Individuals, Worlds, and Relations: A Discussion of Catherine Wilson's "Plenitude and Compossibility in Leibniz" (*The Leibniz Review*, Vol. 10, 2000, 1-20)

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In her stimulating article, Catherine Wilson considers the moment of worlds-making in Leibniz's philosophy. She raises the following question: "How do possible substances give rise to possible worlds?" and observes that the moment of world-making is as puzzling as it is interesting. In section 2 of her article, Wilson considers two approaches to the question. According to the first, possible individuals logically precede possible worlds and possible worlds are constituted either by combinations of possible individuals (model 1) or by mechanically checking the compossibility relations among them (model 2). This approach assumes that possible individuals are given and complete and that worlds result from their various conjunctions. On this approach, a world is a set of compossible individuals, i.e., a set of complete individuals whose co-existence is possible.

Wilson argues that these two accounts of the transition from individuals to worlds (i.e., the combinatorial model and the compossibility-checking model) are unsatisfactory. She suggests reversing the order presupposed by these models and argues that worlds logically precede individuals. "The notion of a 'world', she writes, conceptually precedes the notion of a substance,..." (*The Leibniz Review*, Vol. 10, 2000, 10). Instead of a world produced by conjoining individuals or by checking whether an already given set of individuals is compossible, Wilson suggests that individuals are produced by breaking down an already complete world. She uses the analogy of a jigsaw puzzle in which possible individual substances are broken down from a complete world. She writes: "The claim here is simply that the puzzle-piece model is the most coherent account of his creation-story, preserving most of the theses he held dear, ..." (14-15).

Wilson lists eight theses as "criteria for a Leibniz world" (1):

(1) A given substance exists in only one world.

(2) Our world is the richest and fullest of all possible worlds.

(3) Our world does not contain every possible substance.

(4) If and only if substances A...n can (all) exist together in some possible world, they are compossible.

(5) Substances A...n are compossible if and only if each perceptually represents (all) the others.

(6) If A...n are compossible, and if any element of that set is compossible with any member of the compossible set B...k, then A,B...n...k are (all)

      compossible and conversely.

    (7) Our world is morally-aesthetically optimal.

    (8) Our world is the only actual world.

Wilson recommends that we take these as constraints on a "rational reconstruc-tion" of Leibniz's creation-story. In this note, I accept these theses as constraints in a project of rational reconstruction.

    My main point of divergence is that Wilson's argument for the reversal of the order seems to me inconclusive. Specifically, I will try to respond to her main argument against the compossibility model in which God examines the compossibility relations among all possible individuals (A...n). Let us explore Wilson main (and most interesting) argument against this model:

> Suppose A happens to be the possible substance Julius Caesar, and the next substance God picks up to compossibility-test is Judas. We know *a posteriori* that Judas is compossible with Caesar, for both exist in our actual world. But is there a possible world consisting of the 2-tuple {Caesar, Judas}? There cannot be: for if Judas and Caesar exist in our world, they cannot exist in some other world too by (1). What prevents Judas and Caesar from forming a possible world "prematurely" if they are compossible? We should not suc-cumb to the temptation of rewriting (4) as a conditional, for it is in fact true that if two substances are compossible they are found together in a possible world.
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> The premature assembly of tiny worlds of compossible objects needs to be precluded by the account we give (6-7).

Wilson observes that "Such collections as {Judas,Caesar} or {Adam,Judas,Caesar} or {Adam,Judas,Caesar,CW} can only be torn-off pieces of worlds, fragments of worlds that have fallen apart, or potential parts of possible worlds" (7), and argues that, "the ideal account should show us why, in the absence of an appropriate quorum of other compossibles, two compossibles do not stick together in a world-like way" (8-9).

    This leads Wilson to suggest as much: "Perhaps the problem solved by the 'striving possibles' is not how to agglomerate, but how to fill in a given outline with pieces so that there are no gaps. This idea is expressed in Leibniz's compari-son between creation and the solution of a building or tiling-problem" (9). In following up her argument of tiny worlds, Wilson arrives at the puzzle piece-model in which "the problem of tiny, premature worlds does not arise" (10), and con-cludes: "...our world, and every possible world, is in a sense, given in advance. To make a puzzle, we start with a photograph or drawing, glue it to a backing and then

cut it up with a jigsaw. And this, I submit, is what Leibniz's theory of the striving possibles comes to" (10).

In what follows I will try to present an alternative model in which the problem of the premature assembly of tiny worlds of compossible individuals may be also precluded. In my view, Wilson rightly focuses our attention on the crucial moment of world-making in Leibniz's philosophy. I think that this moment can be better captured in terms of the relations between possible individuals and possible worlds. This terminology is more appropriate since it makes clear that the picture of "possibles striving for existence" is somewhat misleading to the extent that it implies that there may be a direct mechanical transition from possible individuals to the actual world. Rather, an actual world presupposes all possible worlds, which precede God's choice of the morally best world. This is one of the central points in Wilson's article and I will take it for granted in this note.

I would like to focus on the subtle relations between possible individuals and possible worlds, or, more specifically, on Wilson's claim (b) that "individual substances presuppose completed worlds" (1). I wish to point out that, in suggesting the reversal of the order, Wilson overlooked an interesting alternative. It appears to me that the "production" of possible worlds from possible individuals can be described in terms of a model which is plausible, although difficult to articulate. In this note, I wish to draw a rough and preliminary sketch. Developing this model would, curiously enough, leads to the conclusion that the question of logical precedence (between possible individuals and possible worlds) is somewhat misleading. Even more curiously, the model leads to partial agreement with Wilson's conclusion that "individual substances presuppose completed worlds" (1).

The model I have in mind focuses on the relations between possible individuals and attempts to construct possible worlds as results of such relations. More precisely, it focuses on the moment when relations among *in*complete individuals, which include only monadic properties, are constituted. As it turns out, this model lends support to the conclusion that complete possible individuals and possible worlds are mutually dependent or, in other words, that possible worlds and *complete* individual concepts are mutually constitutive. This conclusion is based on the view that *complete* individuality can only arise in the context of the complex net of relations with other possible individuals.

In order to clarify the notion of a possible world, we need to carefully consider the notion of a possible individual. In the model I am trying to sketch here, one must at least distinguish between a "thin" or incomplete individual and a "thick" or complete individual. Whereas the former consists of only monadic predicates,

the latter involves relational predicates as well. I stress the word 'complete' because in this model incomplete concepts of individuals do precede worlds, although complete concepts of individuals do not; rather, complete concepts, as well as possible worlds, result from the relations among incomplete concepts of individuals. That is to say, incomplete concepts of individuals are required for world-formation and worlds (viewed as compossible sets of such individuals) are required for the formation of complete individuals. Thus the completion of individuals' concepts through the emergence of inter-individual relations also constitutes possible worlds. This explains why the question of logical precedence is somewhat misleading.

Given the distinction between incomplete and complete concepts, we can begin the creation story from incomplete possible individuals. The relations among possible individuals arise "when" God considers all possible incomplete individuals in his mind. At the moment when God considers all possible individuals simultaneously, their inter-relations arise in his mind. As a partial illustration, suppose God considers the numbers 3 and 4 at the same time. At that moment, the relation '3 is smaller than 4' (among others) arises in his mind. The simultaneous consideration of the relata gives rise to relational truths (such as '3 is smaller than 4').

The consideration of all incomplete individuals by God results in the constitution of the whole logical space of possibilities in God's mind. Each possible individual, consisting of only monadic predicates, may be seen as a possibility per se, that is, something which on purely logical grounds may exist, while all possible individuals taken together make up the whole space of possible things. Once God considers them all in one thought, their interrelations emerge.

Let me attempt to describe this complex moment in another way: the moment "after" God forms all incomplete (monadic) concepts of individuals in his mind, he considers them (all) simultaneously in one thought. The co-consideration of all individuals constitutes the whole logical space, that is, the space of all possible things; however, it constitutes something more as well, namely, the way in which they are *related* to one another. Hence, in this moment, the space of logical possibilities (per se) serves as the basis for the relations among them (and for the relational propositions describing them). In this logical space, each incomplete individual already occupies a unique "place". Such a unique "place" is fixed by the non-uniform system of relations among the (incomplete) individual concepts. A unique place for each individual is ensured by virtue of the fact that each incomplete concept is unique and therefore its relations to other individuals cannot be identical.

This view is consistent with Leibniz's theory of relations as persuasively presented by Mugnai. Mugnai argued that Leibniz considered relations to be the consequences of considering (at least) two relata at the same time. A relation results when two (or more) separate elements are considered together and united in thought—what Leibniz calls a *concogitabilitas*. For example, by relating two points, a line may result; by relating several stars, a constellation may result; by comparing two magnitudes, relations such as "bigger than", "smaller than" and "the same as" may result. Similarly, many complex relations between two incomplete individuals may arise in God's mind when he considers them simultaneously.

As already noted, the moment when all the monadic individuals are considered simultaneously has great significance: Once the relations among individuals are conceived in God's mind, the compossibility relations among all individuals emerge as well. In turn, once the compossibility relations among the individuals are conceived, possible worlds are in effect formed. Recall that according to the standard interpretation, worlds are compossible sets of possible individuals. This approach thus allows us to begin with incomplete individuals and, by considering the relations among them, arrive at possible worlds.

However, as Wilson argues, the compossibility relations do not result from a mechanical procedure that processes all individuals; rather it requires some sort of intellectual perception by an infinite mind of all relations among possible individuals.

Furthermore, once the relations among all individuals are constituted, their (monadic) individuality can be completed. By virtue of their place in logical space and their simultaneous consideration, incomplete individuals acquire, so to speak, relational predicates that express their relations to other individuals. Such relational predicates "complete" the monadic concepts and allow them to "achieve" full individuality. Let me attempt to illustrate how relations complete the individuality of individual concepts. Consider Arnauld's famous example of the concept of Adam. The concept of Adam is related to Eve as the father of her children, to the Garden of Eden, and to the other human individuals in the world as the first among them. Any concept which is not related to the concept of Eve, the Garden of Eden and to other human individuals in this way is not the concept of Adam; it is the concept of a different individual who has a different posterity and belongs to a different possible world. Leibniz states clearly that in order to distinguish the concept of Adam from other "possible Adams", one has to specify the particular names of other individuals (e.g., Eve), places (e.g., the Garden of Eden) and particular circumstances to which it is related and which "complete its individuality"

("autre circonstances qui achévent l'individualité").

Similarly, Leibniz states that God did not choose to create an "Adam vague", that is, an indefinite notion of Adam which entails only general characteristics (conceived *sub ratione generalitatis*). Rather, God chose to create a specified and well-defined notion of Adam. As a candidate for creation, that is, as a possible individual, the content of an individual notion is entirely specified and fixed. In our context, the notion of an individual is specified and determined precisely by its relations with other possible individuals and particular events. According to this view, relations to other (incomplete) individuals play a constitutive role both in forming worlds and in completing the individuality of possible individuals.

This point may allow us to respond to Wilson's powerful argument for the precedence of worlds over individuals. Wilson argues that if one assumes that worlds are formed by conjoining individuals, it is not clear why subsets of compossible individuals, such as the set {Adam, Eve}, do not form a world. We can now offer the following answer. If the names Adam and Eve are seen as referring to complete individuals, then their very individuation requires the concepts of other individuals with which they are related, such as their descendents. However, in that case, these individuals must be included in the same world. For example, Adam's sons figure in his complete concept as determining some of its essential predicates (such as paternity). Hence, the subset {Adam, Eve} cannot form a world.

If, on the other hand, 'Adam' and 'Eve' do not refer to complete individuals but only incomplete ones or possibilities *per se*, then surely they are not even candidates for being constituents of a world since worlds require at least compossibility relations (and perceptual representation) among individuals. In addition, if 'Adam' and 'Eve' are seen as incomplete (i.e. relationless) individuals, they cannot be anything like the complete individuals which these names refer to.

In the model I am attempting to outline here, relations with other individuals are constitutive of the very concepts of individuals. Boldly put, an individual is not fully individuated unless its relations to all other individuals are considered. A partial set of compossible individuals, e.g. {Adam, Eve}, does not form a world since the names Adam and Eve cannot refer to complete individuals. Only a set formed by considering all the relations among all possible individuals can be considered a world. Such a world is a set which satisfies compossibility relations which, upon creation, translate into perceptual relations among existing substances.

As it turns out, our model partly confirms Wilson's main point that worlds precede individuals. However, if the model is adequate, Wilson's point must be qualified in that it only applies to complete individuals. In any event, the point is better

stated as a thesis of mutual constitution between complete individuals and possible worlds. The issue of how an individual concept is formed and completed requires separate treatment. The point I have tried to make here is that the "moment" of world-making can be described according to an alternative model. I have tried to show that there is another option worth considering before concluding that a world logically precedes individuals. Hopefully, I have shown that we can gain some insight into the question of world-making by focusing on the crucial role that relations between incomplete concepts of individuals play in the construction of possible worlds and in completing the individuality of monadic individual concepts.

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Notes

[1] I do not deal with Wilson's second question, "How does one of the worlds become the actual world" and her claim that there may be a plurality of actual worlds.

[2] Technically, there may be a way of addressing the issue by modifying the notion of possible world as a maximally compossible set of possible individuals. But there is a deeper issue here that I want to bring out.

[3] Even if it is doubtful that one could develop conclusive arguments as to whether individuals precede worlds or vice versa.

[4] The need for and usefulness of such a distinction has been noted by several commentators. For example, G. Brown in his "Compossibility, Harmony, and Perfection in Leibniz", *The Philosophical Review*, Vol. 96, (apr., 1987), 184. This distinction has been also extensively discussed in Cover and Hawthorne, *Substance and Individuation in Leibniz*, Cambridge University Press, 1999 (which is reviewed and discussed in vol. 10 of *The Leibniz Review*).

[5] For some elaboration of this point, see my paper "The Individual's Place in the Logical Space: Leibniz on Possible Individuals and their Relations", (*Studia Leibnitiana*, Band XXX/2 1998, pp.161-177).

[6] In fact, I believe the story actually begins a moment 'earlier' when such thin concepts are formed in God's mind. I attempt to develop this point in my paper

"Leibniz on Possible Individuals".

[7] *Leibniz's Theory of Relations*, Studia Leibnitiana Supplementa 28 (Stuttgart: Franz Steiner Verlag, 1992).

[8] "A relation is an accident which is in several subjects and is only a result or supervenes with no change made on their part if several things are thought at once; it is *concogitabilitas* " (C 74r, 1679). "A relation is the *concogitabilitas* of two things" (C 35, June 1679). "A relation is that according to which [secundum quod] two things are thought of at once" (C 47, April, 1679). Translation from Benson Mates, *The Philosophy of Leibniz* , Oxford,1986, pp. 222-6. This should not be confused with a psychological operation. Although it requires a mind (and, in this sense, is mental), it pertains primarily to God's mind—a perfect and all-knowing mind. In any event, this operation is in no way private.

[9] Georges Le Roy ed., *Leibniz, Discours de métaphysique et correspondance avec Arnauld*, Paris: Vrin 1993, (108).

[10] Ibid. 108.

[11] Ibid. 87.

[12] Ibid. 116.

[13] For another vivid illustration, see Leibniz's response to Arnauld's claim that, whether he marries or not does not affect his identity.