as it seems to call into question whether substances' relational properties are even *essential*. They think it is possible for God to create a substance as a "world apart" by not creating that substance's world, namely, by refraining from actualizing its essential relations. But if we take an essential property of a substance to be that which that substance, should it exist, necessarily has such that it cannot lack it, then, on Messina

[113]There is one confusing aspect of Messina and Rutherford's account on this point, namely, how it is possible for God to conceive of an individual substance by its internal states (intrinsic denominations) alone. Leibniz famously claims that there are "*there are no purely extrinsic denominations*, denominations which have absolutely no foundation in the very thing denominated" (AG, 32). On Cover and O'Leary-Hawthorne's view, there is no incompatibility between the intrinsic denominations of individual substance because they don't hold such denominations as *sufficient* in determining the extrinsic denominations of substances. In other words, God cannot know a particular substance's relational properties by simply conceiving of that substance's complete concept alone, since a complete concept by itself does not provide enough information for God to have such knowledge. Messina and Rutherford, on the other hand, seem to think that relations are (1) essential to substances, and (2) fully specified by complete concepts. If (1) and (2) are accepted, it doesn't seem possible for a particular intrinsic history to be able to ground *different* relational properties than the ones specified in its complete concept. It is not clear to me, therefore, how God can have knowledge of the intrinsic denominations of a particular substance without also concurrently having the knowledge of the relational properties that are necessarily entailed by those denominations, given that no intrinsic history *can* ground different relational properties than the ones it does.

and Rutherford's interpretation, relational properties are not essential to substances. They are, rather, accidental to God's *choice* to create a possible world: God can create the *identical* substance with its relational properties by choosing to create that substance's possible world, or without them by choosing to not create its world. For it to be possible for Adam to be created as a "world apart", Adam's essential properties cannot include reference to Eve, Cain, and the rest of his world-mates such that God necessarily conceives of Adam's world-mates when conceiving of Adam.[114] In other words, Adam, should he exist, cannot necessarily exist with his relational properties, since this will entail the existence of the substances to which he stands in relation. If Adam's relational properties are essential, then it seems that Adam, should he exist, will necessarily exist with his relations. Therefore, if Messina and Rutherford accept that substances can be created as a "world apart", it must be the case that relational properties are not essential to substances.

But if it is the case that any substance's relational properties are not essential, it seems that substances are *per se* compossible in the sense that God *can* create any combination of possible substances, on the condition that God refrains from actualizing any substances' possible world. Messina and Rutherford think that God can prevolitionally conceive, and therefore create, any individual substance by its intrinsic denominations alone. But it doesn't appear that any two substances' intrinsic properties will be inconsistent. If we understand incompossible substances as those that cannot be actualized together, then it seems that any two possible substances, conceived by solely their essential intrinsic denominations, can be actualized together insofar as God chooses not to actualize any substance's world.

Messina and Rutherford may, however, have one possible response available to them. Even if it is granted that God can create any individual substance by its essential intrinsic

[114]On this point, Messina and Rutherford stand in stark contrast with the proponents of the "logical" introduction examined in the first chapter. On the "logical" interpretations, God's knowledge of Adam necessarily includes the world-mates he expresses such that God *cannot* conceive of Adam independently of his world.

denominations alone, it may still be impossible for God to create all possibles because there is no possible world in which all possible substances are members. Consider the following comment from Messina and Rutherford:

> [I]t might be wondered why there could not be a possible world w_2 whose members were qualitatively identical (by virtue of possessing the same intrinsic denominations) to a proper subset of the members of a maximal world w_1. This scenario is blocked by Leibniz's 'no purely extrinsic denominations' thesis. … According to the no purely extrinsic denominations thesis, any change in a relational property of a substance entails some change in an intrinsic property of it, by virtue of the way that substances condition each others' existence in a world. In the case of the imagined scenario, the members of w_2 would not be conditioned by (all) the same substances as their counterparts in the maximal world w_1. Hence, their intrinsic denominations (e.g., their perceptual states) would have to be different from those of their counterparts in w_1.[115]

Based on their views here, one possible response, then, could be that God could not create all possible substances with purely their intrinsic denominations because any individual substance's intrinsic denominations can only ground relational properties to its world-mates and no other. In other words, God will be able to create an individual substance, Adam, as a "world apart", but insofar as God creates Adam with his intrinsic properties, God can *only* further create all the substances with intrinsic denominations that can ground relations with Adam. Should Adam be conditioned differently than the way his intrinsic denominations specify, by Messina and Rutherford's lights,that Adam will be a different individual with different intrinsic denominations. Therefore, it seems that God cannot create any combination of intrinsic denominations, given the 'no purely extrinsic denominations' thesis.

[115]MR, 976 (cf. note 24.)

It seems that Messina and Rutherford understand the 'no purely extrinsic denominations' thesis to mean that a substance's intrinsic denominations *fully* ground its extrinsic denominations. Therefore, for any individual substance to exist with its intrinsic denominations, it cannot be a member of any other possible world than the one its intrinsic denominations specify. If all possible substances are members of a possible world in which they exist with only their intrinsic denominations, since every substance will condition each other's existence, every possible substance will have different extrinsic denominations to the ones they would have in their respective possible worlds. Since it is impossible for any individual substance to have different extrinsic properties than the ones their intrinsic denominations specify, it follows that there is no such possible world.

This response seems to rule out my suggestion that it is possible on Messina and Rutherford's interpretation that God creates *all* possible substances with only their intrinsic properties. It seems that the 'no purely extrinsic denominations' thesis places a restriction on which substances God can create together. While God can create any individual substance by only its intrinsic denominations, it doesn't follow that God will also be able to create *all* possible substances by their intrinsic denominations, since intrinsic denominations fully specify world-mates.

This explanation, however, will be inconsistent with Messina and Rutherford's claim that "God's conception of the internal states of any substance presupposes nothing about the internal states of its worldmates."[116] This claim is central to their strategy of securing (2), since insofar God can conceive of a substance without also necessarily conceiving its world-mates, God will be able to create a substance as a "world apart". But given their understanding of the 'no purely extrinsic denominations' thesis, how can God conceive of a substance without also conceiving of its world-mates? It seems that they hold that a substance's intrinsic denominations *fully ground*[117]

[116]MR, 973

[117]By contrast, Cover and O'Leary-Hawthorne argue that the intrinsic denominations of an individual substance *partially* grounds its extrinsic denominations. God will not be able to know, in other words,

its extrinsic denominations. But if we were to assume a closure principle (i.e., If subject *S* knows *P*, and *P* entails *R*, then *S* knows *R*), then it would appear that God, an omniscient being, will necessarily know a substance's extrinsic denominations by knowing its intrinsic denominations.[118] In conceiving of Adam, in other words, God will also necessarily conceive of all his world-mates, which will preclude the possibility of God's creating Adam as a "world apart". It doesn't appear, then, that they can hold, on the one hand, that God *can* conceive of a substance without also conceiving its extrinsic properties, and, on the other, their understanding of the 'no purely extrinsic denominations' thesis.

In addition, I don't think that their understanding of the 'no purely extrinsic denominations' thesis will rule out the possibility that God creates all possible intrinsic histories. Rutherford explains the thesis in the following way:

> Leibniz typically explains the fact that there are no purely extrinsic denominations in terms of the "real connection" or "universal sympathy" of all things. As a consequence of this connection or sympathy, he argues, nothing can come to be true of anything anywhere in the universe without necessitating a change in their internal states of all other things, and hence a change in their intrinsic denominations.[119]

The 'no purely extrinsic denominations' thesis will only seem to preclude a possible world of all possible intrinsic histories if there is a "real connection" between all the members. Without this assumption, however, it doesn't appear that it is impossible for God to create all possible intrinsic histories. And, it seems, Leibniz was very much open to the possibility that God creates substances without such connection: "God could give to each substance its own phenomena

---

a substance's extrinsic denominations by simply knowing its intrinsic denominations. God would also have to know the laws of expression that obtain between substances in order to know their extrinsic denominations. See note 39.

[118]The epistemic closure principle can be formulated in various ways, and is a topic of controversy in the field of epistemology. Here, I assume that, for an omniscient being, that it will necessarily hold.

[119]Rutherford, 145

independent of those of others, but in this way he would have made as many worlds *without connection*."[120] If God were to create the set of all intrinsic histories without any "real connection", then it seems that it would be possible for God to actualize all possible intrinsic histories.

Messina and Rutherford argue that God can create any individual substance as a "world apart", or as part of a possible world. The difference, they think, "in God's knowledge of the two cases is explained by his knowledge of the different free decrees that would be exercised in them, not by the content of the relevant complete concept(s)."[121] They seem to think it is possible for any substance to exist without its relational properties, since God can exercise the free decrees that will result in the creation of that substance without its world. But suppose that God exercises the free decrees that result in the creation of an individual substance with only its intrinsic denominations, and further suppose that God does this for *every* possible substance. No logical inconsistency will follow from the supposition that all possible substances are actualized with only its essential intrinsic properties, which will not *per se* exclude the existence of another.

Therefore, insofar as Messina and Rutherford hold that it is possible for God to create any individual substance as a "world apart", it seems that it will also be possible for God to actualize all possible substances on Messina and Rutherford's interpretation. In order to achieve this, of course, God will have to create every individual substance by only its essential intrinsic properties. But even if it is *possible* for God to create all possible substances, this fact alone doesn't seem to entail that all possibles are actual. The question is, then, are there reasons for God to abandon his objective of creating a single unique world, in favor of creating all possible substances with only their intrinsic denominations?

3.3 The Threat of Spinozism

In the previous section, I have argued that Messina and Rutherford's strategy for securing

[120]L, 493 (emphasis added.)
[121]MR, 973

(2), the "world apart" doctrine, seems to leave open the metaphysical possibility that God actualizes all possible substances by only their intrinsic denominations. Whether or not an individual substance exists in its spatiotemporally defined possible world or as a "world apart", they argue, is ultimately up to God's choice. But why would God *choose* not to create all possibles by only their intrinsic histories?

Messina and Rutherford seem to hint that it is morally necessary that God creates a spatiotemporally ordered possible world.

> God could decide not to create a world, choosing instead to create one or more separate substances, which lacked the unity of a world. In this case God would actualize the individual substance without actualizing the free decrees contained in its complete concept. Thus, God would create the substance, without creating it as a part of a world. As Leibniz emphasizes, there is no reason to think God would do this. Nevertheless, it remains something that God *could* do.[122]

The natural answer to my query above is, then, that, while it is metaphysically possible for God to not create a spatiotemporally ordered world, it is morally impossible for God to create it. But this seems to be problematic given their commitment to (1). After all, Messina and Rutherford criticize Cover and O'Leary-Hawthorne (and all "lawful" interpretations) on the point that if all possible substances *can* be actualized, and God is disposed to create as much as possible, then it seems natural to assume that God *would*. Given Messina and Rutherford's commitment to (1), it seems that the bald fact that it is metaphysically possible for God to actualize all possible substances on their interpretation implies that a morally perfect God *will* actualize all possibles.

However, Messina and Rutherford may point out that the envisioned scenario where all possible substances are actual fails to satisfy their interpretation of a possible world for Leibniz. Recall that on their view a possible world for Leibniz necessarily has a spatiotemporal manifold.

---

[122]MR, 973 (emphasis theirs.)

They may point out that their criticism of Cover and O'Leary-Hawthorne is that Leibniz's God would "actualize as many possibles as he can, *consistent with those possibles forming a single world*."[123] Since Cover and O'Leary-Hawthorne's interpretation allows the set of all possible substances to constitute a possible world, and assuming that Leibniz's God desires to create a possible *world*, it follows that Cover and O'Leary-Hawthorne leave open the possibility that God will create such a world. If God is disposed to create as much as possible, and if the set of all possible substances is a possible world, then God will choose to create it. However, assuming that the set of all possible intrinsic histories will fail to instantiate a spatiotemporal manifold, which is necessary on Messina and Rutherford's conception of a possible world, and further that Leibniz's God desires to create substances that are ordered in space and time, it follows that God will not create the set of all possible intrinsic denominations.

Such an explanation, unfortunately, does not seem to address the problem at hand. As Messina and Rutherford point out, "the compossibility relation is introduced by Leibniz to explain why God does not actualize all possible substances."[124] They seem to assume that God can only create two or more substances only if they are sufficiently connected by a common order of space and time. However, this seems to be contradicted by Leibniz's claim that "God could give to each substance its own phenomena independent of others, but in this way he would have made as many worlds without connection."[125] Leibniz seems very much open to the possibility that God creates substances without any kind of connection with one another. Just as Messina and Rutherford criticize Cover and O'Leary-Hawthorne for seemingly assuming "that God's preference for harmony would trump his interest in diversity and plentitude when faced with a world containing all possible substances," I think the same criticism can apply to Messina and Rutherford's interpretation as well: that is, why assume that God's preference for a world with a well-defined spatiotemporal ordering will trump his interest in diversity and plentitude when faced with the

[123]MR, 967 (emphasis added.)
[124]MR, 966
[125]L, 493

possibility of actualizing all possibles.[126]

But in addition, it doesn't seem obvious to me that the set of all possible intrinsic histories will fail to instantiate some kind of order of space and time. Messina and Rutherford claim that "it is integral to God's knowledge of a set of substances *as a possible world* that they are conceived as conditioning each other's existence in a lawful manner."[127] They think that "substances can be conceived as belonging to the same world, within which they are lawfully connected, only if they are related according to the order of space and time."[128] A necessary condition for a collection of possible substances to be sufficiently connected such as to be considered a possible world is, they argue, a common order of space and time. But is it the case that the set of all possible intrinsic histories cannot relate in this way?

I don't think so. While it can be granted that on Messina and Rutherford's interpretation that no possible substance can exist in any other spatiotemporally ordered world than the one its relations specify, I see no reason to think that God's creating all possible intrinsic histories will imply that that set of substances cannot instantiate a common order of space and time. After all, given Leibniz's denial of the metaphysical possibility of unlawfulness or irregularity, it would seem that *some* kind of lawful conditioning will obtain between all possible substances' intrinsic denominations (i.e., the perceptual states). Thus, if God can conceive the set of all possible intrinsic histories, then some kind of lawful conditioning will necessarily obtain. If the set of all possible intrinsic histories can be conceived to lawfully condition one another, then, by Messina and Rutherford's formulation, it seems that such a set will be possible world with a spatiotemporal manifold.

3.4 Laws and Final Causes

Messina and Rutherford criticize the "lawful" interpretations in that they fail to explain why God *would* not actualize all possibles given the fact that such a world is possible. But this

[126]MR, 967
[127]MR, 970 (emphasis theirs.)
[128]MR, 971

criticism, I think, neglects a central characteristic of Leibniz's God, namely, that he acts on the basis of final causes (or the perception of value). Laws of the actual world, I will argue, were chosen precisely because Leibniz thinks *these* laws are the *best*, which sufficiently explains why, even though all possibles *could* be actualized, God did not. If we consider the nature of the laws of the actual world, it should be clear, insofar as God decided upon them, that not all possibles are actual.

Leibniz thinks that the laws that are true in the actual world are morally necessary. At *Theodicy* §349, Leibniz says,

> [T]he laws of Nature regulating movements are neither entirely necessary nor entirely arbitrary. The middle course to be taken is that they are a choice of the most perfect wisdom. And this great example of the laws of motion shows with the utmost clarity how much difference there is between these three cases, to wit, firstly *an absolute necessity*, metaphysical or geometrical, which may be called blind, and which does not depend upon any but efficient causes; in the second place, *a moral necessity*, which comes from the free choice of wisdom in relation to final causes; and finally in the third place, *something absolutely arbitrary*, depending upon an indifference of equipoise, which is imagined, but which cannot exist, where there is no sufficient reason either in the efficient or in the final cause.[129]

The laws of nature cannot be absolutely necessary because the laws of motion are not geometrically demonstrable: The laws "do not spring entirely from the principle of necessity, but rather from the principle of perfection and order; they are an effect of the choice and the wisdom of God."[130] In support of this claim, he points to his two principles of the equality of cause and effect and continuity, which, because they cannot be geometrically demonstrated, he claims must

[129]H, 332
[130]H, 334

be the product of a wise creator.

Also, the laws of nature cannot be said to be arbitrary because of the violation of the Principle of Sufficient Reason. The laws of nature would only be arbitrary if there were no sufficient reason for its choice from other laws. However, Leibniz denies that there is no sufficient reason for the laws in the actual world. Since God chose the laws of nature according to *final causes*, there is a sufficient reason for why God freely chose to create these laws rather than another because they are the best.

The laws in the actual world, then, are the *best* laws, which is the sufficient reason for God's choice of these laws rather than another. They were selected on the basis of final causes, and, it seems, somewhat independent of its intended function: "For the wisest mind so acts, as far as it is possible, that the *means* are also in a sense *ends*, that is, they are desirable not only on account of what they do, but on account of what they are."[131] Whatever functions that the best laws will have, this alone was not the determinate factor for God's choosing them, since the laws that were chosen precisely because they are *intrinsically* pleasing to God.

But how does this then relate to substantial compossibility? Well, by Leibniz's lights, the fact that God chose the laws of the actual world based on final causes is the reason why not all possibles are actual.

> For my part, I believe that the laws of mechanics *which serve as foundation for the whole system depend on final causes*, that is to say, on the will of God determined to do what is most perfect, and that matter takes on not all possible forms but only the most perfect ones.[132]

In this passage, Leibniz attempts to differentiate himself from Descartes, who holds two claims, according to Leibniz, which imply Spinoza's conclusion that all possibles are actual. The first is the denial of final causation in physics, and the second is that "matter takes on, successively, all

[131]H, 257
[132]L, 272 (emphasis added.)

possible forms."[133] As he describes it: "These are precisely the opinions which Spinoza has expounded more clearly, namely, that justice, beauty, and order are things merely relative to us but that the perfection of God consists in that magnitude of his activity by virtue of which nothing is possible or conceivable which he does not actually produce."

Therefore, Leibniz seems to think that, because God chose to create the laws that are most intrinsically pleasing to him, God only created those possibles that conform to them. If we consider some of the laws in the actual world, I think we can see why, on the hypothesis that God chose these laws, that not all possibles are actual. One of the laws intrinsically pleasing to reason is principle of the equality of cause and effect, which is contingent and morally necessary. Leibniz thought there were other principles true in the actual world (i.e., the principle of continuity), but all the contingent laws of nature that obtain in the actual world are *derived* from these principles.

> I have found that one may account for these laws [of motion] by assuming that the effect is always equal in force to its cause, or, which amounts to the same thing, that the same force is conserved always: but this axiom of higher philosophy cannot be demonstrated geometrically.[134]

For Leibniz, any supposed law of nature that violate these principles (i.e., the Cartesian laws of motion) will be false in the actual world, but still possible in themselves.[135] I think it is reasonable to suppose that not all possibles will be able to conform to this law. After all, it will exclude those that conform to the Cartesian laws of motion, which will be grounded by *different* principles (e.g., the principle of the ½ cause and effect, or that of ½ cause and ½ effect, whatever they may be) than the one in the actual world. Thus, insofar as the principle of the equality of cause and effect was chosen, it seems that only the substances that can conform to this principle or law can be actualized.

Messina and Rutherford, therefore, seem to misunderstand the "lawful" strategy to

---

[133]L, 273
[134]H, 332-333
[135]For Leibniz's argument, see AG, 49-50

compossibility. As they understand it,

> For proponents of the lawful reading … facts about which substances are compossible (and thus which substances can belong to the same possible world) are 'up to God'. On their view, God freely decrees certain laws for a world, and the compossibility or incompossibility of any set of substances is a function of whether or not they instantiate the relevant laws.[136]

In a sense they are correct. God is free to decree certain laws for a world, but they seem to ignore the fact that Leibniz's God will choose the laws based on final causes. The laws partition substances into different possible worlds and there may be a law(s) that describes all possible substances. However, the "lawful" interpretations maintain that God is morally necessitated to choose the best laws, and therefore compossibility of substances will be a function of whether possible substances will instantiate the *best* laws. It seems to me that the "lawful" interpretations can maintain that the reason not all possible substances are not actual is *because* there was no sufficient reason for God to choose the law(s) to which all possibles will conform. Such laws were morally inferior to the laws that God chose.

Thus, I think the "lawful" interpretations do, in fact, offer a sufficiently restrictive notion of compossibility, contrary to Messina and Rutherford's claims. Given that God chooses laws on the basis of final causes, the proponents of the "lawful" interpretation can simply say that the best laws are morally necessary and not all possibles can instantiate them. Messina and Rutherford can push back and say that, nevertheless, Leibniz's God has the disposition to create as much as possible, so insofar as laws partition possibles into different possible worlds, and among them, a possible world consisting of all possible substances is possible, then God *would* choose such a world, regardless of the laws that describe it.

But this is not so much a criticism against the "lawful" interpretation as it is against

[136]MR, 967

Leibniz's philosophy itself. If the compossibility relation is one that partitions possibles into different possible worlds, and one of its intended functions is to show why not all possibles are actual, saying that God's choice of laws based on final causes results in the existence of some but not all possibles will be an adequate explanation. To say, then, that God's choice of laws is not sufficient to decide God's choice of the best of all possible worlds is broaching a *different* (although related) subject, namely, one what basis does God choose the best possible world. But in the passages I cited above, it is clear that Leibniz thinks that God chooses the laws based on final causes and *for this reason* not all possibles are actual. Whether ultimately this explanation is consistent with Leibniz's other philosophical commitments will be an independent issue.

4.0 Conclusion

In this thesis, we saw the various ways that commentators have proposed understanding Leibniz's notion of compossibility. On the one hand, there is the "logical" interpretation that takes the basis of compossibility to be logical consistency between complete concepts of substances. Should the supposed conjunction of any two complete concepts imply a logical inconsistency, then the corresponding substances will be incompossible. However, I pointed out that one major problem with this interpretation is the entailment of world-bound substances, which is in tension with Leibniz's claims in the "world apart" passages.

The "lawful" interpretation, on the other hand, takes law(s), which God freely decrees in creating a world, as the basis of compossibility. All possible substances are *per se* compossible and it is only on the basis of laws that possible substances are incompossible. In my view, there are good reasons for thinking that the "lawful" interpretation offers a more accurate view of the notion of compossibility. One reason is that the "lawful" interpretation's understanding of the notion of substance seems to better align with Leibniz's claims about substances. Another is the apparent importance of harmony in Leibniz's system, which Leibniz sometimes says precludes the existence of possible things.

The "lawful" interpretation, however, has been criticized recently by Messina and Rutherford on the point that taking law(s) as determining compossibility is too weak to preclude the actuality of all possible substances. In their view, given the evidence that Leibniz's God is disposed to create as much as possible, certain lawful restrictions will not be adequate to block Leibniz's system from collapsing into Spinozistic necessitarianism. If all possible substances are *per se* compossible, they argue, and God has the disposition to create as much as possible, it would seem that God would choose to actualize all possible substances.

I have argued that this criticism is problematic for two reasons. First, it equally applies to Messina and Rutherford's interpretation because they accept that any individual substance can exist as a "world apart". By allowing individual substances to exist independently of its world-mates, I have argued that it is possible on Messina and Rutherford's reading that God can create all possible substances. Since it is possible, given their commitment to the claim that God has the disposition to create as much as possible, I have argued that God would.

Second, the objection conflicts with Leibniz's claim that God acts based on final causes. To the question, "Why would God not create all possible substances even though all substances are *per se* compossible?", the proponents of the "lawful" interpretation can simply answer that the law(s) that describe such a world is inferior and less valuable than the ones that describe a less populated possible world. Despite Messina and Rutherford's claim that the proponents of the "lawful" interpretation fail to offer an explanation for why God would not create all possibles, I think the proponents of the "lawful" interpretation do in fact provide one. God chooses the best law(s), and only the possible substances that can instantiate such laws are actualized.

Works Cited

Adams, Robert Merrihew. *Leibniz: Determinist, Theist, Idealist*. New York: Oxford UP, 1994. Print.

Broad, C. D. *Leibniz: An Introduction*. London: Cambridge UP, 1975. Print.

Brown, Gregory. "Compossibility, Harmony, and Perfection in Leibniz." The Philosophical Review 96.2 (1987): 173. Web.

Cover, J. A., and John Hawthorne. *Substance and Individuation in Leibniz*. Cambridge, U.K.: Cambridge UP, 1999. Print. (Abbreviated as CO)

Leibniz, Gottfried Wilhelm, and Austin Farrer. *Theodicy: Essays on the Goodness of God, the Freedom of Man, and the Origin of Evil*. La Salle, IL: Open Court, 1985. Print. (Abbreviated as H)

Leibniz, Gottfried Wilhelm, Freiherr Von, 1646-1716, and Leroy E. Loemker. *Philosophical Papers and Letters*. Dordrecht : Kluwer Academic, 1989.: n.p., n.d. Print. (Abbreviated as L)

Leibniz, Gottfried Wilhelm, R. C. Sleigh, Brandon Look, and James H. Stam. *Confessio Philosophi: Papers concerning the Problem of Evil, 1671-1678*. New Haven: Yale UP, 2005. Print.

Leibniz, Gottfried Wilhelm, Roger Ariew, and Daniel Garber. *Philosophical Essays*. Indianapolis: Hackett Pub., 1989. Print. (Abbreviated as AG)

Mates, Benson. *The Philosophy of Leibniz Metaphysics and Language*. New York: Oxford UP, 1989. Print.

Messina, James, and Donald Rutherford. "Leibniz on Compossibility." *Philosophy Compass* 4.6 (2009): 962-77. Web. (Abbreviated as MR)

Rescher, Nicholas. *On Leibniz*. Pittsburgh, PA: U of Pittsburgh, 2003. Print.

Russell, Bertrand. *The Philosophy Of Leibniz*. Hoboken: Taylor & Francis, 1992. Print.

Rutherford, Donald. *Leibniz and the Rational Order of Nature*. Cambridge: Cambridge UP, 1995. Print.

Wilson, Margaret D. "Compossibility and Law." *Causation in Early Modern Philosophy: Cartesianism, Occasionalism, and Preestablished Harmony*. By Steven M. Nadler. University Park, PA: Pennsylvania State UP, 1993. 119-33. Print.

국문초록

이 논문의 목적은 라이프니츠의 공존가능성 개념에 대한 여러 해석들을 비판적으로 검토하는 것이다. 공존가능성에 대한 라이프니츠의 입장에 대한 해석은 크게 두 가지로, “논리적” 해석과 “법칙적” 해석으로 나뉜다. “논리적” 해석에 따르면, 가능실체들의 본성들 또는 본질들(완전 개체 개념들)이 논리적으로 일관적일 경우 그리고 오직 그런 경우에만 그 가능실체들은 동일한 가능세계에 존재할 수 있다. 반면에 “법칙적” 해석을 지지하는 철학자들은 실체들의 완전 개체 개념이 그 자체만으로 공존가능성의 기초를 제공한다는 논리적 해석을 거부한다. 그들의 관점에 따르면, 실체들의 공존가능성을 결정하기 위해서는 실체들의 완전 개체 개념뿐만 아니라 실체들이 어떤 법칙을 공유하는지도 고려해야 한다. 그런데 James Messina와 Donald Rutherford는 “논리적” 해석도 “법칙적” 해석도 라이프니츠의 입장에 대한 적절한 해석이 아니라고 주장하며, 공존가능성에 대한 새로운 해석을 제시한다. 그러나 나는 그들이 “법칙적” 해석에 제기한 비판이 그들 자신의 입장에도 적용된다는 것을 보임으로써, 그들의 주장을 비판할 것이다.