DANISH YEARBOOK OF PHILOSOPHY

VOLUME 47 **2012**

MUSEUM TUSCULANUM PRESS UNIVERSITY OF COPENHAGEN 2015 Published for
Dansk Filosofisk Selskab
in cooperation with
the Philosophical Societies of Aarhus and Odense
and with financial support from
the Danish Research Council for the Humanities

*

EDITORIAL BOARD

FINN COLLIN University of Copenhagen Chairman JØRGEN HUGGLER Danish University of Education UFFE JUUL JENSEN University of Aarhus

STIG ANDUR PEDERSEN Roskilde University Centre

HANS SIGGAARD JENSEN Copenhagen Business School MOGENS PAHUUS Aalborg University LARS GUNDERSEN University of Aarhus

*

Articles for consideration and all editorial communications should be sent in three copies to:

Danish Yearbook of Philosophy University of Copenhagen, Department of Philosophy Njalsgade 80, DK-2300 Copenhagen S, Denmark

Business communications, including subscriptions and orders for reprints, should be addressed to the publishers:

MUSEUM TUSCULANUM PRESS

Birketinget 6

DK-2300 Copenhagen S

Denmark

*

© 2015 DANISH YEARBOOK OF PHILOSOPHY COPENHAGEN, DENMARK PRINTED IN DENMARK BY SPECIALTRYKKERIET VIBORG

> ISBN 978 87 635 3448 2 ISSN 0070 2749

67083-Danish Yearbook 47.indd 4 12/03/15 13.07

CONTENTS

Sergio Cremaschi Anscombe on Consequentialism and Absolute Prohibitions Rasmus Dyring The Pathos and Postures of Freedom Andreas Melson Gregersen and Søren Riis The Living-dead and the Existence of God	
	. 7-39
	41-63
	65-86
Carl Erik Kühl	
The Negativity of Negative Propositions	87-110
Johannes Aakjær Steenbuch	
Observations on Negative Theology and Ethics	
in Early Christina Thought	111-128

67083-Danish Yearbook 47.indd 5 12/03/15 13.07

THE NEGATIVITY OF NEGATIVE PROPOSITIONS

CARL ERIK KÜHL
Aarhus University

Abstract

The problem of truthmakers for negative propositions was introduced by Bertrand Russell in 1918. Since then the debate has mostly been concerned with whether to accept or reject their existence, and little has been said about what it is that makes a negative proposition negative. This is a problem as it is obvious that you cannot just read it off from the grammar of a sentence. The aim of this paper is to demonstrate that propositions may be negative or positive in many ways: it offers a typology, and shows how the question of the existence of negative facts will receive a different answer depending on its relationship to that typology.

I. Introduction

The modern discussion of negative facts was initiated by Russell in his famous lectures at Harvard in 1914 and in London in 1918, of which the latter have come down to us in written form as *The Philosophy of Logical Atomism*. The main focus has, undoubtedly, been the question of whether negative facts, as truthmakers for negative propositions, really "exist." By contrast, it is less easy to find philosophers of note who are equally engaged by the issue of what, exactly, a negative proposition really is, or what meaning it has – let alone any who have actually sought to develop a theory about this. Most often they seem to largely take this aspect for granted. The reason for this may be that the examples they make use of – most frequently Russell's own ('There is not a hippopotamus in this room', 'This chalk is not red', and the like) – do not seem problematic in this respect: at least, not at first glance.

Russell himself, though, surely did recognise that there could be a problem here. At the end of the third lecture in *The Philosophy of Logical Atomism*, we can read the following exchange:

Question: "Does putting the 'not' into it [i.e. the statement] give it a formal character of negative and *vice versa*?" Mr. Russell: "No, I think you must go into the meaning of the words." Question: "What is precisely your test as to whether you have got a positive or negative proposition before you?" Mr. Russell: "There is no formal test." (Russell 1956, 215)

Nevertheless, as far as I am aware, he does not develop the point. Yet he does maintain that:

In the perfect logical language that I sketched in theory [i.e. the language of logical atomism], it would always be obvious at once whether a proposition was positive or negative. (1956, 215)

As is well known, however, he never did develop that language to a point where it became "obvious."

Molnar is one of the few significant writers to have subsequently attempted to define negative truths. He admits that "[one] cannot identify negative statements with negated statements since some unnegated statements are logically equivalent to statements in which negation occurs essentially. ... [s]ome predicates are implicitly negative" (Molnar 2000, 72). Molnar's examples are 'blind' and 'deaf'. From this (correct) observation it follows that a negated statement may be positive. His position is that there are "essentially positive properties" (2000, 73), and the negations of the expressions which refer to them will be essentially negative propositions. But he does not formulate a criterion, let alone a theory, of what makes a predicate "essentially positive." He merely admits that one needs a theory and, interestingly enough, "a theory that cannot be formulated on purely a priori grounds."

In the following I shall first try to account for the nature of the problem, sketching the kinds of condition that any potential solution should be expected to satisfy. Next I shall try to provide such a solution by showing that negative propositions may, in fact, be negative in a variety of different ways. In the course of so doing I shall also attempt to outline a typology of these.

II. The great confusion

What is it, then, that makes a negative proposition negative? According to common usage a negative proposition is a proposition that is expressed by a negative sentence. The negativity is simply projected from the grammatical form of a sentence in natural language. However, you need not dig far beneath

the surface to recognise that this procedure won't do. Consider the sentences (a) 'Pierre is ill', (b) 'Pierre is not ill', (c) 'Pierre is healthy' and (d) 'Pierre is not healthy'. Here the positive proposition (a) has the same meaning as the negative proposition (d), and the negative proposition (b) has the same meaning as the positive proposition (c). Either (a) and (d) are true, or (b) and (c) are true – but which truths are positive, and which are negative? In a very important sense 'Pierre is ill/not healthy' is negative and 'Pierre is healthy/not ill' is positive. But this calls for an analysis of the sort we are going to make in the third section. So far we may just observe that grammar does not help. 'Pierre is ill' and 'Pierre is healthy' spell out a pair of "positive contradictories": they are grammatically positive, but take opposite truth-values. Language is full of these: 'the room is clean' and 'the room is dirty', 'the door is open' and 'the door is closed', 'Pierre is bald' and 'Pierre has hair on his head', etc. The structure, of course, does not just occur in propositions expressed in terms of subject and predicate. It also holds, for example, for 'it is a day of rest' and 'it is a working day', for 'there is peace in Europe' and 'there is war in Europe', etc. And whether or not, in a particular language (say English), there is a term or an expression 'R' such that 'S is R' has the same meaning as 'S is not P', accordingly making 'S is P' and 'S is R' into a pair of positive contradictories may, in many cases, be a matter of vocabulary or of linguistic imagination: i.e. a contingent matter.1

The analytical application of the concept of contradictory predicates calls for further elucidation. A proposition like 'The King of Athens is not bald', with a non-existent subject, is, according to Aristotle, true, according to Russell, false, and according to Strawson, without any truth-value at all. Similar problems appear with propositions like 'this chalk is not bald', where the predicate can't be meaningfully assigned to the subject. From this it follows that there is no universal agreement about whether (i) 'S is P' and (ii) 'S is not P' are formally contradictory or merely contrary propositions. But 'Pierre is bald' and 'Pierre is not bald' (Pierre being a living person) are genuine contradictories: they do necessarily take opposite truth-values. The existence of S and the logical possibility of 'S is P' are necessary – and, as far as I can see, sufficient – conditions for 'S is not P' being contradictory to 'S is P', saving the Law of Excluded Middle for internal negation. Let's call them the XP-conditions (as in "subject-eXists-predication-Possible"). We may put it this way:

 \neg (S is P) \land S exists \land 'S is P' is logically possible \Leftrightarrow S is not P 2

In all the examples in this article it will be presupposed that the XP-conditions are fulfilled.

Many negative predications are not made negative by our adding a negating operator to a positive predicate, but are "born" negative by having a negative prefix like 'un-', 'in-', 'non-', 'dis-', etc. This may offer a clue, but not a criterion. Would we, for instance, consider 'unspoiled' as negative and 'spoiled' as positive, if we were not led – or misled – by grammar to think so? May 'certain' be positive at the same time as 'indubitable' is negative? Very often the term with the negative prefix is merely contrary, not contradictory to the positive term: a person who is not happy need not be unhappy. Sometimes a predicate may be provided with more than one negative prefix, resulting in different meanings. Compare 'disinterested' and 'uninterested', 'disorganised' and 'unorganised', or 'disarranged' and 'unarranged'. Sometimes there is no corresponding positive predicate, constituted by the absence of the prefix. A child that is not "mischievous" is not "chievous" but "well-behaved." (And which of them is actually the positive/negative predicate? Is the well-behaved child characterised by the absence of "mischievousness." or is the mischievous child characterised by the absence of "being well-behaved"?) Being "nonchalant" is not the negation of being "chalant." Sometimes the predicate with a negating operator does not have the same meaning as the negation of the predicate. A man may be infamous and famous at the same time. A man who is not "indifferent" is not – by double negation – "different." A non-profit organisation is not the same as an organisation (such as a business) that makes no profit. 'A likes B' contradicts 'A does not like B', but is contrary to 'A dislikes B'.

This *is* confusing, so it still remains to say, perhaps by way of consolation, that in many cases a grammatically positive predicate will not and, I think, *cannot* be contradictory to another positive predicate. A proposition stating that a certain object is located at a certain place L_0 cannot – as a rule – be contradictory to a proposition stating without the use of a negative operator or prefix that the object is *not* at L_0 . That would presuppose that we had as many positive propositions, each contradicting a positive reference to something's being located somewhere, as there are – i.e. as we might construct – positive references to something's being located somewhere. If my book is *not* on my table, that would call for one predicate, if it is *not* under my bed, that would call for another, etc. The same holds for all forms of quantification: 'This stone is not 23 kilograms in weight', 'the distance is not 273 metres', etc. And it holds, as a rule, for propositions stating that an event *did* take place *versus* propositions

stating that it *did not* take place, for colour predicates, and for many other types of predicate too.

We may conclude that there is a distinction between a proposition being *grammatically positive/negative* and its being "really" or, as we shall say, *ontologically positive/negative*. That distinction forms one of the principal subjects of this article.

III. The negativity of propositions

If we don't want to relinquish the distinction between positive and negative propositions as largely arbitrary — which most of us would be intuitively reluctant to do — then we must explain what it is, exactly, that constitutes the negativity of a negative proposition insofar as this can't simply be read off from the grammar of the proposition itself. There is no alternative but to do the analytical job, from sentence to sentence, concept to concept, in order to decide what actually is — i.e. ought to count as — a negative or positive proposition.

A positive proposition states that something *is* the case, and a negative proposition states that something *is not* the case.³ But as we have seen, where that distinction is applied to particular propositions grammar does not furnish us with adequate criteria. A proposition may be *grammatically positive* (abbreviated 'G-positive') and yet be – so we shall put it – *ontologically negative* (abbreviated 'O-negative'). 'Pierre is blind' is an example. Or it may be *grammatically negative* ('G-negative') and yet be *ontologically positive* (O-positive). 'Pierre is not blind' is an example. And even when a proposition is G-positive and O-positive at the same time, or is G-negative and O-negative at the same time, it is so for different reasons. 'Socrates is not alive' is G-negative merely by the presence and function of 'not', whereas its being O-negative depends on the meaning of 'alive' and what it means to be alive.

My thesis is that propositions may be O-positive/negative in many ways, according to different criteria. They may be negative in a "sheer" sense (see below), or they may have different sorts of "ontological valence." For example, 'Pierre missed the train' is O-negative – it has a negative valence – according to a criterion that we may call *failing* (i.e. failing *versus* succeeding), and 'Pierre is bald' is O-negative – it has a negative valence – according to a criterion that we may call *missing an attribute* (missing *versus* not-missing an attribute). Elaborating a range of such ontological valences will be the principal aim for the remainder of this section.

As regards the nomenclature of ontological valences, I shall mainly coin their designations in negative terms: as 'absent', 'deficient', 'dysfunctional', 'missing', etc. The simplest reason for this is that in many cases there is no appropriate term for the positive valence. Is there, for instance, a positive term that may be substituted for 'not missing' in the sentence 'the book is not missing from the shelf'? The sentence 'the book is on the shelf' is not sufficient. It should be added that the book also has its place there. I think it is hard to imagine a language where this could be different. Abnormalities – ways things may be out of order – are discovered/invented every day. You may be paedophile, canophile, P¹-ophile, P²-ophile ... P¹-ophile. The predicate 'sexually normal' is only contrary to each of these, not contradictory. Could you imagine a language in which each new sexual *ab*normality produced a new term for the correspondingly specific state of normality?⁴

IV. Sheer negativity

Before entering upon the presentation of specific types of ontological valence we need to introduce a concept: that of *sheer negativity*. Consider these examples:

- (1) There is not a hippopotamus in this room.
- (2) This chalk is not red.
- (3) A does not love B.5

Each of these propositions asserts or is meant to assert that a certain (sort of an) object is *not* located at a certain place, and just that, or that it does *not* have a certain property, and just that, or that it is *not* related to a certain other object in a certain way, and just that. They all maintain the absence of something – a hippopotamus in a room, the redness of the chalk, A's loving B – without thereby maintaining the presence of something else.

In the case of (1), the proposition states – or is meant to state – nothing more about hippopotami (or about the room) than it would minimally state about any object capable of being in that room. It is simply an instance of 'There is not an X in this room'. Roughly, the only thing presupposed about the object would be its size. The proposition maintains the sheer absence of hippopotami in the room without implicitly maintaining the presence of something else. As regards (2), the proposition states nothing more about the chalk than what it

would minimally state about any object capable of being red. It is simply an instance of 'X is not red'. The proposition maintains the sheer absence of redness with respect to that chalk, without implicitly maintaining the presence of something else. Clearly, if a coloured object is not red – and only coloured objects may not be red – then it must have some other specific colour. But the proposition does not state which one. There is no positive property called 'other-than-redness'. By contrast, 'that traffic light is not red' is not just negative in the sheer sense, since the absence of redness as assigned to the traffic light constitutes part of the actual conditions that bear on the activity of traffic. In (3), A and B are meant to be arbitrary, i.e. conceptually no more specific than is necessary to make the proposition conceptually well-formed. A and B are supposed to be human beings, but nothing is presupposed about whether or not they even know each other. The proposition maintains the sheer absence of love on the part of A, in relation to B, without maintaining the presence of some other relationship between them. However, if we write 'This man A does not love his wife B', the negation is more than just a sheer negation, as the absence of love in a marriage stands out "positively" as being a feature of that marriage.

Propositions (1)–(3) are O-negative in the most attenuated sense. The point, then, is that propositions may be negative in a more "substantial" sense, according to which the absence of something implies – or simply constitutes – the presence of something else. That is the essential feature of propositions that have an ontological valence.

A proposition like 'X is not red', as we saw, is negative in the sheer sense when 'X' takes the value 'this chalk', but becomes "loaded" with an ontological valence when the value is 'this traffic light'. Similarly, 'A does not love B' is negative in the sheer sense when 'A' and 'B' are proper names or definite descriptions like 'the president of the United States' and 'my grandmother', whereas it takes a negative valence when 'A' and 'B' are further specified as 'this man A' and 'his wife B'. However, in some cases the option of sheer negativity does not apply. 'A is not married' never merely spells out the absence of a contracted marriage. No matter who A is, or how he/she is referred to, the married and the unmarried person do each of them have a "positively" assigned marital status implying the presence of certain civil rights, and also certain civil, and perhaps moral, obligations. Similarly, when a hippopotamus is absent from some place there is not *eo ipso* something present "instead of" the hippopotamus.⁷ But when *peace* is absent from some place, something is

present: war. Whenever and wherever there is war, there is not peace, and whenever and wherever there is not war, there is peace, so 'there is war' and 'there is peace' make a pair of contradictories. Even though peace and war are, "positively." two forms of human social life, this does not affect the view that peace constitutes a kind of default or "natural" state of affairs, implying that war then constitutes a deficiency.⁸

V. Ontological valences

Now let's take a closer look at ontological valences.

O1. 'Absence as Deficiency':

(4) There is not a blackboard in this lecture room.

The room is still the room in which Russell is lecturing, and the proposition spells out the sheer absence of a blackboard in the same way as the proposition 'there is not a hippopotamus in this room' spelled out the sheer absence of a hippopotamus. But there is more to it. In the lecture room the absence of the board will also give rise to an O-negative proposition according to a criterion that we may here call *absence as deficiency*, in the specific mode of *dysfunctionality*. A lecture room, to be fully functional as such, must include a board. But there is no board in the room. The absence of the board means the presence of practical obstacles. When X becomes deficient on account of the absence of Y, then X is *missing* Y – in one sense of that word.

Right now there is no water either on the island of Sardinia or on Jupiter. But the absence of water on Sardinia makes the crops wither: i.e. water is *missing* there. Here the absence of water means the presence of *drought*. Insofar as there is no life on Jupiter, there cannot be drought. Drought implies the presence of something suffering from the absence of water.

Drought, as we have defined it, means the absence of water in the mode of being missing. However, at a sufficiently low level of physical description it will lose that ontological valence, and even the term 'absence' will disappear from the account. The physiochemical processes going on, were there to be H₂O, we may call P1; the processes going on in the absence of H₂O we shall call P2. Both are described and explained in terms of the present components and their interaction. The absence of H₂O does not occur in any chemical formula.⁹ But the moment you switch from the lowest level to a level where a

concept of life (even in the most primitive form) is introduced, P2 is what happens when a vital condition for life is not fulfilled. You get the absence of something as something "missing": there was no H₂O, so the plant withered. The withering of the plant was partly a consequence – if you don't like to say 'effect' – of the absence of water. 11

In most cases of deficiency/dysfunction there is a *radical* variant that we may call *obstruction/preventing*.

(5) There is no light in this lecture room (= This room is dark).

Russell may have his difficulties in lecturing in a room with no board. But he would be entirely prevented, if there were no light – either natural or artificial. This is "missing" as "obstruction by absence." X is prevented from doing Z by the absence of Y.

Now consider this example:

(6) Pierre [with whom I have an appointment] is not in the room.

This time the room is a café, and Jean-Paul Sartre has an appointment with Pierre to meet him there at four o'clock. Entering the café some minutes later he casts a glance across the room, only to see that Pierre is absent from his usual place. Neither Paul Valéry, nor Lord Wellington, nor a hippopotamus, is in the room, but Pierre is absent in a more substantial sense. We may consider it to be an example of deficiency by absence. Yet Pierre's absence is not a deficiency of the room, of its inventory, etc., but, rather, of the situation – that of two persons being supposed to meet each other by appointment. The absence of Pierre makes it a situation of the type Sartre calls an "existential absence." The board is missing whether or not there is somebody in the room failing to see it and being prevented from using it. It belongs essentially to the stock of the room. The room may be deficient with respect to the absence of a table, lamp, and so on. Yet Pierre, by contrast, is not "missing" from the room. (Maybe Jean-Paul misses Pierre, but that is not constitutive of the existential absence.)

Had there been an appointment between twenty-eight former classmates to meet that afternoon for a chat, with Pierre and Jean-Paul being just two of them, then Pierre's absence would still have made the situation deficient, but the deficiency would not have been radical: i.e. it would not have prevented the session from taking place. However, when the appointment is solely between Pierre and Jean-Paul this is the case.

(7) Pierre is hungry (= Pierre is not satisfied)

Granted that Pierre exists and belongs to the kind of entities whose appetite for food may be satisfied, 'Pierre is hungry' and 'Pierre is satisfied' are contradictory propositions: i.e. there is a one-word predicate for whatever we may take to be the positive or the negative property, respectively. There is nothing dysfunctional about being hungry. That's exactly the difference, I think, between being hungry and starving. But when you are hungry you are still longing for (and consequently looking, aiming, working or even fighting for) something that you are thus presently in need of and, in that sense, *missing*: food. 'Pierre is hungry' is, therefore, an O₁-negative proposition.

Similarly, 'Pierre is ill' is O₁-negative, because illness means a living organism being dysfunctional.

O2. 'Presence as Deficiency':

In the previous examples the ontological negativity was a matter of the absence of something. Now let us compare that with the following:

(8) This room is not clean (= This room is dirty)

A clean room is a room without dirt, better suited to the use that we make of the room *as* a room – as a lecture room, living room, dining room, study – and something which we take care of by cleaning and keeping clean. This time the *presence* of something, dirt, makes the proposition O-negative in terms of *deficiency* or *dysfunction*.¹³

The proposition 'Pierre has a tumour' asserts the presence of something: the tumour. But having a tumour means to suffer from an illness – the living organism being dysfunctional – so the proposition is O₂-negative, whereas 'Pierre has no tumour' is an O₂-positive proposition.

(9) The road is blocked by a rock

The proposition 'there is a rock on the road' is positive in the sheer sense. But when it is further spelled out that the rock is *blocking* the road, then the proposition becomes O₂-negative. The road-users are prevented from something by the presence of something.

- O_{3.} 'Disorder as Deficiency':
- (10) This picture on the wall is awry (= This picture on the wall is not straight)

If we take it as a premise that the picture in question, in virtue of its kind, is meant to hang straight, then hanging awry is a negative predicate in terms of deficiency/dysfunction. But the dysfunction is not – in any plain sense – constituted by the absence of something that essentially ought to be there, nor by the presence of something that essentially ought not to be there. In absolutely general terms one might say that there is an "absence of order." But when Russell's lecture room is deficient in examples (4) and (5), it is because of the absence of something (i.e. the board or the light), whereas when the picture is awry, the deficiency is the absence of something: order. It is also arbitrary whether you assign the deficiency to the picture or to the arrangement.

'The knife is blunt', 'his/her heart is beating irregularly', 'Pierre is short-sighted' are examples of O₃-negative propositions in the mode of something being "out of order." But if the knife is broken, it can't be used at all, and if Pierre is blind he is entirely prevented from seeing. These exemplify the radical variant of disorder: obstruction/prevention by/as disorder.

O4. 'Missing/Lacking an Attribute':

(11) Pierre is bald

Now back to baldness and not-baldness. Pierre is neither the King of France nor a piece of chalk but an actually living human being. But having hair on one's head is a human attribute, and an *absent attribute* is a *missing attribute*. (Even if a person has not *lost* his hair but has lived his whole life without hair, he would still be bald.) In this case the "missing" or "lacking" does not refer to something as being dysfunctional. Whatever the function of hair may be, it is not that function we are referring to when we say that somebody is bald. Some

humans have hair on their upper arms, others do not. But an absence of hair *there* is not a case of hair being missing there, as having hair present on the upper arm is not a property that humans have just *qua* being human: i.e. it is not a human attribute. Also, when a child has lost its milk teeth, it does not then *lack* them. But when an adult loses a wisdom tooth – or maybe never comes to have it – he will lack it.

'Pierre is bald' is an example of a radically negative variant of O₄. If we introduce, within the category of having hair on one's head, the dichotomy 'lacking (some) hair on one's head /not lacking hair on one's head', then the "soft" negative variant will be 'Pierre is thin-haired'.

- O5. 'Failing':
- (12) Pierre's flute playing is out of tune 14

Whenever human practical life is involved there is – explicitly or implicitly – an absolutely basic ontological criterion in play, which we shall call O₅: *failing and succeeding*. When Pierre is playing out of tune, something – the playing, the music – is out of order, so the truth of an O₃-negative proposition is implied. But Pierre playing out of tune also means, in an even more basic sense, Pierre *failing* to play *in* tune. In examples (4), (5) and (8), it is the room as a site for various kinds of human activity that makes the absence of a board, or of light, or the presence of dirt, negative: the activities fail, or face the threat of failure, or have less than optimal conditions for success. In these examples O₁-and O₂-negativity depend on O₅-negativity.

According to the Kenny-Vendler classificatory scheme for action types (or action verbs), 'playing the flute' counts as an *activity* (Vendler 1953; Kenny 1963; see also Kühl 2008). It may be defined in different ways, the most basic characterisation probably being inferential: any moment in which it is true that you are *playing* is a moment in which you *have played* (*i.e. have been playing for a while*). ¹⁵ Failing in the performance of an activity means performing it in a *deficient way*.

The second action type is *accomplishment* (Vendler) or *performance* (Kenny):

(13) Pierre [who took lessons in flute playing] did not learn to play the flute.

Here it holds that any moment in which it is true that Pierre is *learning* to play the flute is a moment in which he *has not (yet) learned* to play the flute: failing in the project or performance of learning means failing to *accomplish* the learning.

The third action type is called *achievement* (by Vendler):

(14) Pierre did not find his flute.

(14) implies that Pierre had a flute and, on the occasion in question, didn't know where it was, but tried to find it. But whatever Pierre actually did in order to find his flute, there is one thing he failed to do: find it. Failing in the performance of an achievement means failing to *achieve* the projected *end*.

There may be other ontological criteria for a proposition being O-positive or O-negative. And there are certainly other types of proposition that we have not analysed as regards ontological valences: truth-functions, general propositions, modal propositions, etc. All this points towards a need for further discussion, which may well call for additional analytical tools. Yet, at the same time, this would certainly exceed the scope of the present paper, whose basic concern is just to demonstrate how an ontological discourse about the negativity and positivity of propositions, such as is necessary if we are to arrive at a properly nuanced verdict concerning the nature of negative facts, *makes sense*. On the other hand, even if we stay with singular propositions and the ontological criteria already so far introduced, there are a few further observations that ought to be made.

Let's begin with a remark concerning "contextual valence." Consider the following:

(15) Pierre did not play the flute

Without a context I think this is a negative proposition, in the sheer sense of 'negative'. But we may easily imagine a context in which the flute-playing was more than just absent and, with this, how the meaning of the proposition, and accordingly the presence/absence of ontological valences, might change with the context of utterance. Imagine an orchestral rehearsal where Pierre is performing the flute part and misses the entrance at bar 238. In that context (15) will be – or may be spelled out as – an O₅-negative statement. Or imagine that

a bit later on in the score there is an interval in the flute part, and Pierre *does* make the pause. This makes (15) an O₅-positive statement

Now let us proceed to a remark concerning what I would like to call "dynamic paraphrasing." When propositions occur in pairs of contradictories there may also be propositions stating the transition or change from a positive valence to the corresponding negative valence, or vice versa. A proposition stating a transition from a positive to a negative valence will itself then take on a negative one, whereas a proposition stating a transition from a negative to a positive valence will then take on a positive one. The transition from negative to positive in the sheer sense (e.g. from 'there is not a hippopotamus in this room' to 'there is a hippopotamus in the room', where this amounts to the same thing as 'a hippopotamus entered the room') is, in itself, an ontologically positive proposition in the sheer sense, whereas the transition from positive to negative (e.g. 'the hippopotamus left the room') is, in itself, an ontologically negative one, also in the sheer sense. This may hold in principle for all types of ontological valence: 'Pierre has a tumour' is, let's recall, an O2-negative proposition, the presence of the tumour constituting a deficiency, whereas 'Pierre does not have a tumour' is O₂-positive. The proposition 'Pierre does not have a tumour any longer' accordingly becomes a dynamically O₂-positive proposition, whereas 'Pierre has got [i.e. has developed] a tumour' will be a dynamically O2-negative one. It should, moreover, be noted that the reason why the end (or telos) of such a transition takes on a positive or a negative valence is also the reason why the transition itself takes on, respectively, a positive or a negative valence.

Where the ontological criterion of *failing* is concerned, especially, the valences may be positive *and* negative at the same time, depending on the varying enterprises and perspectives of different agents. This gives rise to such "dialectical variants" as the following:

(16) The level-crossing barrier is down

The barrier being down prevents the cars from passing over the level-crossing (O₂- and O₅-negative), at the same time as giving the train leave to do so (O₂- and O₅-positive).

If there is light, you may manage to see things, but not to hide. If there is no light, you may manage to hide, but not to see.

When a passenger is sitting on a seat in a bus, the seat is in use [by him], as

opposed to *not in use [by him]*, and he succeeds in having a comfortable trip. But from the perspective of other passengers, the seat is *occupied* as opposed to *vacant*.

In Ex. 9 'The road is blocked by a rock' was, as we saw, an O-negative proposition, since the block was *preventing* road-users from getting through. But the rock may have been put there by highwaymen, who have thus *succeeded in preventing* the road-users from getting through, making the proposition O-positive instead. Yet things are now becoming complicated – as complicated as daily life.

(17) The door to the room is locked.

If Pierre wants to enter by the door and does not possess the key, he will fail to do so if the door is locked, but succeed if it is unlocked. In that context 'the door is locked' is an O-negative proposition, 'the door is unlocked' an O-positive one. On the other hand, when the door is locked people who possess the key may succeed in preventing those who do not from entering by the door, whereas if it is unlocked, they may fail to do so. In such a context the first proposition gives rise to an O-positive proposition, the second to an O-negative one.

VI. The meanings of 'The meaning of a negative or positive proposition'

This whole discussion has been aimed at addressing the issue of what makes a negative *proposition* negative. So the propositions we study should be deemed negative and their specific mode of negativity should be read off from the *meaning* of the proposition. The majority of the examples work well this way. The negative valence is embedded in the meaning of the predicate ('Pierre is bald', 'Pierre's flute playing is out of tune', etc.), or it follows from its meaning insofar as it is negated ('the room is not clean', 'Pierre did not find his flute', etc.), or it follows from the meaning of the subject and the predicate in their specific configuration ('the picture on the wall is awry').

But what about an example like (4): 'There is not a blackboard in this lecture room'? One might argue that this proposition simply asserts the sheer absence of a blackboard from the room exactly as (1) ('There is not a hippopotamus in this lecture room') asserts the sheer absence of a hippopotamus from the same room. The deficiency – the presence of practical obstacles in (4) – is a conse-

quence or effect of the fact and is not implied by the meaning of the proposition. The proposition itself has no ontological valence. If one were still to talk about a "negative ontological valence" here, it would have to be assigned to the fact, without being assigned to the proposition.

I think this is wrong. The meaning of a sentence, and of the words in that sentence, is what you must minimally understand when you understand the sentence. But you have not understood the meaning of the word 'blackboard', or the expression 'a blackboard in a lecture room', if you don't understand what it means for a blackboard to be in a lecture room – i.e. the use of it, its function, what it is "good for." (It is not sufficient just to be able to classify objects as being or not being blackboards.) But *when* you have understood these terms as they are brought together in the proposition 'there is not a blackboard in this lecture room', then you have *also* understood – on the level of semantics, you may say, if you so wish – the *proposition* as stating a deficiency.¹⁶

Similarly in (5): 'There is no light in this room [where I am lecturing]'. If you don't have a certain minimal understanding of the meaning of lecturing in a lecture room, and of what the absence of light means for such an activity, then you have not understood the very meaning of the proposition. On the other hand, *when* you have that minimal understanding, then you have also recognised the deficiency: i.e. you have recognised the proposition as being O₁-negative. Compare this with a proposition like (8*): 'There is no light in this room (where I'm hiding)'. When you have in place the minimal understanding (of how the presence of light relates to the project of hiding) necessary to understand the meaning of that proposition, you just *have* also recognised the proposition as being O₂-positive.

Take the example 'There is no water in my flower garden', which I claim to be O₂-negative ("presence as deficiency"). Imagine somebody who rejects the proposition, pointing at a full water-container in the corner of the garden: "There is water in the container, and the container is in the garden, so there *is* water in the garden." Clearly, he has not understood the meaning of the proposition. 'There is no water in the garden' means that *the soil is dry*, and this is what I tell him. Let us say that he then goes on to argue as follows: "There will always be *some* water down there, the soil will never be entirely dry. So *how* dry is the soil in your flower garden when you say that it is dry?" Unless he gets an answer to that question, he has still not understood the original proposition. Even so, I don't think I can give him an answer that does not spell out 'dry' – in

this context – in terms of a *deficiency* of water. Yet the soil *per se* cannot be deficient in water: if you believe that, you have not understood the meaning of the expression 'dry soil'. *Something in the soil* must be deficient in water, insofar as the soil can be said to be deficient in water. It might be insects or worms, it may be plants – you name it. But since it is spelled out here in a proposition about a flower garden, let us take it as pertaining by contextual implication to the plants there. Our point is that he has not really understood the sentence until he has understood *this*, and in this way the deficiency turns out to be a feature of the meaning of the *proposition*, too – thus making it an O₁-negative proposition. You may put it this way: 'There is no water in my flower garden, therefore the plants lack water' is an entailment rather than a statement of a causal relationship – or, at least, it sits on the borderline between these.

I wouldn't say that a man doesn't know the meaning of the *word* 'flower' or the *expression* 'flower garden' if he doesn't know that flowers need water and get it from the soil, but I would insist that he doesn't know the meaning of the *sentence* 'there is no water in my flower garden' (where, as we've said, this amounts to saying that 'the soil in my flower garden is deficient in water').

Clearly, by no means is it the case that all negativities in this world may be spelled out as analytical truths. Most of them – unfortunately, perhaps – cannot. 'Pierre's body temperature is 45 degrees centigrade' and 'Pierre has a high fever' may relate to the same "negative fact." but only the latter is a negative proposition in the sense that it takes on a negative ontological valence. The first simply assigns a certain property to a certain subject: it is positive in the sheer sense. Alternatively, let us say that there is a hippopotamus in this lecture room. That will be an obstacle for anyone involved in a lecture there, but this does not follow from the truth of the proposition 'there is a hippopotamus in this lecture room'. The minimal knowledge or understanding of hippopotami, lecturing, lecture rooms, of hippopotami in lecture rooms, etc., that you necessarily have insofar as you understand the meaning of the sentence, does not imply that you understand why it constitutes an obstacle. It is, to be sure, easy to explain the latter, but it is not, nevertheless, a matter of pure semantics in the sense of being embedded in the meaning of the sentence itself. Here the proposition *itself* has no ontological valence.

VII. Problems with ontological valences

Let's recapitulate the argument so far: if you have strong opinions on negative facts as truthmakers for negative assertions – i.e. you don't "believe in them" – then you must find some alternative basis for distinguishing between positive and negative propositions. You must have a criterion, or a set of criteria, and ideally you should be able to apply them in all cases. But these criteria cannot be grammatical, most obviously because a grammatically negative proposition will very often have the same meaning as a grammatically positive proposition. If you want to arrive at a properly qualified opinion regarding the existence of negative facts you must develop – and apply – other criteria, be it the principle of sheer negativity or something worked out in terms of ontological valences. I think this is what many writers intuitively do when dealing with the subject and I have tried to demonstrate, or at least illustrate, how such intuitions could be made explicit in a discourse. Undoubtedly there are a variety of problems involved in this approach, but I shall mention just two.

The first problem is that of "ambivalent contradictories." An O-negative proposition always presupposes an O-positive proposition to negate, and vice versa. Just compare 'this monkey is "a he" with 'this monkey is "a she". If the monkey is "a he." it is not "a she." and if it is not "a he." it is "a she." so the propositions are contradictory. But which of them is positive, and which is negative?¹⁷ Aren't both of them positive, in fact? In that case we have to admit that there are cases where the negation of an O-positive proposition doesn't create an O-negative proposition. Or should we rather accept that there are cases where it does not make sense to use the signs in question? Compare, also, 'the temperature is above 10 degrees centigrade', and 'the temperature is 10 degrees centigrade or below'. Is night the absence of day, or day the absence of night? Is sameness the absence of difference, or is difference the absence of sameness? The examples are legion.

Compare, also, the propositions 'Pierre is in pain' and 'Pierre is not in pain'. Which is positive, which negative? Here, and in many other cases, it may help to clarify matters if we supplement the categories of grammatical and ontological valence with that of *experiential* valence. In all languages that I know of we have no possibility of converting the second proposition into a grammatically positive one. This is not an ontological argument, but it may be a matter of how we learn to use the concepts. Adam and Eve didn't know from the beginning that they were free of pain, and even The Lord would have had his difficulties in explaining it to them, had he not expelled them from the Gar-

den of Eden. You can't explain what painlessness means except by using the concept of pain, and you can't even *experience* painlessness as painlessness if you have had no experiences of pain. On the other hand – in ontological terms – one may argue that painlessness is "the default case." or is "normal." whereas being in pain is "abnormal." or a deficiency in the life of the sufferer.

It is worth adding that the existence of ambivalent contradictories does not by any means render the distinction between O-negative and O-positive predicates or propositions "absurd" or superfluous as a whole. It rather just means that there is even more there to be elaborated, on account of the fact that we will need criteria to distinguish between cases where positive and negative make sense and cases where they do not.

The second problem to be mentioned is that of *molecular propositions*. Take the following:

(18) Socrates is dead.

According to Russell "[t]his is *partly* a negative fact. To say that a person is dead is complicated. It is two statements rolled into one: 'Socrates was alive' and 'Socrates is not alive'" (Russell 1956, 215, my italics). But he does not develop this point, which is a shame, since the very starting point of his logical atomism is that many (singular) propositions – most probably the majority – may turn out *not* to be atomic.

The problem with molecular facts is not their complexity as such. As long as they are simple conjuncts of "atomic" facts the molecular fact is just the components. ¹⁹ But if we still take it as a principle, that from any proposition 'A' we may derive another proposition ' \neg A' this other proposition will become a series of disjuncts, and disjunctive facts form a bullet that is not easy to bite. The negation of the proposition 'Socrates is dead' would, in case it were true, be made true by the "fact" that *either* Socrates was never alive (he might for instance be a mythological figure) *or* he is (still) alive. ²⁰

As we mentioned, Russell discusses other types of fact than those that are supposed to make a singular proposition true or false. One of them is "general facts." another is "existence-facts." as Russell calls them in order to emphasise that there are not merely general and existential propositions but also facts making them true or false (Russell 1956, 234–35). And as he himself points out, it is quite arbitrary whether such propositions are considered to be positive or negative (228–29). Propositions like 'all men are mortal' and 'there exist

blue fish' may strike us as positive, whereas propositions like 'no Greeks are monkeys' and 'there exist no unicorns', on the face of it, i.e. according to their grammatical form, appear to be negative. But from the first chapters in any textbook in logic we know that a general proposition is logically equivalent to a proposition that denies the existence of something ('all men are mortal' is logically equivalent to 'there exist no men that are not mortal'), and all existential claims deny a general proposition ('there exist blue fish' is equivalent to 'not all fish are not blue'). Russell strongly emphasises this, but at the same time he seems to ignore it too. His favourite example of a negative fact, "There is not a hippopotamus in this room." may itself be obverted into "All hippopotami are not in [i.e. are outside] this room." But the "psychological" effect may be different. In the latter case one imagines that the utterer knows how many hippopotami there are in the world, has checked them one by one and arrived at the conclusion that they are all to be found outside this room. In the first case there is just a glance around the room. The room is in some sense taken as the subject and the absence of the hippopotamus as the predicate: "This room is empty of hippopotami."

VIII. Negative facts

I think theorists generally share the intuition that there is a distinction between (ontologically) positive and negative propositions. We may, in some (or maybe many) cases disagree about where the line should be drawn, but *given* the existence of the distinction we may ask about the truthmakers for the propositions that occur on the negative side. And that is the question that most recent theorists have concerned themselves with.²¹ So does this study of how negative propositions are to be defined have implications for that question – the question, that is, of whether negative facts exist or not? This is a subject I intend to discuss in more detail in due course, in a subsequent paper,²² but it nevertheless seems appropriate to anticipate here some of the observations that most readily present themselves.

If we take a look at the category of O-negative propositions that do have an ontological valence, I find it hard to deny that they, when true, are each made true by a negative fact in quite the same way as un-negated positive propositions, if true, are each made true by a positive fact. In some cases I wouldn't even know what it would *mean* to deny this. I will mention just a couple of such cases.

'Pierre is not healthy'. This is a negative claim. Yet the absence of health means the presence of illness: i.e. the presence of symptoms and causes of symptoms. I find it odd to say that the occurrence of illness is less of a fact and "exists" in a different or even vaguer sense than the occurrence of health.

What about the negative property of blindness?23 Whereas the absence of health is constituted by the presence of something else, blindness seems to be the sheer absence of something, viz. sightedness. Now, compare the following two sets of remarks: (1) "This is A. He is sighted. That's a fact! Or in analytical philosophers' terminology: the fact that he is sighted does exist." (2) "And this is B. He is blind. That's not a fact in the same sense as A's being sighted. The fact that he is blind does not exist!" You are surely justified in wondering about the meaning of this comparison. You may feel yourself to be in a position somewhat similar to that of Aristotle, about whom it is said that when somebody presented him with the Eleatic arguments against the existence of movement he simply walked around. But why is it so? First, blindness can only be assigned to beings for whom the faculty of seeing is an attribute in virtue of their genus: for instance, human beings. A stone, a flower, or an earthworm cannot be blind. Next, you cannot be blind for just a few minutes. Your being blind must obtain for a significant part of your life – maybe your whole life – in order to be blindness. You are not blind unless you have been that way long enough to mean you are living the life of someone who is blind. In this sense B's blindness is not less "real" than A's sightedness. I would rather say that A's sightedness impacts on his life in one way, and B's blindness impacts on his life in another. There are even a lot of things B "positively" does, being blind, that A does not do, not being blind: he takes a walk using a white stick to help him find his way and to be recognised by other people in the street as blind, waits at the busy crossroads for somebody to help him cross the road, reads or writes a letter in Braille, etc.24

As has sometimes been noted, the discussion of the nature of causation might well have developed differently, had it not, since Hume, taken the behaviour of billiard balls as its paradigm case (Randall, 1960). Similarly, I think, the discussion of the existence of negative facts would have turned out differently, had it not been so concerned with the absence of hippopotami from lecture rooms, and with chalk not being red.

Notes

- 1 Just to be on the safe side, we should perhaps add that the problem of what defines the positivity/negativity of a proposition only arises when two propositions p and q make a pair of contradictories: i.e. when 'p → ¬q' and '¬p → q': one of them, it is assumed, must be the positive, the other the negative. By contrast, although the proposition 'Pierre is in Paris' does contradict the proposition 'Pierre is in Berlin', the propositions don't together make a pair of contradictories but, instead, a pair of contraries: i.e. 'p → ¬q' or (as logically equivalent) 'q → ¬p'.
- 2 The principle merely holds for contingent truths and not when 'S is not P' by itself is a logical necessity. I owe this observation to Eline Busck Gundersen.
- 3 I shall mainly confine the present discussion to singular propositions.
- 4 Another reason is that most often it will be the introduction of the negative valence that brings it about that it makes sense to talk about 'negative' and 'positive'. The positive is a default (in which case you may question whether it deserves to be called 'positive'), whereas the negative "opens up the dimension." One may compare this to the case of rational and irrational numbers: the concept of rational numbers is not, of course, to be understood as the negation of irrational numbers, but it is the introduction of irrational numbers that leads to the very dichotomy of rational vs. irrational numbers and, in that sense, makes the rational numbers explicitly rational too. Similarly, it is the markedness of the term 'woman' that makes 'man' a gendered term.
- 5 These are among Russell's favourites. Another is 'Socrates is not alive'. However, the logical structure of this proposition is not entirely unambiguous. Russell writes: "... it is simpler ... to assume that 'Socrates is not alive' is really an objective fact in the same sense in which 'Socrates is human' is a fact" (Russell 1956, 214). Apparently, he takes 'alive' to be a predicate, and in his own terms the structure will be: '(∃x)(x is Socrates ∧ x is not alive)'. There is, however, an obvious alternative, which is to simply write '¬(∃x)(x is Socrates)' and add a terminological footnote explaining that Socrates is a human being and that when we speak about human beings using our natural language − in this case English − 'exists' is conventionally substituted by the expression 'is alive'.
- 6 We omit dogs, dishes, etc.
- 7 That is one of Russell's arguments against Demos' incompatibilism (Russell 1956, 213–14).
- 8 Hobbes might disagree: war is natural, peace is constructed.
- 9 For an analysis of the "acausality of the negative," see Molnar 2000, 77.
- 10 For a similar analysis, see Armstrong 2004, 64.
- 11 See ibid, 63-66.
- 12 For Sartre, "existential absence" is opposed to "formal absence." which may reasonably be considered to be a variant of (what I have called) "sheer negativity." (See Sartre 1969, 9–10.) I have slightly modified Sartre's example (and his analytical point) for my own purposes.
- 13 As long as the proposition 'there is dirt in the room' is merely considered to be positive in the sheer sense, the dirt should not, strictly speaking, be called 'dirt', but 'grease spots, particles of certain sorts, of a certain minimal size, in a certain minimal quantum, etc.', instead.
- 14 'Pierre is playing in tune' and 'Pierre is playing out of tune' are not contradictories since it is possible that Pierre is not playing at all. The negation of 'Pierre is playing in tune' goes 'Pierre is playing out of tune *or* Pierre is not playing' (exclusive disjunction). The XP-conditions (see p. ###) still hold: since Pierre exists and it is possible that he may not play in tune we get '¬(Pierre is playing in tune)', as equivalent to 'Pierre is not playing-in-tune', which in turn is not equivalent to 'Pierre is playing-out-of-tune'.

- 15 Actually, only Kenny makes use of an inferential characterisation.
- 16 A short description of the minimal understanding involved: lecturing is an activity in which one person (= the lecturer) tells something to many persons, all facing him (= the audience). Parts of what he tells are exclusively, primarily, or preferably, accessible as written or drawn (diagrams, formulas, drawings, surveys). Using the blackboard the lecturer enables the audience to *share* that access. One may further add that Russell's lecture takes place in a "lecture culture" where the lecturer may *base* his presentation on the possibility of utilising such access. (It is not necessary to understand the distinction between teaching a school class, giving a talk in a village hall, or lecturing in a lecture room at a university.) For a detailed demonstration of the close relationship between understanding the meanings of *words* (sentences, utterances) and understanding *things* (situations, the world), see Melee 2005.
- 17 Well, there may be theological considerations regarding the signs connected with the valences if we are dealing with a *human* 'he' or 'she', but they don't apply to monkeys.
- 18 In German you have 'schmerz' and 'schmerzfrei', where '-frei' takes on the function of a negative suffix.
- 19 The term 'atomic fact' may be more or less pragmatically defined. An atomic fact may be considered to be a fact which, at a given moment, is not analysed further. This is already also Russell's line of thought in 1922 (Russell 1988).
- 20 A possible solution: The proposition 'A \vee B' is true iff: it is a fact that A and B or it is a fact that A and \neg B or it is a fact that \neg A and B. The disjunctive relationship between the three candidate facts does not make a fourth fact in its own right: a "meta-abstract fact," so to speak.
- 21 The problem of implementing the distinction between negative and positive truths may be greater for the disbeliever than for the believer in negative facts. If, with Russell, one thinks that "...Socrates is not alive' is really an objective fact in the same sense in which 'Socrates is human' is a fact" (Russell, 214), then the question of classifying the particular statements as positive or negative is less crucial. The procedure, say, of truthmaking, will be the same no matter how the distinction is drawn.
- 22 Kühl, On the Existence and Reality of Negative Facts.
- 23 This is Aristotle's example [of *steresis*]: "'the absence of sight in one who by nature sees" (Aristotle, *Physics*, chapter 7). It is also important since the property of blindness is considered by Molnar as by me to be a negative property (even though grammatically it may be expressed negatively, as 'not sighted', as well as positively, as 'blind') (Molnar 2000, 73). One may wonder how Aristotle's (and his commentators') analyses would have turned out if he (or they) had used 'blind' as the paradigm for negative predicates.
- 24 A sighted person may also read or write a letter in Braille, but then he is doing something different, since the point of what he is doing will be different.

References

Armstrong, D. (1997). A World of States of Affairs. Cambridge: Cambridge University Press.

Armstrong, D. (2004). Truth and Truthmakers. Cambridge: Cambridge University Press.

Beall, J. C. (2000). "On Truthmakers for Negative Truths." *Australasian Journal of Philosophy* 78(2): 264–68.

Björnsson, G. (2007). "If You Believe in Positive Facts, You Should Believe in Negative Facts." In T. Rönnow-Rasmussen, B. Petersson, J. Josefsson and D. Egonsson (eds.), *Hommage à Wlodek* (eds), 60 Philosophical Papers Dedicated to Wlodek Rabinowicz. Lund 2007

Cheyne, C., and C. Pigden (2006). "Negative Truths from Positive Facts." Australasian Journal of Philosophy 84: 249–65.

Chisholm, R. (1982). Brentano and Meinong Studies. Amsterdam: Rodopi.

Davidson, D. (1969). "True to the Facts." The Journal of Philosophy 66(21): 748-64.

Demos, R. (1917). "A Discussion of a Certain Type of Negative Propositions." Mind, 36: 188-96.

Dodd, J. (2007). "Negative Truths and Truthmaker Principles." Synthese 156: 383-401.

Hochberg, H. (1997). "D. M. Armstrong, A World of States of Affairs." Nous 33(3): 473-95.

Grzegorczyk, A. (1964). "A Philosophically Plausible Formal Interpretation of Intuitionistic Logic." *Indagationes Matimatica*, 26: 596–601.

Kenny, A. (1963). Actions, Emotions, and Will. New York: Humanities Press.

Kühl, C.E. (2008). "Kinesis and Energeia—and What Follows." Axiomathes 18(3): 37-103.

Martin, C. B. (1996). "How It Is: Entities, Absences and Voids." Australasian Journal of Philosophy 74(1): 57–65.

Meløe, J. (2005). "Words and Objects." In Publications from the Wittgenstein Archives at the University of Bergen 17, pp. 109–41. Bergen: University of Bergen Press.

Molnar, G. (2000). "Truthmakers for Negative Truths." *Australasian Journal of Philosophy* 78(1): 72–86.

Parsons, J. (2009). "Negative Truths from Positive Facts?" Australasian Journal of Philosophy 84(4): 591–602.

Reinach, A. (1911). "Zur Theorie des negativen Urteils." Eng. trans. in B. Smith (ed.), 1982, Parts and Moments. Studies in Logic and Formal Ontology, pp. 315–77. Munich: Philosophia Verlag. Rosenberg, J. F. (1972). "Russell on Negative Facts." Noûs 6(1): 27–40.

Russell, B. (1956). "The Philosophy of Logical Atomism." In *Logic and Knowledge*, pp. 175–281. London: George Allen & Unwin.

Russell, B. (1956). "On Propositions." In *Logic and Knowledge*, pp. 283–320. London: George Allen & Unwin.

Russell, B. (1956). "On Denoting." In *Logic and Knowledge*, pp. 283–320. London: George Allen & Unwin.

Russell, B. (1988). "Dr. Schiller's Analysis of *The Analysis of Mind*." In *Collected Papers of Bertrand Russell* 9, pp. 37–44. London: Unwin Hyman.

Sartre, J.-P. (1969). Being and Nothingness. London: Methuen & Co Ltd.

Scheffler, U. and Y. Shramko (2000). "The Logical Ontology of Negative Facts." *Poznan Studies in the Philosophy of Sciences and the Humanities* 76: 109–31 Amsterdam: Rodopi.

Stenius, E. (1960). Wittgenstein's Tractatus: A Critical Exposition of Its Main Lines of Thought. New York: Cornell University Press.

Turner, R. (1987). "A Theory of Properties." The Journal of Symbolic Logic 52: 455–72.

Vendler, Z. (1957) "Verbs and Times." The Philosophical Review 66(2): 143-60.

Wittgenstein, L. (1962) Tractatus Logico-Philosophicus. London: Routledge.