

NEW LIGHT ON BERTRAND RUSSELL'S  
"BUNDLE THEORY"

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Gülberk Koç Maclean. *Bertrand Russell's Bundle Theory of Particulars*. London and New York: Bloomsbury Academic, 2014. Pp. x, 170. ISBN 978-147251-2666. £65.00; US\$120.00.

This is an important book which should bring needed attention to Russell's much neglected later philosophy, which is not only innovative but also, as the author argues, of a coherent whole with much of his metaphysics and epistemology going back to the early years of the last century. One of Gülberk Koç Maclean's pervasive themes is that Russell's philosophical evolution is largely motivated by a commitment to his programme of logical atomism built on three principles: analysis, the plurality of reality, and the method of logical construction. All were at work in Russell's serious philosophy from roughly 1903, and they served him well whether he was breaking new ground in philosophy of mathematics, metaphysics or epistemology.

The main problem that Maclean examines in detail is the frightfully difficult one of particulars and Russell's relatively late career solution in terms of his bundle theory—a theory first put forward in *An Inquiry into Meaning and Truth* (1940) and later, with some modification, in *Human Knowledge: Its Scope and Limits* (1948).

In her Introduction, with the help of some terminology and categorial distinctions from Michael Loux's excellent *Metaphysics*, Maclean gives the reader a very useful overview of the problem and a brief look at the bundle theory itself and its main metaphysical competitor, substratum theory. In the course of eight chapters she manages to present Russell's theory and its background, and defend it against many critics, old and contemporary, on several related issues including individuation, modality, non-demonstrative inference, neutral monism and logical atomism. Some of her ideas are innovative departures from traditional accounts of Russell's later work, e.g. that it's of a piece with

both his logical atomism and his neutral monism of the years between the world wars.

#### BACKGROUND

The problem of particulars in one form or another was tackled by Russell in several early works. In *The Problems of Philosophy* (1912), for example, ordinary physical (material) objects were epistemically problematic: their existence was knowable only indirectly by inference from our immediately known sense-data which were normally caused by those physical objects. But those causes were mysterious *Ding an sich*-like substances permanently hidden behind a veil of sense-data, allowing us knowledge of their structure but nothing of their intrinsic nature. It was Russell's empirical uneasiness with material object particulars that led him to try to eliminate them by constructing them out of experiential data (sensed and unsensed) in 1914; they became—were replaced with—series of classes of *sensibilia*.<sup>1</sup>

Similar empirically motivated concerns led him to a version of neutral monism. He dropped the mental/physical distinction between sensations and sense-data and eliminated ordinary mental particulars (minds) as well as material objects, by constructing them out of a “neutral” stuff—sensations in *The Analysis of Mind* (1921) and events in *The Analysis of Matter* (1927). Both minds and matter become series of classes of neutral stuff arranged according to different causal laws, viz. those of psychology and physics respectively. Maclean has an interesting and rich chapter (pp. 119–31) in which she defends Russell's neutral monism against several critics, including W. T. Stace and David Bostock, and argues against the widely held view that Russell gave up neutral monism in his later period.

#### THE PROBLEM AND SOLUTION

By 1940 Russell's logical atomist programme led him to eliminate *all* particulars, not just the so-called ordinary ones like material objects and minds. The problem quite simply was this: from roughly 1900 until 1940 all of Russell's

<sup>1</sup> See “The Relation of Sense-Data to Physics”, secs. III–V; also *Our Knowledge of the External World*, Chaps. 3 and 4. Elimination of Xs by construction must be understood merely as making it unnecessary to assume their existence, i.e. one's attitude toward their existence is to be agnostic. Russell's unsensed *sensibilia* were “ideal”, “hypothetical” entities supposed to fill the gap of perceiverless perspectives, and which would be more or less qualitatively like what would be sensed were there a perceiver present. In some places, however, he says they are actual and could be qualitatively different from sense-data. (See “Relation of Sense-Data”, pp. 143–9, *Papers* 8: 1.)

“ultimate” particulars—including sensibilia, sensations and events—were particulars in space-time which had sensible qualities. But each particular was itself a thing distinct from its qualities, a mysterious substance. As he later put it, “a mere unknowable substratum, ... an invisible peg from which properties would hang like hams from the beams of a farmhouse” (*MPD*, p. 120). But these particulars were useful; indeed, they seemed indispensable, because the substrata guaranteed them distinct individual identity for the construction of point-instants for the space-time series.<sup>2</sup> Yet they offended his empiricist sensibilities, and by 1940 they were ready for Occam’s razor *via* his bundle theory. As he says in the Preface of the *Inquiry*: “The book results from an attempt to combine a general outlook akin to Hume’s with the methods that have grown out of modern logic” (p. 7).

Maclean presents Russell’s bundle theory as an extension of his earlier analyses of ordinary particulars (minds and physical objects) in terms of “transient particulars” (like sensibilia, sensations and events).<sup>3</sup> On the new theory, these transient particulars are eliminated as well, in terms of non-particulars, *viz.* qualities unified into bundles by the simple, experiential relation of compressence, which may be thought of roughly as “occurring together in space and time”.<sup>4</sup>

Maclean takes Russell’s bundle theory in both the *Inquiry* and *Human Knowledge* as construing sensible qualities like red and round as “immanent universals” in space-time;<sup>5</sup> they are abstract only in the sense of being “multiple occurrent”, *i.e.* the same quality can occur in many places at the same time—a view of universals in radical contradistinction to his Platonic, transcendental view in *Problems* (and apparently for a decade earlier and later as well)<sup>6</sup> whereby universals are not in space-time. And they do not bear the

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<sup>2</sup> In 1911 Russell explored the possibility of dropping substrata via a bundle theory, but found what he thought were decisive arguments for retaining them. See “On the Relation of Universals and Particulars”, especially his 1955 note on the last page. For an insightful discussion of these early objections to bundle theory see HOCHBERG, “Moore and Russell on Particulars, Relations and Identity” (not cited in Maclean).

<sup>3</sup> So far as I can tell, the term is rarely used by Russell (see *AMi*, p. 143), but Maclean uses it throughout. Russell does occasionally speak of “ultimate particulars” (*e.g.* *AMa*, pp. 277, 319).

<sup>4</sup> As early as 1913 Russell made use of a very similar simple relation he called “being experienced together” which united the parts of a perception to create instants for the construction of the time series (which had to have succession which was asymmetrical and transitive). See “On the Experience of Time”, pp. 216ff. (*Papers* 7: 68ff.).

<sup>5</sup> The term “immanent universal” is apparently borrowed from Loux. I don’t believe it occurs in either *IMT* or *HK*.

<sup>6</sup> See Maclean, p. 38, where she attributes the transcendental view to him as late as 1921 in *AMi*, p. 228.

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mysterious exemplification relation to any particulars because on Russell's bundle theory there are no particulars to exemplify them—the ordinary ones having been eliminated by logical construction before 1940, and the transient ones after, by his bundle theory. The bundle theory enables him to carry forth his atomism and simplify his ontology to one kind of ultimate atom—(immanent) universals, i.e. qualities and relations.

But the bundles need to be organized so that they can stand in for transient particulars as non-recurrent items. This is achieved with the help of the relation of compresence. In physical space it unifies the overlapping of qualities in space-time; in private space it unifies the qualities of a momentary experience (p. 58). These bundles, complexes of compresence, can (as a matter of logical possibility), and do, recur; but if they include enough qualities—including those of position in the sensory fields—they are highly unlikely to recur. In constructing the space-time series of point-instants, Russell uses *complete* complexes of compresence, defined as those complexes of which all qualities within are compresent and no quality outside the complex is compresent with all those within. Such complexes are the point-instants needed for constructing the space-time series. *Incomplete* complexes of compresence are space-time slices of transient particulars. The fact that all complexes can recur as a matter of logical possibility, is closely related to his claim that Leibniz's principle (the identity of indiscernibles)—which he rejected before 1940 along with bundle theory<sup>7</sup>—is logically true (*IMT*, p. 97).

Macleon is careful not to call Russell's elimination of transient particulars a logical construction, since his bundles of compresent qualities are not identified with *classes* as ordinary particulars are; they are *unities*, and their constituents are *parts* of a whole—and of the same logical type as the whole—not *members* of a class. She takes scholars, including Bostock, to task for thinking that Russell put constructions in place of *all* eliminated particulars (p. 66). She also observes that this error is easy to make given Russell's maxim of replacing inferences with constructions where possible. But the elimination of transient particulars via bundles of compresence is not a construction since the bundles are not classes. Russell is clear that bundles are not classes, but he does sometimes refer to their substitution for transient particulars as "constructions" (see *HK*, pp. 293, 297). She also notes that Russell allows that some inferred entities (e.g. unperceived events in *Analysis of Matter* and unperceived bundles in *Human Knowledge*) can be known to exist, but only indirectly by means of inductive inference in accord with the accepted presuppositions of science and (in *Human Knowledge*) the *a priori* synthetic (probable) postulates of non-demonstrative inference. But Russell, in some ways

<sup>7</sup> See, for example, his 1911 paper "On the Relation of Universals and Particulars" (*LK; Papers* 6: 16).

reminiscent of his view of the external world in *Problems*, seems to allow merely knowledge of their *structure*, although (*pace* Maclean, p. 131) nothing of their intrinsic nature.<sup>8</sup>

This is a very ambitious and well researched book tackling tough and technical issues. Her explications are generally remarkably clear and her defence of Russell well argued, innovative and often courageous. The chapter on individuation, for example, is quite challenging, with a long section on Max Black's famous argument (1952) against bundle theory based on the alleged falsehood of Leibniz's principle—a very rich and informative discussion.

There's much more worthy of detailed review but, alas, so little time and space. I'll make do with a few observations on a few issues.

#### FINAL THOUGHTS: A FEW OBSERVATIONS

##### *Elimination vs. reduction*

Maclean places much emphasis on a distinction between reductive and eliminative analysis, a distinction about which I'm not totally clear, at least as applied to Russell's analyses. But I take it that the main difference is supposed to be that "*reducing* Xs to Ys", whatever its form, leaves Xs as well as Ys in one's ontology, while "*eliminating* Xs in terms of Ys" eliminates Xs, leaving only Ys in their place (p. 65). She stresses the importance of understanding that Russell's analyses of particulars are eliminative and not reductive, as, she says, some scholars have wrongly thought.<sup>9</sup> I do agree that Russell's analyses are eliminative in carrying out what he calls "the supreme maxim in scientific philosophizing": Whenever possible, substitute logical constructions for inferred entities (RSDP, p. 150). In this sense numbers, for example, are eliminated by classes; and *ordinary* physical objects are eliminated by classes of *transient* particulars (*sensibilia* or events); and these particulars in turn by quality complexes—although not by constructions *qua* classes, as she reminds Bostock.

There is, I think, a minor slip about constructions on page 66. In explaining the eliminative nature of Russell's constructions, she quotes Russell on the replacement of the number 2 by the class of couples:

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<sup>8</sup> See *HK*, p. 231. Maclean does cite the passage and admits it presents problems for her interpretation according to which Russell's non-demonstrative postulates should allow him some (probable) knowledge of the intrinsic qualities of unperceived events, not merely structure (p. 131). But he does say their qualities are "completely unknown". And on p. 229 he likens them to the epistemic status of Kant's "things-in-themselves", save knowledge of structure.

<sup>9</sup> She mentions DAVID PEARS as one (p. 101), but I see no evidence that his views are anything but eliminative, either in her reference to *False Prisons* (p. 63) or in his earlier *Bertrand Russell and the British Tradition in Philosophy*, which is not mentioned.

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There is no doubt about the class of couples: it is indubitable and not difficult to define, whereas the number 2 ... is a metaphysical entity, about which we can never feel sure that it exists.... It is therefore more prudent to content ourselves with the class of couples.... (IMP, p. 18)

Russell's words here can mislead. Indeed, Maclean concludes: "Thus, it is ... prudent to *replace* numbers with what we know to exist, that is, classes" (her italics, p. 66). But at this time Russell didn't think classes existed; they were, as he put it, "logical fictions".<sup>10</sup> But I certainly agree that Russell's analyses are eliminative and not reductive, as I understand the distinction. In fact she argues that if the bundle theory is construed as *reductive*, it becomes vulnerable to a host of problems, including those of individuation, modality and analyticity.

Take the problem of modality. On the supposition that a particular is *reduced to* its qualities, the qualities become essential to it (p. 100), and what would ordinarily be a contingent proposition attributing a quality to a particular becomes a necessary truth (or falsehood). But happily, this problem is avoided on the eliminative interpretation, because "... there is no particular about which the question of accidental [or necessary] predication can arise" (p. 106).<sup>11</sup>

The related problem of analyticity (that all true subject-predicate propositions become analytic or trivial) doesn't escape so neatly on the eliminative view. But as she says (pp. 114–16), Russell's own answers—in terms of defining proper names by nominal descriptions (e.g. "the philosopher called 'Aristotle'") instead of enumerating all qualities, and by allowing that complexes of qualities can be directly experienced without all their constituents being known—are good ones.<sup>12</sup>

<sup>10</sup> Curiously, one of Maclean's references to support her claim that classes are things we "know to exist" is *PLA*, p. 270 (*Papers* 8: 234) where Russell is quite clear that "classes are logical fictions." She herself had said three pages earlier that that was Russell's view. It's true that Russell doesn't always use "fiction" for things to be excluded from his ontology. (See PERKINS, "Urmson on Russell's Incomplete Symbols", p. 202.) But he does in *PLA*, as he does in *IMP*, pp. 137, and 182. The "misleading" quote on p. 18 should be read mindful of the footnote on p. 14 of *IMP* where he says their status as "logical fictions ... will be explained later", but for the present it will simplify the exposition "to treat classes as if they were real."

<sup>11</sup> She suggests that modal problems might be avoided on Albert Casullo's suggestion that the particular-bundle identity relation is a contingent one (p. 103). But after a lengthy and technical discussion (including a look at Russell on identity in *Principia*), she concludes that on the reductive supposition Russell's bundle theory is vulnerable to modal problems.

<sup>12</sup> See *IMT*, p. 122; also *HK*, pp. 299–302. Cf. his earlier view of knowing complexes by acquaintance without knowing all their constituents in *TK*, p. 120, and "Knowledge by Acquaintance", pp. 202–3 (*Papers* 6: 148).

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*Terminological problems*

I'd like to draw attention to a passage from the later Russell's replies to criticisms (SCHILPP, p. 685), and quoted by Maclean (p. 49), that I think might cause some doubts regarding Maclean's understanding of Russell's theory. He says that Weitz has misunderstood the theory in the *Inquiry*,

... according to which a given shade of colour is a particular, not a universal.... My theory has been misunderstood because readers have persisted in regarding a given shade of colour as a universal.... [My theory] ... does not reject the dualism of universals and particulars; all that it does is to place qualities among particulars.

Some scholars, e.g. D. C. Long, have taken these words as "making it clear" that Russell's qualities are *particulars*, and that it's misleading to say that his theory eliminates particulars in terms of bundles of qualities.<sup>13</sup> Maclean does not mention Long, but does comment on Russell's reply to Weitz. She seems to think that Russell is speaking of particulars in a purely "syntactical" sense, as items referred to by names (or descriptions) for bundles.

I think we have here merely a terminological distinction without a meta-physical difference. The qualities, which Maclean calls (immanent) "universals", Russell calls "particulars" (at least in the reply to Weitz).<sup>14</sup> But whether they occur singly or in bundles they are *sine* substrata. His statement that his theory doesn't reject the dualism of particulars and universals is also potentially misleading. But presumably his predicates stand for entities of the same ontological kind as his subject terms do—whether we call them (immanent) "universals" or "particulars". Predications of the form "*a* is *F*" on this theory are no longer assertions involving the old mysterious exemplification relation between different ontological kinds, but are to be taken as assertions of the form "*F* is part of *B*", where quality *F* is a part of the bundle *B* of component qualities identified (eliminatively) with *a*.<sup>15</sup>

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<sup>13</sup> See D. C. LONG, "Particulars and Their Qualities", p. 314, where he says it is "... more accurate to say that it attempts to eliminate both 'bare particulars' [substrata] and what we ordinarily think of as the qualities [transcendental universals] of things, in favour of special particulars [bundles of qualities]."

<sup>14</sup> And perhaps *only* in his reply to WEITZ. The term "particular" seems not to occur in reference to qualities or their bundles in either *HK* or *IMT*. I see only one passage where he uses the term for bundles, but he puts it in scare quotes; see *HK*, p. 299.

<sup>15</sup> Earlier in the book (p. 28) Maclean also cites Russell's reply to Weitz's claim that in 1911 Russell held that universals had "instances". Russell insists they did not have *instances*, a view, he says, he has held since 1902 (SCHILPP, p. 684; *Papers* II: 21). (But see his 1913 reply to Dawes Hicks, note 16 below.) Maclean correctly points out that "instance" is ambiguous as between the particular (with substratum) which exemplifies the universal and a particularized *quality* which is numerically distinct

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Before the advent of his bundle theory, when his universals were transcendental, Russell's terminological shifts did sometimes cause confusion. In *Problems*, Russell frequently refers to sensible qualities (e.g. "colours" and "hardnesses") as particulars, viz. sense-data (p. 12). But he also refers to colours as "sensible qualities", viz. universals, which are exemplified "in" particulars (like a white patch), but which are not themselves objects of acquaintance when we first see (are acquainted with) white patches. We have to "learn" to be acquainted with such "qualities" by "seeing many white patches". He adds "... they [the "sensible" universals] seem less removed from particulars than other universals are" (p. 101). No wonder Dawes Hicks was confused.<sup>16</sup>

*The place of acquaintance in Russell's atomism*

Maclean takes the somewhat unorthodox view that Russell's logical atomism includes his later work, and since it's generally accepted that Russell gave up acquaintance, along with egos and sense-data, after 1919, it's not surprising that Maclean doesn't think Russell's atomism needs acquaintance, at least in its original sense. On page 138 she quotes Gregory Landini as granting that logical atomism included a search for logical simples but as also pointing out that acquaintance with something is not a sufficient condition for its being a simple, because Russell allowed acquaintance with complexes; nor is it a necessary condition, because he admits that "... it is possible for there to be logical simples we are not acquainted with" (LANDINI, pp. 31–3). True enough. But I agree with David Pears that Russell was thinking of the destination of his atomism as "simples" reachable only via symbols *which had to be treated as simple* regardless of their referents' possible complexity.<sup>17</sup> And if we hoped to discourse intelligibly about them in the "perfect language", or in any language, we'd have to name them, or describe them, and that required

(nonrecurrent), and sometimes called a "trope" or "abstract particular". Russell rejected the second view before (and after) 1940. Cf. his interesting discussion on different senses of "instances" of qualities in *HK*, pp. 293, and 298. He distinguishes two important ones: one of which is essentially the one he held before 1940; the other, the one he held after, i.e. an instance of a quality *F* is any bundle *B* of co-present qualities containing *F*.

<sup>16</sup> See G. DAWES HICKS' review of *Problems, Papers* 6: 434–43. And see Russell's reply, *ibid.*, 6: 188, where he admits to some terminological ambiguity. Dawes Hicks had protested that the brown colour of the table, being a universal, "does not exist" (p. 442). Russell tries to clarify: "... there is a [transcendental] universal which is a given shade of colour, there are also particulars which are instances of the universal, and are sense-data when that shade of colour is seen. It is these particulars [sense-data] which are concerned in the discussion ... though probably my language could often be equally interpreted as applying to the universal."

<sup>17</sup> See PEARS, *Bertrand Russell*, Chaps. IV and VIII. See also PERKINS, "Meaning and Acquaintance in the Early Philosophy of Bertrand Russell", Chap. III.



acquaintance—at least that seems to be Russell’s position in “The Philosophy of Logical Atomism”.

In fact Russell himself talks frequently about objects “of which we are immediately aware” and even uses the term “acquaintance” long after 1918. In *My Philosophical Development*, he says he has maintained since his theory of descriptions (1905):<sup>18</sup>

... a principle which still seems to me completely valid, to the effect that, if we can understand what a sentence means, it must be composed entirely of words denoting things with which we are acquainted or definable in terms of such words.

(P. 169)

Of course acquaintance can’t quite be the unanalyzable dyadic cognitive relation between a mind and a sense-datum as it was before 1919. So, yes, logical atomism on some understandings may not need acquaintance, but Russell certainly thought it was a crucial part of what he took to be analytic philosophy before 1919 and, in some form, for decades later.

*Russell’s bundle theory: why so long in coming?*

Isn’t it curious that Russell, so deeply committed to the elimination of metaphysical monsters for so long, allowed the likes of Lockean substrata to remain as part of his philosophy until 1940? It’s true that he did make brilliant uses of Occam’s razor via logical constructions before World War I, but his transient particulars (*cum* substrata) were part of his ontology for another quarter century. It seems his conception of universals *qua* transcendental objects had a long-lasting grip on his metaphysical outlook. It would be very interesting to find evidence, if any, of his increasing dissatisfaction with this conception and the related one of substrata in the years leading up to the *Inquiry*. His new theory was a long time in coming, but we’re glad to have it.

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<sup>18</sup> Cf. *Problems*, p. 58, where Russell articulates his “fundamental principle in the analysis of propositions containing descriptions”: Every proposition we can understand must be composed wholly of constituents with which we are acquainted.

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