

**VIRTUAL RELATIONS vs. VIRTUAL UNIVERSALS:  
Essay, Comments, and Reply**

**Dale Jacquette**

**Department of Philosophy  
The Pennsylvania State University  
University Park, PA 16802  
dlj4@psu.edu**

**William J. Rapaport**

**Department of Computer Science  
and Center for Cognitive Science  
State University of New York at Buffalo  
Buffalo, NY 14260  
rapaport@cs.buffalo.edu  
<http://www.cs.buffalo.edu>**

**Abstract**

This document consists of three papers: “Virtual Relations”, by Dale Jacquette; a reply, “Virtual Universals”, by William J. Rapaport; and “A Note in Reply to William J. Rapaport on Virtual Relations”. They were originally presented at the Marvin Farber Conference on the Ontology and Epistemology of Relations, SUNY Buffalo, 17 September 1994. This document is SUNY Buffalo Center for Cognitive Science Technical Report 95-10.

## VIRTUAL RELATIONS

Dale Jacquette

Department of Philosophy  
The Pennsylvania State University  
University Park, PA 16802

dlj4@psu.edu

### 1 THE ONTOLOGY GAME.

The metaphysics of relations is decided by an ontology game. It is a game with an impressive history. The play begins with the Presocratics, but gains prominence especially in Plato's theory of Forms and Aristotle's concept of the inherence of secondary substance in primary substance.<sup>1</sup> Again, a similar dispute arises in the medieval period in the realism-nominalism debate, in the empiricist repudiation of the rationalist notion of abstract general ideas during the Enlightenment, and more recently in investigations of ontological commitment to universals by Russell, Quine, Goodman, Armstrong, Wolterstorff, and others.<sup>2</sup>

That there are game-like features in attempts to determine the ontology of relations is apparent in the interchange between opposing views. Each participant alternatively adopts the role of player, spectator, referee, and self-appointed rules committee. Those engaged in disputes about the ontic status of relations can be seen as following a limited set of rules, on the basis of which they win or lose ground against one another, with nothing to decide the truth of the matter except successful or unsuccessful performance according to the evolving rules. More so than in other areas of philosophical disagreement, in problems about the ontology of abstracta, there seem to be goals and strategies, and a concept of winning, in which one ontological position emerges as victorious over its opponents. The questions whether there are relations as opposed to relational properties, whether properties or relations are universals as opposed to particulars, and whether if properties or relations are universals they are existent, subsistent, or have some other ontic status, are among the main stakes for which the ontology game is played. To call this philosophical activity a game, moreover, by no means detracts from its philosophical seriousness or importance.

---

<sup>1</sup>See David Ross, *Plato's Theory of Ideas* (Oxford: The Clarendon Press, 1961), for an excellent discussion of Plato's theory and Aristotle's criticisms. Plato's formulation of the 'secret doctrine' of Protagoras in *Theaetetus* 152c–153d reverses the usual reduction of relations to qualities by holding that qualities do not obtain absolutely, but only in relation to a perceiver. Aristotle, *Categories* 7.

<sup>2</sup>An account of the medieval dispute over the ontology of properties and relations is presented by Meyrick Heath Carré, *Realists and Nominalists* (London: Oxford University Press, 1946), and Mark G. Henninger, *Relations: Medieval Theories 1250–1325* (Oxford: The Clarendon Press, 1989). George Berkeley, *Three Dialogues Between Hylas and Philonous*, *The Works of George Berkeley Bishop of Cloyne*, edited by A. A. Luce and T. E. Jessop (London: Thomas Nelson & Sons, 1949), Vol. II, pp. 192–194; *A Treatise on the Principles of Human Knowledge, Works*, Vol. II, pp. 29–45. David Hume, *An Enquiry Concerning Human Understanding* [1748], in *David Hume: Enquiries Concerning Human Understanding and Concerning the Principles of Morals*, edited by L. A. Selby-Bigge, 3rd ed. revised by P. H. Nidditch (Oxford: The Clarendon Press, 1975), pp. 154–155. Hume, *A Treatise of Human Nature* [1739–1740], edited by Selby-Bigge, 2nd ed. revised by Nidditch (Oxford: The Clarendon Press, 1978), p. 17. Extensive bibliographies of more recent treatments of the problem, especially by recent and contemporary philosophers, are found *inter alia* in D. M. Armstrong, *A Theory of Universals: Universals and Scientific Realism*, vol. 2 (Cambridge: Cambridge University Press, 1978); Michael J. Loux, editor, *Universals and Particulars: Readings in Ontology* (New York: Doubleday & Company, Inc., 1970); Nicholas Wolterstorff, *On Universals* (Chicago: The University of Chicago Press, 1970).

It is inevitable perhaps that the ontological issues about abstract entities should be determined on the basis of gamesmanship. For there is arguably no empirically verifiable fact of the matter that would settle any of these questions about the ontic status of properties, relations, and other abstract ontology candidates. The ontology game is successfully played by the metaphysician who offers an ontic categorization of the parts of speech in terms of which scientific theories are constructed. To be successful, the categorization must best accommodate and make sense of the truths these theories are believed to convey, with the best compromise of the sometimes conflicting constraints of ontological economy and explanatory simplicity. There is a hierarchy of different levels of strategy at which the ontology game is played. It is possible to favor one set of ontic categorizations over another at the lowest level of play by offering an interpretation at a higher level of what scientific theories are to be included for consideration, what scientific facts are really expressed by accepted scientific theories, what is to count as doing justice to the facts expressed by accepted scientific theories, and what is to count as ontological economy or explanatory simplicity. All of these aspects of the problem are relevant to the metaphysics of relations, and all are up for grabs in the ontology game.

## 2 RUSSELL'S ARGUMENT FOR RELATIONS AS UNIVERSALS.

We can see the ontology game masterfully played by Russell in his efforts to prove the existence of universals. There is a compact statement of his realist position in his book, *The Problems of Philosophy*. In Chapter IX, 'The World of Universals', Russell begins by claiming that a proof for the existence of universals must establish the existence of relations rather than qualities:

As a matter of fact, if any one were anxious to deny altogether that there are such things as universals, we should find that we cannot strictly prove that there are such entities as qualities, i.e. the universals represented by adjectives and substantives, whereas we can prove that there must be relations, i.e. the sort of universals generally represented by verbs and prepositions.<sup>3</sup>

Russell then offers a two-part argument. If we try to do without universal qualities, we must do so by nominalizing resemblances as holding between multiple particulars. But to do this is to recognize universal resemblance relations, so that despite ourselves the nominalization of qualities commits us to the existence of relations as universals. Russell then opens the floodgates, concluding that, having admitted relations as universals, the advantage of explanatory simplicity outweighs that of ontological economy obtained by barring other universal relations and qualities from ontology. The heart of Russell's proof is this:

If we wish to avoid the universals whiteness and triangularity, we shall choose some particular patch of white or some particular triangle, and say that anything is white or a triangle if it has the right sort of resemblance to our chosen particular. But then the resemblance required will have to be a universal. Since there are many white things, the resemblance must hold between many pairs of particular white things; and this is the characteristic of a universal. It will be useless to say that there is a different resemblance for each pair, for then we shall have to say that these resemblances resemble each other,

---

<sup>3</sup>Bertrand Russell, 'The World of Universals', *The Problems of Philosophy* [1912] (New York: Oxford University Press, 1959), Chapter IX, p. 95.

and thus at last we shall be forced to admit resemblance as a universal. The relation of resemblance, therefore, must be a true universal. And having been forced to admit this universal, we find that it is no longer worth while to invent difficult and implausible theories to avoid the admission of such universals as whiteness and triangularity.<sup>4</sup>

To further emphasize the importance of the existence of relations as the thin edge of the wedge that opens ontology to universals generally, Russell links his criticism of the ineffectiveness of quality nominalism in avoiding universals altogether to what he perceives as the failure of Berkeley's and Hume's strategy to eliminate abstract general ideas. He adds:

Berkeley and Hume failed to perceive this refutation of their rejection of 'abstract ideas', because, like their adversaries, they only thought of *qualities*, and altogether ignored relations as universals. We have therefore here another respect in which the rationalists appear to have been in the right as against the empiricists, although, owing to the neglect or denial of relations, the deductions made by rationalists were, if anything, more apt to be mistaken than those made by empiricists.<sup>5</sup>

Russell's proof trades crucially on some unexamined metaphysically controversial presuppositions. He takes it for granted that there is a real distinction between qualities and relations, so that although qualities in principle are dispensable in playing the ontology game, resemblance relations are not, but are brought back in a self-defeating manner by the very effort to do without universal qualities. He also takes it as a matter of course that qualities and relations as universals can only explain the meaning of substantives, adjectives, prepositions, and verbs, if universals exist (or subsist, have real abstract or nonspatiotemporal being).

So many philosophical problems are raised by Russell's argument, that it will be worthwhile, because of its historical and tactical importance in the relations ontology game, to examine these two implicit assumptions in the overall structure of Russell's proof in more detail. This critical discussion will set the stage for the sketch of an alternative ontically neutral model of what I shall refer to as virtual relations.<sup>6</sup>

---

<sup>4</sup>Ibid., pp. 96–97.

<sup>5</sup>Ibid., p. 97. See also Russell, "On the Relations of Universals and Particulars", *Proceedings of the Aristotelian Society*, 12, 1911–12, pp. 1–24.

<sup>6</sup>Russell's pronouncements about the British empiricists having ignored the theory of relations in favor of concepts of qualities are misleading in the extreme. To consider just Hume's *Treatise*, there is such an extensive treatment of the concept that the analytical index for 'Relation' in the Nidditch edition runs to two full pages in small print. It is worth remarking that Hume's rejection of universals is not directed exclusively toward unary qualities or properties, but, p. 17, toward 'abstract or general ideas' without further qualification. It is at least conceivable that Hume regarded the distinction between qualities and relations as superficial, and therefore subsumable and subject to the same criticisms under the same category. Alexius Meinong wrote his *Habilitationsschrift* at the University of Vienna, the *Hume-Studien I, II*, respectively on Hume's nominalism and theory of relations. See *Alexius Meinong Gesamtausgabe*, 8 volumes, edited by Rudolf Haller and Rudolf Kindinger in collaboration with Roderick M. Chisholm (Graz: Akademische Druck- u. Verlagsanstalt, 1969–1978) (hereafter, *Gesamtausgabe*), I, II. An English translation is given by Kenneth Frank Barber, *Meinong's 'Hume Studies': Translation and Commentary*, Ph.D. thesis, The University of Iowa, 1966 (Ann Arbor: University Microfilms, Inc., 1967). See also, Barber, "Meinong's Hume Studies, Part I: Meinong's Nominalism; Part II: Meinong's Analysis of Relations", *Philosophy and Phenomenological Research*, 30, 1970, pp. 550–567; 31, 1971, pp. 564–584.

### 3 RELATIONS AND RELATIONAL PROPERTIES.

If relations as universals were not needed at least in trying to explain away qualities as universals, Russell believes, there could be no proof of the existence of universals. This commits him to a sharp distinction between qualities and relations.<sup>7</sup>

There are many variations in technical terminology for the development of ontology. Perhaps the most common way of speaking about properties is to divide them into unary qualities, in which a property predicate with a single argument place attaches to a single occurrence of a single object term, and n-ary relations, in which a property predicate with at least two argument places holds between at least two terms or occurrences of a term for an object or objects. Alternatively, properties and qualities are sometimes equated, as distinct from relations. The point by either convention is that quality or property terms hold of one object only, while relations hold between two or more distinct terms or occurrences of a term for an object or objects. The clause by which the number of occurrences of terms is used to distinguish qualities or properties from relations allows identity among other genuine relations that hold between an object and itself. The distinction between quality or property and relation is thus characterized by their distinct linguistic, including formal logical, expressions. Qualities or properties are formulated by attaching a one-argument predicate term to no more than a single object term; relations in their formulation require more-than-one-argument predicate terms to be attached to a corresponding number of occurrences of object terms.

Russell's opening play in the round of the ontology game he describes shares in the benefits and risks that generally accrue in drawing ontic conclusions from linguistic evidence. Here the difficulty is that predicate terms requiring more-than-one-argument-place (hereafter, n-ary predicate terms) are not an essential feature of some languages, but can be reduced in every ostensible application by devices well-known to Russell to one-argument place (hereafter, unary) predicate terms. This is accomplished in certain formalisms by abstraction principles.<sup>8</sup> But the same effect can be reproduced without special symbolic operators in ordinary languages. Here is an informal example. Consider the unary predication of a quality or property to a single object, Albrecht is German, and the n-ary predication of a putative relation to two distinct objects designated by two distinct object terms, Albrecht is taller than Beatrice. The putative relational predication is reducible even in ordinary discourse to the unary predication of a more complexly formulated quality or property to a single object. This occurs when we say for example that Albrecht has the quality or property of being-taller-than-Beatrice, or, less euphonically, of being Beatrice-taller, and that Beatrice has the quality or property of being-shorter-than-Albrecht, or of being Albrecht-shorter.<sup>9</sup>

The same counterplay in the ontology game can obviously be made for any relation whatsoever. (Paradox-contravening restrictions are sometimes imposed on the inferences validly derivable from certain diagonal constructions familiar to mathematical logicians that can be formulated by this procedure, like the self-applicational unary Liar-predication, being-false-of-itself.)<sup>10</sup> For Rus-

<sup>7</sup>See Russell, 'A Priori Knowledge', *The Problems of Philosophy*, Chapter VIII, pp. 89–90.

<sup>8</sup>Russell and A. N. Whitehead make use of a similar reductive device in *Principia Mathematica*, 2nd ed. (Cambridge: Cambridge University Press, 1927), Part I, Section D, 'The Logic of Relations', in his theory \*30 of descriptive functions. A theory of abstraction is offered by Alonzo Church, *The Calculi of Lambda-Conversion* (Princeton: Princeton University Press, 1941).

<sup>9</sup>The distinction invoked here is similar to that often drawn between relations and relational properties.

sell's argument in support of the existence of relations as universals, the implications are clear. If it is true, as Russell maintains, that there is no decisive proof for the existence of unary qualities or properties as universals, but only of n-ary relations, if the argument for the existence of n-ary relations rests on the linguistic evidence of the distinction between unary quality or property and n-ary relation predications, and if the linguistic distinction between unary quality or property and n-ary relation predications is superficial, so that any n-ary relation predication is reducible to a unary property or quality relation, then there is equally no decisive proof for the existence of unary qualities or properties as universals, and hence no decisive proof for the existence of universals.

To make the objection more concrete, consider its implications for Russell's argument. The proof states that if we apply Berkeley's and Hume's method of eliminating abstract general entities from ontology, then we must regard every instance of a quality or property nominally as belonging to a single category by virtue of certain resemblances between particulars. These resemblances are then ineliminable relations that add universals irreducibly to the ontology. If we have white triangle A and white triangle B, both are white triangles according to Berkeley and Hume because they resemble one another sufficiently in the color and shape sensations they produce in observers to merit a common nominalization of these particular features. This is a reductive move in the ontology game. Russell now counters that the resemblance between the particular whiteness of particular A and the particular whiteness of particular B is a universal relation that is also instantiated by white triangle C, so that the higher-order resemblance between A and B is also universally instantiated by A and C and B and C.

Now it might be objected right from the outset that the precise way in which A resembles B, B resembles C, and A resembles C, need not be the very same, no more than the whiteness or triangularity of A need be the very same as the whiteness or triangularity of B or the whiteness or triangularity of C. Indeed, if A has a slightly different shade or hue of whiteness, and a different triangularity than B or C (milk, eggshell, Attic white; scalene, isosceles, obtuse), then the resemblances between these three objects should also be proportionately different, and hence, though the three particulars resemble each other, they do not resemble each other in precisely the same way, but each in somewhat different particular ways. To see this, we need only recall that resemblances among contingently existent things are intransitive. If A resembles B in some predicationally relevant respect, and B resembles C, etc., and Y resembles Z, it does not follow that A resembles Z in that same predicationally relevant respect. The minor differences between particulars can be amplified successively in tiny increments until the first element in the series no longer relevantly resembles sufficiently remote elements.

Must the still higher-order resemblance between different particular resemblances be universal, as Russell concludes? Why? Why not allow an indeterminate ascent of different particular resemblances among different particular resemblances? Russell seems to think that his regress of particular resemblance relations will wear us out after two or three steps, and we will have to admit that there are universal relations. But I see no reason why the regress cannot continue indefinitely without involving universal relations at any stage. Russell's argument is invalid. Not only do we not need to postulate universals on the basis of his proof, but it is better not to—the world is much more particular than our simplifying, unifying, categorizing thought about it. If our concept

---

<sup>10</sup>If we begin with the abstract,  $Z = \lambda x[\sim(xx)]$ , and the abstraction equivalence principle  $(\forall y)(\lambda x[\dots x\dots]y \equiv (\dots y\dots))$  holds, then from  $ZZ \vee \sim ZZ$ , it follows that  $ZZ \& \sim ZZ$ . To avoid diagonalizations of this kind and forestall logical paradox without invoking type theory, restrictions of various kinds are sometimes placed on abstraction equivalence.

is that the degree of resemblance between particulars is sensitive to the similarity or difference between resemblant particulars, then if the particulars at the origin of the hierarchy are not precisely identical, the differences between them should ripple from the *inferiora* bottom of the resemblance hierarchy throughout to the *superiora* top, never once permitting an exact identity of resemblances among anything but *per impossibile* exactly identical particulars.<sup>11</sup>

Instead of positing the resemblances between A, B, and C, as universal n-ary relations, they might rather be understood reductively in the way I have just explained, as particular unary qualities attaching singularly to A, B, and C. Thus, in place of saying that universal relation R holds between A, B, and C, or even between A and B, A and C, and B and C, we can say that particular A has the particular unary quality of resembling-B, and the distinct particular unary quality of resembling-C. Similarly for particular B's having the particular unary quality of resembling-A, and the particular unary quality of resembling-C, and the particular C's having the particular unary quality of resembling-A and the distinct particular unary quality of resembling-B. Trumping Russell's ontology game strategy, we streamline commitment to existent entities further than he anticipates by rejecting the linguistic justification for positing resemblance relations as distinct from qualities, which he claims are eliminable.

We should expect that resemblances between contingently existent things will not be precisely identical, and hence not universal. This does not prevent us from speaking of them for convenience in loose and popular expression as identical, or of multiple sets of particulars as being resemblant in the very same way. There are too many differences and kinds of differences among contingent entities for selections of more than two of them to identically resemble each other. The resemblances between necessary, ideal or abstract entities might be precisely identical, and hence universal. But resemblances between ideal or abstract entities cannot be advanced without begging the question against critics like Berkeley and Hume, who consistently with the principles of their radical empiricism oppose the existence of any abstract general ideas or entities. Russell quite reasonably proposes to open the floodgates to universals useful in explanations generally only after he has proved the existence of relations as universals. But unless or until his argument succeeds, he has no basis for admitting abstract entities into a preferred ontology. The result is that in either case we are not forced to accept Russell's argument for the existence of universal n-ary relations, which he claims is the only possible proof for the existence of universals.<sup>12</sup>

#### 4 REFERENCE TO AND EXISTENCE OF RELATIONS.

There is another vulnerable presupposition in Russell's argument. Russell assumes that only existent objects can be referred to or enter into true explanations. To speak of irreducible relations for Russell is automatically to be committed to their existence. At least some universals exist according to his view if we must refer to universal resemblance relations in order to explain qualities as nominalizations of resemblances among particulars.

The idea that reference entails existence is characteristic of an extensionalist semantics. Russell after the publication in 1905 of 'On Denoting' was well-entrenched in extensionalism. The theory of names as incomplete symbols to be replaced by definite descriptions, and the analysis of definite descriptions in terms of a triad of conditions including existence, uniqueness, and pred-

---

<sup>11</sup>The *inferiora-superiora* terminology derives from Meinong's theory of relations as objects of higher order. See his *Über Gegenstände höherer Ordnung und deren Verhältnis zur inneren Wahrnehmung*, Gesamtausgabe, II.

<sup>12</sup>Russell, 'The World of Universals', p. 95.

ication, leaves no possibility for referring to nonexistent objects by name or description.<sup>13</sup> This position marks Russell's rejection of Meinong's object theory, in which reference to and true predication of properties to existent as well as nonexistent objects is authorized by an intentionalist domain comprehension principle. Thought is free to assume whatever it likes, and thereby to intend existent spatiotemporal objects, subsistent abstract objects, and contingently nonexistent and even ontically impossible objects, including the notorious golden mountain (an example borrowed by Meinong from Hume, who in turn borrowed it from Berkeley) and round square. Meinong holds that we can think about and refer in thought and language to the golden mountain and round square, just as we can think about and refer linguistically to golden entities and mountains that happen to exist, like the so-called mask of Agamemnon and Mt. Aetna. The golden mountain for Meinong is truly golden and a mountain, and the round square truly round and square. It is because the round square is both round and square, that the round square cannot exist, but is an impossible object.<sup>14</sup>

The criticism of Russell's argument for the existence of relations as universals need not involve a full-scale defense of a Meinongian as opposed to a Russellian extensionalist semantics of reference and predication.<sup>15</sup> It should be enough to indicate that Russell's proof is indecisive if there is at least one coherent semantic theory that permits reference to and true predication of properties to nonexistent objects. Then it does not follow logically from the mere fact that we may find it necessary or expedient to refer to n-ary relations, such as universal resemblances as opposed to unary qualities or properties, that therefore universal resemblances exist (or subsist, or in some sense have being). If a nonextensionalist account of reference and true predication is at least logically possible, it follows immediately that we can refer to and truly predicate properties even of universal relations, including n-ary resemblance relations, without implying that universal resemblance or any other relations exist. Russell's argument is inconclusive if there is no contradiction in the proposition that nonexistent n-ary resemblance relations can be referred to and truly have whatever properties are needed for the nominalist elimination of universal unary qualities.

The criticism of Russell's argument is bolstered by objections to the adequacy of his rejection of Meinong's object theory, and of the theory of definite descriptions which he offers as an alternative extensionalist semantic theory of reference and true predication. The literature already contains philosophical attacks against Russell's theory of definite descriptions as unsatisfactory on its own terms, as well as sophisticated efforts to advance Meinongian logics and semantics that contradict Russell's theory of definite descriptions.<sup>16</sup> If it is at least logically possible for either one of these projects to succeed in rejecting the extreme extensionalism of Russell's theory of definite descriptions, or in promoting a Meinongian intentionalist theory in which reference to and true

---

<sup>13</sup>Russell, "On Denoting", *Mind*, 14, 1905, pp. 479–493; rpt. in *Logic and Knowledge: Essays 1901–1950*, edited by Robert C. Marsh (New York: G. Putnam's Sons, 1956), pp. 41–56, all references to this edition. See especially pp. 45–47.

<sup>14</sup>The best exposition of Meinong's object theory is J. N. Findlay, *Meinong's Theory of Objects and Values*, 2nd ed. rev. (Oxford: The Clarendon Press, 1963). Meinong, "Über Gegenstandstheorie", in Meinong, editor, *Untersuchungen zur Gegenstandstheorie und Psychologie* (Leipzig: Verlag von Johann Ambrosius Barth, 1904), pp. 481–530. See also Gustav Bergmann, *Realism: A Critique of Brentano and Meinong* (Madison: University of Wisconsin Press, 1967).

<sup>15</sup>I offer this kind of criticism in Dale Jacquette, *Meinongian Logic: The Semantics of Existence and Nonexistence*, forthcoming.

<sup>16</sup>See Nicholas Griffin, "Russell's Critique of Meinong's Theory of Objects", *Grazer Philosophische Studien*, 25–6, 1986, pp. 375–401. Janet Farrell Smith, "The Russell–Meinong Debate", *Philosophy and Phenomenological Research*, 45, 1985, pp. 305–350. For a recent discussion of Meinongian approaches to reference and predication theory, see Kenneth J. Perszyk, *Nonexistent Objects: Meinong and Contemporary Philosophy* (Dordrecht: Martinus Nijhoff, 1993).



predication of properties of nonexistent objects, then Russell's proof for the existence of universal relations is logically invalid.

This is not the place to enter into these matters in great detail. Suffice it to say that Russell's theory of definite descriptions fails in application to true predications of properties like being mythological to definitely described objects like the flying horse. The theory requires that the flying horse exist in order to have the property of being mythological truly predicated of it. The recent resurgence of interest in Meinongian logic and semantics testifies at least to the perception on the part of a number of competent logicians that a Meinongian theory in which reference to and true predication of properties to nonexistent objects is logically possible. This in turn implies that Russell's argument for the existence of relations as universals at most proves, not that relations as universals necessarily belong to an ontology of existent or subsistent entities, but at most that the nominalist attempt to do away with unary qualities or properties commits us to referring to and truly predicating properties of existent or nonexistent universal relations that may either belong to an ontology of existent or subsistent entities, or to an extraontology of nonexistent nonsubsistent Meinongian objects entirely lacking in being.<sup>17</sup>

If an alternative to Russell's extreme extensionalist theory of reference and predication is available, as appears to be the case, we cannot validly infer the existence, subsistence, or being of relations as universals from the mere fact that in certain theoretical contexts we must refer and truly predicate properties of universal relations. For all that Russell says in playing the ontology game, we can do without universal relations entirely. There are at least these two possibilities. We can limit ourselves exclusively to particular unary qualities or properties, or we can allow ourselves the luxury of nonexistent, nonsubsistent, or beingless unary qualities or properties and n-ary relations, to which, as Meinongian intended objects, we can nevertheless refer as subjects of true predications.<sup>18</sup>

## 5 ONTIC NEUTRALITY AND EPISTEMIC LIMITATIONS.

It is convenient to think and speak of relations. The reduction strategy by which n-ary relations are reduced to unary relational qualities or properties is cumbersome. Yet arguably it is no more unwieldy than many similar kinds of reductions in linguistic philosophy and philosophical logic, including Russell's analysis of definite descriptions. If we can say what we need to say about the properties of things without formulations involving ineliminable and irreducible n-ary relational predicates, then we can take advantage of the convenience of expressing some properties by means of n-ary relation terms without thereby incurring ontological commitment to relations as existent or subsistent universal entities.

The ontology game is successfully played by presenting an adequate account of the metaphysics of property attributions that, among available alternatives, maximizes both ontic economy and explanatory simplicity. As the game is often played, an extensionalist semantics is presupposed,

---

<sup>17</sup>I develop this criticism of Russell's theory of definite descriptions in greater detail in my article on "Definite Descriptions", in the *Handbook of Metaphysics and Ontology*, edited by Hans Burkhardt and Barry Smith (Munich and Vienna: Philosophia Verlag, 1991), pp. 201–202. See also Jacqueline, "A Meinongian Theory of Definite Description", *Axiomathes*, forthcoming.

<sup>18</sup>Meinong, *Über Annahmen*, 2nd ed. [1910], *Alexius Meinong Gesamtausgabe*, IV, p. 229 (my translation); see also p. 237. Meinong, *Über Gegenstände höherer Ordnung und deren Verhältnis zur inneren Wahrnehmung*, *Gesamtausgabe*, II, pp. 382–383; *Sach-Index zur Logik und Erkenntnistheorie*, *Gesamtausgabe*, VIII (*Ergänzungs Band*), pp. 61–63.

as in Russell's argument for the existence of relations as universals. Russell finds it necessary to include reference to relations even in the attempt to eliminate reference to qualities, and concludes that reference to relations implies their existence. But both parts of Russell's proof have been shown to be inconclusive. We have seen that n-ary relations need not be posited in addition to unary qualities or properties. If Russell is right in asserting that there is no decisive proof for the existence of unary qualities or properties, then there is no decisive proof of the existence of any universals whatsoever. Furthermore, the extensionalist presupposition of Russell's argument is subject to dispute by virtue of the conceivability of nonextensionalist semantics for the reference and true predication of properties to nonexistent objects. From this standpoint, even if Russell had soundly demonstrated the need to include reference and true predication of properties to n-ary relations as universals, it still would not follow that relations must be admitted into the ontology. Relations might instead be nonexistent objects to which reference and true predication of properties, such as relating resemblant white triangles A, B, and C, are nevertheless possible. In a nonextensionalist semantic framework, the need to refer to and truly predicate properties of an object does not imply the object's existence, subsistence, or being.

Yet in order to trump Russell's move in the ontology game, it is necessary to offer something more positive by way of an alternative account of relations. What I propose is an innovation in ontology game strategy whereby the basic goals of the game are seen as best satisfied by the most comprehensive ontically neutral metaphysics of relations. For this purpose, I shall introduce the concept of *virtual relations*. Virtual relations are mind-independent potential intended objects that serve all the referential and predicational, and therefore all the same explanatory, functions as actual universal relations in traditional extensionalist ontology. The only difference between virtual and actual relations is in their respective ontological categorizations. Virtual relations unlike actual relations need not be regarded as existent or nonexistent, but, in the language of some of the object theorists of the turn of the century, they can be understood instead as pure potential intended objects beyond being and nonbeing.

The justification for this ontic bracketing of relations is epistemological. We have, as Hume emphasized with respect to causal relations, no direct epistemic access to the being or nonbeing of relations. We do not see, hear, touch, smell, or taste relations. Our experience is limited only to the particulars and their instantiations of properties. We come to accept or reject the existence of abstract entities like relations only as they are determined to be necessary or unnecessary according to the most successful performances in the relations ontology game. The ontology game depends on factors other than those that can straightforwardly be understood as revealing the nature of reality, such as balancing or negotiating a compromise between incommensurable preferences for ontic economy over explanatory simplicity and explanatory simplicity over ontic economy. Hence, it may be preferable simply to avoid ontic commitment wherever reference and true predication are needed for explanation, if there is no direct epistemic criterion for a referent and predication subject's being or nonbeing.<sup>19</sup>

This seems to be precisely the situation encountered in the case of the ontic status of relations. Relations are desirable referents and predication subjects because of the simplicity of

---

<sup>19</sup>Russell claims that universals are known by direct acquaintance as opposed to description. See his 'On Our Knowledge of Universals', *The Problems of Philosophy*, Chapter X, pp. 101–110, and "Knowledge by Acquaintance and Knowledge by Description", *Proceedings of the Aristotelian Society*, 11, 1910–11, pp. 108–128. Significantly, Russell does not offer epistemic acquaintance with universals as a proof of their existence, but only claims this mode of knowledge of them after their existence has supposedly been established by rational argument, which is to say by the ontology game.

explanation they afford in accounting for the metaphysics of entities and states of affairs in the world, in what are sometimes distinguished as an object's intrinsic and extrinsic relations. But we need not accept relations into the preferred ontology of existent and subsistent entities with being in order to refer to and predicate properties of relations. By allowing virtual rather than actual relations to do the same explanatory work in metaphysics, we gain significant ontological economy at no sacrifice of explanatory adequacy or simplicity. To appreciate the advantages ontic neutrality confers on virtual relations, we must now outline the basic principles of this alternative ontology game strategy.

## 6 VIRTUAL RELATIONS AS ONTICALLY NEUTRAL INTENDED OBJECTS.

The idea of a virtual relation is to have available a referent that does all the work of traditional existent or subsistent relations, but for which ontic commitment is unnecessary. The object theory developed by Meinong and his students provides the concepts needed for an analysis of this kind.

First, we recognize, not an ontology, but a semantic domain, consisting of mind-independent potential intended objects. The domain consists of both an ontology and extraontology, since it is possible according to the naive intentionalist phenomenology of object theory to intend or be directed in thought toward both existent or subsistent and beingless objects. Objects of thought generally can be regarded as pure objects, or objects as they are in themselves, in the non-Kantian sense by which objects to be included in the semantic domain are identified and individuated on the basis of their constitutive properties, regardless of their ontic status. The golden mountain is the potentially intended mind-independent object constituted by the properties of being golden and a mountain; the round square is the object constituted by the properties of being round and square. Quine is paraphrased as having insisted that there be 'No entity without identity'; object theory expands on this slogan by requiring that there be 'No entity or nonentity without identity'.<sup>20</sup> The identity conditions for membership in the object domain are determined intensionally by possession of unique sets of constitutive properties. Meinong and his school spoke of the ontically neutral domain membership of intended objects in this spirit as belonging to the *Aussersein* of the pure object, which is also said to be homeless (*heimatlos*), in that it belongs to no traditional ontological category, neither spatiotemporally existent, abstractly subsistent, nor conceptual or ideational. The constitutive properties that uniquely identify a pure object belong to the object's *Sosein* or so-being, which is said to be independent of its being or *Sein*. The pure object is ontically neutral, but in a Meinongian intentionalist semantics, can be referred to regardless of its ontic status, designated by name or definite description, and have any and all of the constitutive properties belonging to or supervenient on its *Sosein* truly predicated of it.<sup>21</sup>

---

<sup>20</sup>This thesis is ascribed to Quine by Charles D. Parsons, "Frege's Theory of Number", in *Philosophy in America*, edited by Max Black (Ithaca: Cornell University Press, 1965), p. 182. See W. V. O. Quine, *Word and Object* (Cambridge: MIT Press, 1960), pp. 200–205; "Ontological Relativity", in Quine, *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969), pp. 32–34, 45–46.

<sup>21</sup>Meinong, "Über Gegenstandstheorie", *Gesamtausgabe*, II, pp. 490–93. See Roderick M. Chisholm, "Beyond Being and Non-Being", *Philosophical Studies*, 24, 1972, pp. 245–255. Reinhardt Grossmann, "Meinong's Doctrine of the *Aussersein* of the Pure Object, *Noûs*, 8, 1974, pp. 67–82. The independence of *Sosein* from *Sein* thesis was formulated by Meinong's student Ernst Mally, in his "Untersuchungen zur Gegenstandstheorie des Messens", in Meinong, ed., *Untersuchungen zur Gegenstandstheorie und Psychologie* (Leipzig: Verlag von Johann Ambrosius Barth, 1904), p. 127. See Findlay, *Meinong's Theory of Objects and Values*, p. 44. Karel Lambert, "A Logical Interpretation of Meinong's Principle of Independence", *Topoi*, 1, 1982, pp. 87–96. Lambert, *Meinong and the Principle of Independence: Its Place in Meinong's Theory of Objects and its Significance in Contemporary Philosophical Logic* (Cambridge: Cambridge University Press, 1983). Griffin, "The Independence of *Sosein* from *Sein*", *Grazer Philosophische Studien*, 9, 1979, pp. 23–34.

Now to complete the picture, it is necessary only to show that we can accomplish everything ordinarily required of relations belonging to traditional ontological categories by virtual relations considered as pure ontically neutral objects. This is relatively easy to do, once we have broken the hold of extensionalist semantic presuppositions generally. What do relations do for us? It seems reasonable to conclude that relations primarily organize information about the instantiated properties of particular objects in convenient ways. Such a purpose is equally served by actual or virtual relations, provided only that virtual relations can be referred to and have properties truly predicated of them. Consider the case of two objects, A and B. A is shorter than B. It is tempting to suppose that if virtual relations in their purity are ontically neutral, then there is no real fact of the matter about the relative heights of A and B. But this is not so. A is 2 meters tall, and B is 2.2 meters tall. That is a truth about the world. We do not add to or subtract from this basic fact, conveniently represented in the description of A as shorter than B, by saying that the relation shorter than or of the shortness of A relative to B exists, subsists, or has being. But then neither do we add to or subtract from the facts of the matter by treating relations as ontically neutral pure intended objects, beyond being and nonbeing.

The application of virtual relations as an ontology game strategy raises an interesting difficulty. Is it cheating, or does it unfairly bypass the goal for which the ontology game is played, to introduce virtual relations? The ontology game is supposed to determine within certain constraints whether or not relations exist. Virtual relations deliberately leave this question open, with the effect, a critic might complain, of avoiding rather than solving the problem. One reply to this objection is to claim that if ontic neutrality is not permitted as an acceptable solution to the problems posed by the theory of relations, then the purpose of the ontology game may be too narrowly circumscribed. But the ontic neutrality afforded by virtual relations can also be defended without further apology as directly addressing the point of the ontology game. This is the task of giving an adequate account of relations or other abstracta by which the parts of speech are metaphysically categorized that best makes sense of the truths of scientific theories while maximizing ontological economy and explanatory simplicity. Replacing the extensionalist account of actual relations with an intentionalist theory of ontically neutral virtual relations fully accomplishes this purpose.

Relations understood in this way can be referred to and individuated from one another. The relation of tallness is distinct from the relation of being older than, and causation is different than siblinghood. The properties predicated of relations in all our explanations are also fully satisfied by virtual relations. Thus, the virtual relation of being taller than has the property of holding between A with respect to B, of being a relation involving relative height, of being the complement of the relation being shorter than, and so on. There is nothing that we can truly say about the extraontological properties of actual relations that we cannot also truly say about virtual relations. Since the ontic status of relations is epistemically undecidable, enjoining our doxastic agnosticism, and we can do without actual relations provided we accept an intentionalist semantic framework in which virtual relations can be posited as ontically neutral pure intended objects, there is nothing to be gained in playing the ontology game by maintaining a traditional realist ontology in which relations actually exist. Virtual relations serve all the same explanatory purposes as actual relations, and do so moreover without assuming avoidable epistemically unsupportable ontic commitments.<sup>22</sup>

---

<sup>22</sup>I am grateful to The Pennsylvania State University for research leave in 1993 which made this project possible.

**VIRTUAL UNIVERSALS:  
Comments on Dale Jacquette’s “Virtual Relations”**

Marvin Farber Conference on the Ontology and Epistemology of Relations  
SUNY Buffalo, 17 September 1994

**William J. Rapaport**

**Department of Computer Science and Center for Cognitive Science  
State University of New York at Buffalo, Buffalo, NY 14260**

rapaport@cs.buffalo.edu, <http://www.cs.buffalo.edu>

In “Virtual Relations”, Dale Jacquette argues that Bertrand Russell’s argument for the existence of universals (specifically, universal *relations*) fails because of two erroneous presuppositions, namely, that relations are different from properties and that explanatory talk of relations implies their existence.

In Russell’s words, the argument (in *The Problems of Philosophy* (1912, Ch. 9)) is this:

If we wish to avoid the universals *whiteness* and *triangularity*, we shall choose some particular patch of white or some particular triangle, and say that anything is white or a triangle if it has the right sort of resemblance to our chosen particular.<sup>1</sup> But then the resemblance required will have to be a universal. Since there are many white things, the resemblance must hold between many pairs of particular white thing; and this is the characteristic of a universal. It will be useless to say that there is a different resemblance for each pair, for then we shall have to say that these resemblances resemble each other, and thus at last we shall be forced to admit resemblance as a universal. The relation of resemblance, therefore, must be a true universal. And having been forced to admit this universal, we find that it is no longer worth while to invent difficult and unpalatable theories to avoid the admission of such universals as whiteness and triangularity. (pp. 96–97.)

In my view, this argument has the following structure:

1. There are lots of (white) particulars. (Assumption)
2. Either qualities (like *whiteness*) are universals, or there are only particular (white) things.
3. If the former, then there are universals.
4. If the latter, then there is a prototypical white particular, *w*, such that, for any *x*, to say that *x* is white is to say that *x* resembles *w*.
5. Therefore, either resemblance is a universal (since it holds between *w* and *each x*), or there are only particular resemblances (such as the resemblance between *this x* and *w*).
6. If the former, then universals exist.
7. If the latter, then, by assumption 1, each *x-w* resemblance must resemble every other; i.e., *x*’s resemblance to *w* resembles *y*’s resemblance to *w*.

---

<sup>1</sup>Note that this sounds very much like a description of a *property*.

8. Therefore, *this* resemblance (i.e., this resemblance of resemblances) is a universal.
9. Therefore, in any of cases 3, 6, or 7, universals exist.
10. Therefore, we might as well stop at case 3 and admit the existence of universal qualities.

I agree that this argument fails as it stands, but for a different reason, namely, Russell stops it at an arbitrary place—case 7—without noting that fact. Rather, Russell’s argument shows (at most) that there must be an *arbitrary* stopping place *if* we don’t want an infinite regress and that, wherever we stop it, there we will find universals. Let me now turn to Jacquette’s analysis.

## 1 THE FIRST PRESUPPOSITION.

The first unstated presupposition of Russell’s argument that Jacquette points out is that there are ( $n$ -place) *relations* as distinct from (1-place) *properties*. If we assume, instead, that there are only properties, then, according to Jacquette, Russell’s argument doesn’t get off the ground.

How might there be only properties? Jacquette suggests reducing relations to properties by replacing relational statements of the form:

$$xRy \tag{1}$$

by a conjunction of property statements:

$$(xR)y \ \& \ x(Ry), \tag{2}$$

i.e.,  $y$  has the (relational) property of *being-that-to-which- $x$ -is- $R$ -related* &  $x$  has the (relational) property of *being- $R$ -related-to- $y$* . Actually, Jacquette uses:

$$x(Ry) \ \& \ y(R^{-1}x), \tag{3}$$

i.e.,  $x$  has the (relational) property *being- $R$ -related-to- $y$*  &  $y$  has the (relational) property *being- $R^{-1}$ -related-to- $x$* .

In general, it seems, an  $n$ -place relational statement

$$Rx_1 \dots x_n \tag{4}$$

would be replaced by an  $n$ -ary conjunct of the form:

$$(R\_x_2 \dots x_n)x_1 \ \& \ (Rx_1\_x_3 \dots x_n)x_2 \ \& \ \dots \ \& \ (Rx_1 \dots x_{n-1}\_)x_n, \tag{5}$$

where the relational properties with blanks are to be understood as follows:

$$Rx_1 \dots x_{i-1}\_x_{i+1} \dots x_n \tag{6}$$

is a (relational) *property* of  $x_i$  that generalizes such (relational) properties as  $Ry$  and  $R^{-1}x$ .

This is a costly reduction, since we would need lots of very complex properties for each relation, as well as lots of rules relating them; e.g., we would need rules such as:

$$x(Ry) \rightarrow y(R^{-1}x) \tag{7}$$

$$(R_{-}x_2 \dots x_n)x_1 \rightarrow (Rx_1_{-}x_3 \dots x_n)x_2 \ \& \ \dots \ \& \ (Rx_1 \dots x_{n-1}_{-})x_n \quad (8)$$

and so on.

Less expensively, perhaps, we could reduce relations to properties by replacing ( $n$ -place) *relations* among  $n$  arguments with (1-place) *properties* of a single complex argument, namely, an  $n$ -tuple:

$$xRy \text{ is replaced by } R\langle x, y \rangle. \quad (9)$$

This is more than a notational variant.  $R$  is now a (1-place) *property* predicated of the ordered pair  $\langle x, y \rangle$ , which is to be thought of as a single, complex object, perhaps somehow encoding  $x$  and  $y$ . For example, if  $x$  and  $y$  were natural numbers,  $\langle x, y \rangle$  could be the Gödel-coding  $2^x 3^y$ . Here, too, there is a cost: We now have to deal with lots of very complex *individuals*, though perhaps this is a less expensive solution than Jacquette's. (This *may* be related to Bradley's account, as described in the conference paper by Fred Wilson, but that requires further investigation.)

In either case, we get a “cumbersome” (p. 9) theory, to use Jacquette's words. Are there any advantages to it? That, perhaps, is a matter of taste. Do we really want to trade in a typed theory of particulars and universals, properties and relations, with only a few of each, for a theory of such complex particular properties as resembling- $w$  (where  $w$  is the prototypical white particular) and being-resembled-by- $x$  (where  $x$  is a particular that is white in virtue of resembling  $w$ ), along with the additional rules mentioned earlier? If ontology is a game, and if we can play either of these games, why not play with simpler pieces and by simpler rules?

According to Jacquette,

The ontology game is successfully played by presenting an *adequate* account of the metaphysical property attributions that, among available alternatives, maximizes both ontic economy and explanatory simplicity. (p. 9; my emphasis.)

But what's to count as maximal ontic economy or explanatory simplicity? A typed theory of properties and relations with only a few of each kind? Or a “flat” theory of properties only, with fewer *kinds* of entities, albeit more complex ones? Such maximization principles, it seems to me, are also a matter of taste.

But why does Jacquette emphasize relations? Russell was more interested in showing that there were *universals* than he was in showing that there were *relations*. Showing that there are relations was merely a convenient way to show that there are universals. However, on my analysis, according to which we find universals wherever we stop the regress, Russell's argument for *universals* goes through even for *properties* (pending evaluation of the second presupposition, of course): Suppose there are no relations, but only properties, including relational properties of the sort Jacquette envisages. Then Russell's argument would go as follows: If whiteness isn't a universal, and there are only particular white things, then any particular white thing  $x$  is white in virtue of having the property of resembling- $w$ . If *this* property isn't a universal, then each *particular* resemblance-to- $w$  must resemble every other one, or—to say it in property language—each particular resemblance-to- $w$  (say,  $x$ 's resemblance-to- $w$ ) must have the properties of resembling each other resemblance-to- $w$ . That is,  $x$ 's resemblance to  $w$  has the properties resembling- $y$ 's-resemblance-to- $w$ , resembling- $z$ 's-resemblance-to- $w$ , etc. And, Russell could argue, *this* is a universal. Or he could move on to the next level, and so on *ad infinitum*.

(Or, suppose there are no relations, only properties, including properties that apply to  $n$ -tuples. Then if whiteness isn't a universal, then any particular white thing  $x$  is white in virtue of there being the property of resemblance that applies to the ordered pair  $\langle x, w \rangle$ . And, Russell might go on to argue, either *this* is a universal, or *it* must resemble all other particular resemblances of white things to  $w$ :

$$R' \langle R_x, R_y \rangle \tag{10}$$

i.e., the ordered pair consisting of  $x$ 's resemblance to  $w$  and  $y$ 's resemblance to  $w$  have a resemblance property. Russell could then argue that *this* is a universal. Or he could move on to the next level, and so on *ad infinitum*.)

The point is that where Russell chooses to stop is arbitrary (just as in Bradley's regress), and where he chooses to stop, there we find a universal, *whether or not we distinguish properties from relations*. Jacquette's point, however, is that there is no need to stop; he says: "Why not allow an indeterminate ascent of different particular resemblances among different particular resemblances?" (p. 6). Why not? Because it's hardly an explanatorily simple or ontically economical theory. Stopping the regress—and thereby admitting universals—satisfies Jacquette's own criteria better.

## 2 THE SECOND PRESUPPOSITION.

Let's now look at the second presupposition of Russell's argument that Jacquette points out. This one reminds us that the *ability* to talk of universal relations *doesn't* imply their *existence*. Granted; but Russell does show that if we choose an arbitrary stopping place, at that place we *need* to talk of universals, so they "exist" in the same way that quarks or black holes or even Sherlock Holmes<sup>2</sup> "exist"—namely, as theoretical entities of an explanatory theory. We accept them if we accept the theory. (I note parenthetically that a recent paper by Richard Cartwright (1994, esp. §II) distinguishes between the *ontology* of a theory as marked by the values of its bound variables and the *commitments* of a theory, roughly those things that would falsify the theory if they didn't exist. I must leave to another time the implications of this for Jacquette's argument.)

The *first* objection of Jacquette's, you'll recall, was that we don't *have* to accept the theory of universals and relations, that we only need to talk of particulars and properties. However, Russell was not arguing primarily for the existence of *relations*, but of *universals*. Jacquette could *accept* the existence of relations and say that Russell's argument for *universals* fails for some *other* reason (say, that the stopping place is merely arbitrary, and if we're willing to accept the infinite regress, then we don't need *universals*). So, I see no need for Jacquette to propose a theory of virtual *relations*. What he should want, I suggest, is a theory of virtual *universals*.

Before seeing what that might be, let's return to Jacquette's argument. He has rejected relations in favor of rather complicated properties. But, as he points out, it's *easier*—less "cumbersome"—to talk of relations. His next move is to say that since we *can* talk of relations, we can promote them to Meinongian-objecthood (which, of course, doesn't imply their *existence*). So we can have a theory of "virtual" (or "Meinongian") relations. As those of you familiar with my own Meinongian tastes might expect, I'm sympathetic, but I prefer a slightly different approach.<sup>3</sup>

<sup>2</sup>As in Peter van Inwagen's theory of fictional entities as theoretical entities of literary theories of fiction (1977); cf. Rapaport 1991, Rapaport & Shapiro forthcoming.

<sup>3</sup>See, e.g., Rapaport 1976, 1978, 1979, 1981, 1983, 1984, 1985, 1985/1986, 1986, 1991ab; Shapiro & Rapaport 1987, 1991.



Jacquette proposes that once we've shown how to reduce relations to properties, we can then use relational *language* as an abbreviation (p. 9). And this *abbreviational* relation language can be promoted to Meinongian-objecthood (p. 11) on the grounds simply that it's *easier* to think and talk about them. However, I would promote them on the somewhat different grounds that we *do* think and talk about them. Whether they actually exist is irrelevant. What counts is that we are trying to paint a picture of our epistemology, and relations are part of our *epistemological* (or "naive") *ontology*: "the study of the entities that make thinking possible[;] ... what there must be in order for us to know what there is" (Rapaport 1976; 1985/1986: 61, 72; cf. §4.3). Minds think in terms of relations, so, whether or not relations exist, our theory of minds must deal with them.

The same can be said for a theory of virtual *universals*: We think and talk about universals, wonder whether they exist, etc. Hence, they are part of our epistemological ontology, and any theory of mind must deal with them. As a computational cognitive scientist, I find *that* game more interesting to play than the *metaphysical* ontology game.

### REFERENCES

1. Cartwright, Richard L. (1994), "Speaking of Everything", *Noûs* 28: 1-20.
2. Rapaport, William J. (1976), *Intentionality and the Structure of Existence*, Ph.D. dissertation (Bloomington: Indiana University Department of Philosophy).
3. Rapaport, William J. (1978), "Meinongian Theories and a Russellian Paradox," *Noûs* 12: 153-180.
4. Rapaport, William J. (1979), "An Adverbial Meinongian Theory," *Analysis* 39: 75-81.
5. Rapaport, William J. (1981), "How to Make the World Fit Our Language: An Essay in Meinongian Semantics," *Grazer Philosophische Studien* 14: 1-21.
6. Rapaport, William J. (1983), "Meinong, Defective Objects, and (Psycho-)Logical Paradox," *Grazer Philosophische Studien* 18: 17-39.
7. Rapaport, William J. (1984), Critical study of Richard Routley, *Exploring Meinong's Jungle and Beyond*, in *Philosophy and Phenomenological Research* 44: 539-552.
8. Rapaport, William J. (1985), "To Be and Not To Be," *Noûs* 19: 255-271.
9. Rapaport, William J. (1985), "Meinongian Semantics for Propositional Semantic Networks," *Proceedings of the 23rd Annual Meeting of the Association for Computational Linguistics (University of Chicago)* (Morristown, NJ: Association for Computational Linguistics): 43-48.
10. Rapaport, William J. (1985/1986), "Non-Existent Objects and Epistemological Ontology," *Grazer Philosophische Studien* 25/26: 61-95. Reprinted in Rudolf Haller (ed.), *Non-Existence and Predication* (Amsterdam: Rodopi, 1986).
11. Rapaport, William J. (1986), Review of Karel Lambert, *Meinong and the Principle of Independence*, *Journal of Symbolic Logic* 51: 248-252.
12. Rapaport, William J. (1991a), "Meinong, Alexius; I: Meinongian Semantics," in Hans Burkhardt & Barry Smith (eds.), *Handbook of Metaphysics and Ontology* (Munich: Philosophia Verlag): 516-519.

13. Rapaport, William J. (1991b), "Predication, Fiction, and Artificial Intelligence," *Topoi* 10: 79–111; second half revised as Rapaport & Shapiro 1995.
14. Rapaport, William J., & Shapiro, Stuart C. (1995), "Cognition and Fiction," in Judith Felson Duchan, Gail A. Bruder, & Lynne Hewitt (eds.), *Deixis in Narrative: A Cognitive Science Perspective* (Hillsdale, NJ: Lawrence Erlbaum Associates): 107–128; revised version of second half of Rapaport 1991.
15. Russell, Bertrand (1912), *The Problems of Philosophy* (London: Oxford University Press, 1959).
16. Shapiro, Stuart C., & Rapaport, William J. (1987), "SNePS Considered as a Fully Intensional Propositional Semantic Network," in Nick Cercone & Gordon McCalla (eds.), *The Knowledge Frontier: Essays in the Representation of Knowledge* (New York: Springer-Verlag): 262–315.
17. Shapiro, Stuart C., & Rapaport, William J. (1991), "Models and Minds: Knowledge Representation for Natural-Language Competence," in Robert Cummins & John Pollock (eds.), *Philosophy and AI: Essays at the Interface* (Cambridge, MA: MIT Press): 215–259.
18. Van Inwagen, Peter (1977), "Creatures of Fiction," *American Philosophical Quarterly* 14: 299–308.

## A NOTE IN REPLY TO WILLIAM J. RAPAPORT ON VIRTUAL UNIVERSALS

Dale Jacquette

Department of Philosophy  
The Pennsylvania State University  
University Park, PA 16802

dlj4@psu.edu

I am grateful to William J. Rapaport for his thoughtful comments on my paper, “Virtual Relations”, originally presented at the Marvin Farber Conference on the Ontology and Epistemology of Relations at SUNY Buffalo, 17 September 1994.

This is not to say that I agree with all or even most of Bill’s remarks. Nevertheless, I am firmly in his company when he maintains that I should espouse more generally a theory of virtual universals, and not merely a narrowly specific theory of virtual relations. Indeed, I have done so in my essay, “On Defoliating Meinong’s Jungle”, delivered at and forthcoming in the proceedings of the 9–10 December 1994 conference on Meinong and his School at the University of Trento, Italy. I am further prepared to go one better and announce my commitment to a neo-Meinongian theory of virtual abstracta that includes not only universals but even abstract particulars like numbers, sets, and other mathematical objects. My reason for offering only that part of the extraontology concerning relations was simply to introduce the fragment of my theory appropriate to the occasion of a conference specifically on relations. I did not claim and I hope it is clear that I would deny being interested only in developing a theory of virtual relations to the exclusion of other abstracta.

Now let me turn to a few matters of disagreement. Rapaport in my opinion misrepresents the logic of Russell’s proof for the existence of relational universals in several key respects. First, Rapaport holds that for Russell the regress of resemblances among particulars contains universals at every arbitrary stopping place in the hierarchy otherwise leading to an infinite or indefinite regress. This would be an interesting and powerful argument. But Russell’s proof, as I have tried to show in some detail, is more confused than this. Russell claims that lower level resemblances in the hierarchy of resemblances and resemblances of resemblances are not universals, but particulars, and remain such for any arbitrary number of iterations. It is only the higher level resemblances holding between particular resemblances at any stage of the regress that for Russell ascend to universality. I regard this argument as woefully inadequate, even conspicuously logically invalid, as I explain at length in my criticism. If Russell had shown that we get universals at any break in the regress of resemblances, say, at an arbitrary level  $n$ , rather than at level  $n + 1$ , then there would be no basis for his conclusion that universal resemblance relations obtain only at the next level (and above) where they supervene on lower level particular resemblances. As I argue, there is no sound reason in Russell’s proof not to permit the hierarchy of particular resemblances to continue indefinitely with no universals occurring at any stage. If there can be particular rather than universal resemblances anywhere in the regress, then let there be particular rather than universal resemblances absolutely all the way up. Why—from the standpoint of Russell’s argument—not?

Since Russell explicitly declares that his resemblance regress proof is the only possible demonstration of the existence of universals, and that there can be no demonstration for the existence of universals outside of his proof for the existence of relations, the above criticism entails the defeat of Russell’s entire defense of universals. Thus, I think Rapaport puts things too mildly when he says that for Russell, “Showing that there are relations was merely a convenient way to

show that there are universals.” Russell should be taken at his word in his treatment of the subject when he says (as I also quote in my essay): “As a matter of fact, if any one were anxious to deny altogether that there are such things as universals, we should find that we cannot strictly prove that there are such things as *qualities*, i.e. the universals represented by adjectives and substantives, whereas we can prove that there must be *relations* . . .” (*The Problems of Philosophy*, p. 95). Russell regards the proof of universals by way of relations not merely as a convenient device, but an absolute necessity if there is to be any proof of universals at all. This exposes his proof to the two kinds of criticisms I develop in my essay, concerning the assumption that there is a hard and fast difference between relations and relational properties, and the assumption that objects like relations must exist in order to be referred to and stand as subjects of true predications of properties.

This point is directly related to some of Rapaport’s concerns that my proposal to reduce relations to relational properties, and more importantly my complaint that Russell overlooks such a possibility, implies a more ‘costly’ and complicated metaphysics of abstract objects than Russell’s ontology of universal relations. First, however, my observations here are really directed against the invalidity of Russell’s proof for relations as universals. Even if it is ultimately undesirable to reduce relations to relational properties (regardless of their ontic or extraontic status), the fact that Russell ignores this possibility is sufficient to expose the logical invalidity of his argument. We are clearly not driven to accept relations as universals if, as Russell insists, there is no distinct proof for the existence of nonrelational universal qualities, and if relations can be reduced to particular properties. Finally, I try to show that we can preserve all the simplicity of a nonreductive theory of relations by interpreting them as extraontological Meinongian objects or virtual relations. If my overall conclusions are correct, then we can have our cake and eat it too, by having relations as well as qualities and particulars as abstract nonexistent nonsubsistent Meinongian abstracta. I claim moreover that we ought to regard universals in this ontically neutral Meinongian light because of the lack of supporting empirical evidence for their existence. If we are playing the ontology game honestly, then we should not pretend to more actual knowledge than we can reasonably expect to attain. But epistemic agnosticism about the existence of an object presupposes the semantic neutrality whereby we can refer to and truly predicate properties of objects independently of their ontic status. And this is afforded only by a Meinongian or neo-Meinongian semantics.