

RAFAEL DE CLERCQ

**A criterion of diachronic identity
based on Locke's Principle**

The aim of this paper is to derive a perfectly general criterion of identity through time from a suggestion made by Peter F. Strawson almost thirty years ago in an article called 'Entity and Identity' (1976). The reason why the potential of this suggestion has so far remained unrealised is twofold: firstly, the suggestion was never properly developed by Strawson, and secondly, it seemed vulnerable to an objection that he himself raised against it. Consequently, my aim in this paper is to further develop Strawson's suggestion, and to show that the result is not vulnerable to the objection that seemed fatal to its underdeveloped predecessor.

It is important to be clear from the start about what exactly is being sought here. First of all, it is important to be clear about the kind of questions that identity criteria are supposed to answer. A criterion of identity does not attempt to answer the question 'When are two objects identical?' for the answer to that question is trivially 'never'. Nor does it attempt to answer the question 'When is an object identical to itself?' for the answer to that question is trivially 'always'. Rather, the question to which identity criteria seek to provide an answer is 'When do two names refer to the same object?'.¹ Or, if this sounds too much like an issue concerning the semantics of names: 'When is the object referred to by one name the same as the object referred to by another name?'. (By "name" I

¹ See Quine 1960, pp. 116-7 and Quine 1987, pp. 90-91. This view strikes some people as counter-intuitive, because the problem of identity is usually regarded as a purely metaphysical problem. For instance, when we ask, 'Is a ship whose planks are gradually removed and replaced by other planks still the same ship?' then we don't seem to be asking a question about the reference of certain names. However, suppose that our criterion of identity tells us that the resulting ship is indeed identical to the original one. Then what did we discover? That the ship is identical to itself? We don't need a criterion to tell us that. That the ship still exists? That need not be in dispute. But what else could we hope to find out at a purely metaphysical level? My suggestion is to ascend to a semantic level, and to check whether we would have two (or more) presentations of the same ship. See also Section 5.

mean everything that functions logically as a singular term; as we shall see, certain types of definite descriptions are to be included in this category.)

Second, clarity concerning the type of theory that will be developed here may well prove equally important. Theories of diachronic identity usually divide into those that make reference to three-dimensional objects and those that make reference to four-dimensional objects. In this paper reference is made to three-dimensional objects, but the choice should not be taken to be indicative of a metaphysical preference or prejudice. Talk of three-dimensional objects just sounds more natural, and what is more, it is doubtful whether the issue of three- versus four-dimensionality really touches the heart of the matter concerning us here.² The matter of present concern is, roughly, when we are allowed to consider two (time-bound) presentations as presentations of one and the same object. Whatever the answer to that question may be, it does not seem to depend crucially on how objects are ultimately to be conceived of. For instance, if they turn out to be four-dimensional entities then we may have to speak about a relation between temporal parts, but it is doubtful whether this is really more than just an idiomatic requirement. After all, my concern is with the relation rather than with the elements between which it is supposed to hold.³ However, if the reader is not convinced by this line of thought, then he or she may read the remainder of this paper as an overtly three-dimensional approach to object identity.

In Section 1 I will delve deeper into the question of what identity criteria are supposed to be. This will allow me, in Section 2, to highlight some of the deficiencies exemplified by current theories of personal identity. In Section 3, Strawson's suggestion will be introduced and reformulated, and in Section 4 the result will be further developed and defended against a range of possible objections. Section 5 compares diachronic identity with continuity and transworld identity. In addition, an attempt is made to uncover a response-dependent component in the identity relation. Finally, the conclusion sums up the most important results.

1 COMMON GROUND

The search for a criterion has to be distinguished from two other things with which it might easily be confused. First, to search for a criterion is—

² *Pace* the great bulk of the literature on the subject. See, for instance, the discussion between Johnston and Forbes (1987).

³ See Williamson 1990, pp. 138-9 for similar reservations.

in the sense that is relevant here—not to search for a reliable *epistemic procedure*. For instance, once a criterion of diachronic identity has been found it may still be an open question how diachronic identity, or the satisfaction of the criterion, is to be established. While criteria—in the semantic-metaphysical sense intended here—are necessarily criteria for the things in question, the reliability of epistemic procedures is contingent and so variable from one possible world to another. (Consider, for example, the reliability of DNA-traces in a world where people are systematically cloned.) Second, to search for a criterion is not to practice *conceptual analysis*.⁴ The purpose of a criterion is not to analyse a certain concept, but to delineate, or help delineate, its extension. In other words, a criterion is not so much concerned with the concept itself (that is, with meanings) but with what falls under it (that is, with things). As a consequence, it is not among the objectives of this paper to find an analysis of, say, persistence or diachronic identity.

Now that the notion of a criterion has been elucidated, it is time to take a closer look at what criteria *of identity* are supposed to be. The following scheme seems to capture much of what is currently accepted in the literature on this subject:

$$\forall x \forall y (x = y \leftrightarrow \exists K (x =_K y))$$

Less formally: x is identical to y just in case there is a kind K such that x and y are the same K , or what comes to the same, just in case x and y satisfy the criterion of identity for members of the kind K .

The above equation merely represents a broad schema and does not as yet provide a substantial criterion of identity. In order to obtain such a criterion, the following conditions would have to be satisfied. First, the schema would have to be made *precise* by specifying for each kind K what the appropriate criterion of identity is. The result would be a conjunction of sentences of the following form (cf. Lowe 1989, p. 6):

$$\forall x \forall y [(K_1x \ \& \ K_1y) \rightarrow (xR_1y \leftrightarrow x = y)]$$

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⁴ At least not in the narrow sense of ‘conceptual analysis’, which I take to be: ‘the decomposition of complex concepts into their simpler constituents’. In a broader sense, searching for a criterion of identity may involve conceptual analysis.

$$\forall x \forall y [(K_n x \ \& \ K_n y) \rightarrow (x R_n y \leftrightarrow x = y)]$$

The conjunction would sum up the different criteria of identity applicable to the members of kinds $K_1 \dots K_n$ respectively.⁵ For instance, one of the conjuncts could be the Axiom of Extensionality:

$$\forall x \forall y [(x \text{ and } y \text{ are sets}) \rightarrow (x \text{ and } y \text{ have the same members} \leftrightarrow x = y)]$$

Second, when made precise, the schema should turn out to be *adequate*: it should provide a reliable criterion of identity for all objects x and y , regardless of the kind to which they belong. Third, when adequate, the schema should be *non-circular*: verifying the right-hand side of the biconditional should not presuppose any (prior) knowledge of what are identical members of the kind K . Fourth, in the meantime, the schema should remain *compatible* with the attribution of reflexivity, symmetry, transitivity, necessity, absoluteness, and discreteness (non-vagueness) to the identity relation.⁶ From this requirement it follows for instance that the relation R should be an equivalence relation.

2 PROBLEMS

There are some relatively uncontroversial examples of criteria that seem to meet all of the aforementioned conditions. The Axiom of Extensionality provides a case in point. However, it is notoriously difficult to come up with a satisfactory criterion of identity for concrete objects (roughly speaking, objects existing in space and time). In particular, it seems extremely difficult to find a criterion of identity through time—a diachronic criterion—for such objects.⁷ The ongoing debate about personal identity may illustrate this point.

⁵ For the sake of simplicity I have ignored the distinction between ‘one-level’ and ‘two-level’ criteria of identity. For more on the nature and importance of this distinction, see the discussion between Lowe and Williamson (1991), as well as Anderson 2001.

⁶ These are all properties of the identity relation according to the orthodox view of identity. Less orthodox views have denied the necessity, absoluteness, and discreteness of the identity relation. For a defense of the orthodox view, see, among others, Wiggins 1980 and Perry 1970.

⁷ Discontent with the major positions was also voiced by Lowe 1988.

Consider, for example, accounts that aim to define a criterion of personal identity in terms of mental continuity.⁸ First, the term ‘mental continuity’ is not precise enough to function as the key-component of a useful account of personal identity. Second, as soon as the term is made more precise, for instance by invoking memory links, the adequacy of the account tends to be undermined. For instance, there appear to be cases of personal identity where the required memory links are absent (cf. the case of the amnesiac). Third, where adequacy is achieved, problems with circularity tend to pop up, for example, in identifying memory links and in isolating person-stages. Fourth, even when all these problems seem to be solved, there usually remains a problem with the logical properties of the identity relation, and especially with transitivity (because of the possibility of fission), necessity (because the same person could have had a different mental life), and discreteness (because mental continuity is not an all or nothing affair).

Although the proponent of the mental continuity theory may be able to meet *each* of these objections, I doubt that he can meet *all* of them. The present state of the discussion surely provides reasons for doubt. Note, however, that alternative theories, reducing personal identity to bodily continuity for instance, are not much better off. Because the difficulties can be shown to arise mainly from the attempt to reduce diachronic identity to some form of continuity, practically all current theories of personal identity may be expected to face difficulties of the sort outlined above. (In Section 4 the relation between diachronic identity and continuity will be further discussed. However, the impasse in which current theories find themselves is here primarily accepted as a datum rather than as a claim to be argued for.)

3 A WAY OUT

In spite of all this, a fully satisfying account of identity through time is not too far away, at least if we accept (a version of) the Lockean principle that two objects of the same kind cannot occupy the same place at the same time.⁹ In particular, the following suggestion, made by P. F. Strawson in

⁸ What follows is merely intended to give a sketchy account of the problems faced by current theories; it is not intended to summarize the discussion as a whole.

⁹ This idea goes back to John Locke, but was reintroduced into the discussion by David Wiggins (1968). The idea will be defended against alleged counterexamples in due course.

1976, could serve as a first hint at what might constitute the identity of concrete objects:

a = b if and only if there is a substantial kind which a is of and which b is of and there is no time at which there is a volume of space occupied by a which is not occupied at that time by b (Strawson 1997 [1976], p. 39).

Since what was once identical will always be identical (because of the necessity of identity), Strawson could also have written:¹⁰

a = b if and only if there is a substantial kind which a is of and which b is of and there is at least one time at which there is a volume of space occupied by both a and b.

The above criterion seems to satisfy all the requirements listed in Section 1. First, it is precise: sameness of kind and sameness of spatio-temporal position are, for all I know, precise and unambiguous notions. (Of course, they could still be made more precise.)¹¹ Second, it is adequate, at least if we adhere to the idea that two things of the same kind cannot spatio-temporally coincide with one another (see *infra*). Third, it is not circular: the right-hand side of the biconditional refers to the sameness of positions or locations, but not to the sameness of concrete objects. Fourth, the logical properties of the identity relation are preserved, mainly because of the recurrence of the identity relation on the right-hand side. Finally, the approach has the extra advantage of being completely general and so not requiring a possibly infinite conjunction of kind-specific identity criteria. More specifically, the criterion is applicable to all concrete objects, or at least to those that occupy space.

Before proceeding, I need to say something in defence of the principle that I am taking as a starting point, that is, the Lockean principle that two things of the same kind cannot coincide with one another. To be sure, defending this principle in a proper way would require a separate paper, but in the absence of a proper defence, and considering what is of relevance to this paper, two things are worth mentioning. First of all, the

¹⁰ Provided that the rationale behind Strawson's proposal was indeed the Lockean principle, namely that two things of the same kind cannot coincide with one another. In other words, what follows in the main text is not just a reformulation of Strawson's suggestion, but also an interpretation.

¹¹ For instance, one could say that two objects occupy the same spatial position at a given time if and only if there is no co-ordinate system that separates them.

cases that are supposed to provide counterexamples to the principle usually involve entities for which there may not exist criteria of diachronic identity. Very often, they are not persisting bodies or substances, but more ethereal entities such as shadows, light rays and clouds. Furthermore, the cited cases do not strike me as very convincing counterexamples to the particular version of Locke's Principle that I wish to endorse here.

As it stands, Locke's Principle is imprecise. For example, it does not specify what is meant by a 'thing' or a 'kind'. For my purposes, it matters little how 'thing' is understood, as long as it is some kind of continuing entity. The interpretation of 'kind' has greater importance. In particular, it is important to know when two things are of the *same* kind. Here is what I propose: two things are of the same kind if, and only if, they share all their (qualitative) essential properties.¹² Perhaps this is not what Locke himself had in mind when he formulated his principle. However, what is important is that the proposed interpretation can be seen as offering a precisification of Locke's original formulation. The question is then whether, so interpreted, Locke's Principle is correct.

Locke's Principle can be correct for at least two reasons, a weaker and a stronger one. It can be correct because, necessarily, coinciding entities belong to different kinds. Or it can be correct because, necessarily, there are no coinciding entities. The latter is of course the stronger reason. If it is correct, then two things can *never* occupy the same place at the same time. Whether they belong to the same kind or to different kinds does not make any difference.

In this paper I remain neutral with respect to the stronger reason. It is the weaker reason that I aim to defend. More specifically, my aim is to defend it against counterexamples allegedly showing that two things of the same kind can coincide.

Counterexample#1. According to G. W. Leibniz (1996, p.230), two shadows coinciding with one another remain nonetheless distinct because they are cast by different objects. (Let us grant, for the sake of argument, that shadows are continuing entities.) This claim faces a dilemma. Either a shadow is necessarily cast by certain object, or it is not. If it is not, then it is not clear why a difference in shadow-casting objects would imply a difference in shadows. And if that is not clear, then it seems possible to say that the two objects, whose shadows were said to coincide, are actually casting one and the same shadow. However, if a shadow *is* necessarily cast by a certain object, then in the case of two coinciding shadows there is an

¹² By a 'qualitative' property I mean a property that can be shared by different objects.

essential feature that distinguishes them from one another. Otherwise said, since the two shadows are cast by different objects, they have different essential attributes and thus belong to different kinds. As a result, they do not constitute a counterexample to the particular version of Locke's Principle adopted in this paper.

Counterexample#2. Christopher Hughes (1997) asks us to imagine a functional ship whose planks are gradually replaced by the planks of a structurally identical ship that is kept in a museum (for historical reasons, for example, because it has once belonged to Theseus). If all the original planks of the functional ship are destroyed, then, according to Hughes, the result of the replacement is two ships coinciding with one another (namely, the functional ship whose planks have been replaced and the museum-ship whose planks have been used for the replacement).

Again, I don't think that we are dealing with a genuine counterexample. On the one hand, it is probably true that museum-ships and other antiquarian objects have (most of) their parts essentially, and that they travel wherever their original parts travel. On the other hand, it is not evident that museum-ships *qua* antiquarian objects are to be regarded as ships. Perhaps they are better regarded as collections of ship-parts, or as ship-parts arranged ship-wise—this would account for the intimate relation they bear to their parts. And if this is how they are to be regarded, then there is no violation of Locke's Principle in the situation described by Hughes. After the replacement of the planks, there would not be two ships coinciding with one another but one ship and one collection of ship-parts. Because a ship and the collection of its parts are not of the same kind, the resulting coincidence is unproblematic from the point of view of someone accepting Locke's Principle (in its precisified form).¹³

Counterexample#3. Kit Fine (2000) asks us to imagine a correspondence between two lovers, Bruce and Bertha. Bruce writes 'I am leaving you' to Bertha, and Bertha replies by writing 'I'm returning your horrible letter' on the backside of Bruce's letter.¹⁴ According to Fine,

¹³ Hughes downplays the importance of the antiquarian side to his story but it is striking that his examples always involve museum-ships, which, unlike ordinary ships, are known to bear an intimate relation to their parts. In a footnote to this text (note 8, p. 60) Hughes denies explicitly that his examples trade on the historical significance of museum-ships. He may be right about this, but I don't think he is able to deny that his argument requires scenarios in which ships are viewed *in the same way as* historically significant objects are viewed (that is, if I'm correct, as collections of parts or as parts arranged in a certain manner.)

¹⁴ Actually, they are supposed to use a lit cigarette to scorch in their message.

there are two letters here, the first having been written before the second one was. But the letters nonetheless share their location, since they are written on the same sheet of paper.

One possible response is to argue that the two letters belong to distinct kinds: Bruce's belongs to the category of avowals or announcements, while Bertha's belongs to the category of replies. In other words, to construct a counterexample it is not sufficient to find coinciding objects belonging to *a* common category, that is, sharing *an* essential attribute (e.g. 'artefact', 'linguistic communication', 'written message', or 'letter'). They should share all their essential attributes. In the case of linguistic communications, this could mean that they should be instances of the same type of illocutionary act, for example, 'avowal', 'declaration', or 'reply'. However, in this respect the two letters differ crucially from one another.

Fine's example can be improved in the light of this response. Suppose, for instance, that Bertha unknowingly writes the same text ('I am leaving you') on the reverse side of Bruce's letter, and that she intends her text to be read as a declaration or avowal. It is still possible to say that there are two letters here, although they surely belong to the same kind now. Or so it seems. For, as in the case of coinciding but distinct shadows, the two letters have different origins. Bertha's letter was written by Bertha, while Bruce's was written by Bruce. This is an essential characteristic that distinguishes them from one another. (Moreover, it is also a qualitative characteristic because it is one that can be shared by different objects; for instance, many letters can have the property of having been written by Bertha.)

4 STRAWSON'S OBJECTION, A REFORMULATION, AND SOME MORE OBJECTIONS

Strawson himself rejected the proposal for the following reason:

It seems that in order to apply [the criterion] we must already be operating a principle of identity: for how else could we be sure that we had the identical individual, *a*, in all those positions in which we are then to ask whether we had, at the same times, the individual, *b*? (p. 39).

Or to put the question in terms more appropriate to the reformulation: how are we going to determine in each case whether *a* and *b* have *once* occupied the same spatial position? After all, we cannot assume that the

individual histories of a and b are given to us entirely. Maybe a is referred to as ‘the thing that had property F at time t_1 ’ and b as ‘the thing that had property G at time t_2 ’. In such a case, we do know something about the pasts of a and b. But on the basis of that knowledge it may not be possible to conclude that a and b have once occupied the same volume of space. It seems that we need something more, and moreover something which can be specified without assuming that we are able to keep track of a and b independently of the criterion.

The objection tends to undermine any attempt to come up with a criterion of diachronic identity for ordinary objects. The reason is this. Whatever the preferred identity criterion R turns out to be, R will be assumed to obtain between a and b just in case they are identical. Now, either R implies the existence, at the same time, of its relata, or it does not. If it does not, then R cannot imply the *identity* of its relata either, which means that R cannot be a criterion of identity. If it does, however, then verifying whether a stands in the relation R to b will inevitably involve verifying whether a *exists also* at the time when b is known to exist, say t_2 . And here, of course, the objection takes over as follows: verifying whether a, known to exist at t_1 , exists also at t_2 involves applying a criterion of (diachronic) identity; hence, we get caught in a vicious circle or an infinite regress. But the objection is wrong: verifying whether a exists at t_2 merely amounts to verifying whether ‘a’ has *some* referent or other at t_2 . It does not amount to verifying whether ‘a’ has *the same* referent as ‘b’ or ‘c’ or any other name. Only in the latter sort of case—where sameness of reference is to be determined—a criterion of identity is needed. (Recall that criteria of identity were supposed to tell us when two names refer to the same object.) So there is no infinite regress, and Strawson’s objection fails.

The criterion outlined above is supposed to be applicable to all spatio-temporal objects, including persons. Therefore, another objection might be that the account is not neutral between mental and bodily continuity views of personal identity, because spatial coincidence can only be understood as a relation between bodies. As a consequence, the criterion would involve a hidden commitment to the view that personal identity consists in bodily continuity. However, this objection overlooks the fact that (the person or human being) a may have different bodies at different times. Otherwise said, all that the above criterion requires is that a’s body coincides spatially with b’s at some time: it does not require that a’s body remains the same or even similar. So, at first sight, the account seems able to accommodate several views of personal identity. (Strictly speaking it is

even compatible with a purely mentalistic conception of persons which holds that persons need not be embodied; after all, on such an account persons would not qualify as spatio-temporal particulars, which means that they would fall outside the intended field of application of the criterion.)

However, it is also possible to reject the account precisely because it is too neutral. For it might be asked how there can be an account of personal identity that does not choose between mental and bodily criteria of identity. Moreover, it might be asked whether such an account could qualify as *precise* in the sense outlined in Section 1. But this objection overlooks the possibility that personal identity may consist neither in mental nor in bodily continuity (or characteristics). This possibility is to be taken seriously because of the problems faced by current theories (cf. Section 3).¹⁵ Moreover, note that a neutral view on these matters is perfectly compatible with the fact that personal identity is actually established on the basis of mental and physical traits. After all, as noted in the beginning of this paper, there is an important difference between a criterion of identity on the one hand, and an epistemic procedure for determining identity on the other hand. (Which is not to deny that the two are related: the reliability of an epistemic procedure depends both on the actual state of the world and on the criterion of identity associated with a particular entity or concept.)

If the distinction between epistemic procedures and criteria of identity is not sufficiently acknowledged, then the criterion outlined in this essay is likely to disappoint. After all, the criterion is not of much practical help in determining whether two singular terms refer to the same object. But then again, this is not what a criterion of identity is supposed to be. The purpose of such a criterion is merely to provide us with an adequate description of the conditions under which two singular terms refer to the same object. And the adequacy of such a description is not measured by how it might improve our practice but by the extent to which it meets certain formal constraints such as precision and non-circularity. In this respect, I think, the proposed criterion is fully adequate.

5 FURTHER THOUGHTS

It may be noteworthy that the idea of continuity is completely lacking from the criterion of identity through time stated above. Although it is true that in order to evaluate whether the criterion is met we have to consider the

¹⁵ See Sider 2001 for similar thoughts.

possibility of an object *a* existing at various times, *a* need not be a continuant (in the sense of a persisting object)! It is sufficient, for the criterion to be met, that *a* exists at time t_1 and at time t_2 , but it need not exist *between* t_1 and t_2 . (Of course, if it does not exist in this interval, then neither does *b*.) In other words, it is possible that the object in question does not have a continuous life span (as most objects do in the actual world) but instead exists at intermittent times. If this is the case, the object may be said to be recurrent rather than persistent.

What this means is that it is possible to have diachronic identity without persistence or continuation; the reverse is obviously not true. Diachronic identity merely requires recurrence, while persistence requires continuous existence. As a result, the problems of persistence (or continuation) and of diachronic identity have to be kept apart, and a criterion of diachronic identity should not involve—however tacitly—the concept of persistence or continuity. This is one respect, I think, in which the criterion described in this paper is superior to the other criteria that can be found in the literature.¹⁶

It may also be noteworthy that the criterion is world-relative in the sense that it can only be operated *within* a possible world. Thus, it cannot serve as a criterion for transworld identity. (I do not think that this is a disadvantage.) This might seem obvious but it is not. For given, first, that the future can be regarded as one among many possible worlds, second, that diachronic identity does not require continuity, and third, that the current formulation of the criterion does not make reference to a particular world, there seems nothing to prevent us from applying the criterion across possible worlds. However, one reason why the criterion should not be applied across possible worlds (that is, with *a* and *b* existing at different worlds) is that this would yield the counterintuitive result that objects *necessarily* have a certain spatio-temporal position

Finally, a noteworthy consequence of the criterion is that the identity relation may have a response-dependent component. A property *P* is said to be response-dependent when (for all *x*) it is possible to know a priori that

¹⁶ For an interesting defense of intermittent existence, see Burke 1980. Unlike Burke (p. 404), I am inclined to accept the conceptual possibility of extreme cases of intermittent existence where an object temporarily pops out of existence *together with its parts*. However, note that the plausibility of the criterion proposed in this paper does not depend on the possibility of such cases.

x is P if and only if for all subjects s: if conditions C obtain, then s judges
that x is P.

where the conditions C are to specified in a substantial way, that is, without relying on independent knowledge of P's extension (i.e. the set of objects instantiating the property).¹⁷ In other words, when a property is response-dependent the extension of the property is what competent subjects judge it to be: their judgements function as a criterion of the instantiation of the property.

Which properties are response-dependent is a controversial matter, depending largely on metaphysical assumptions and on intuitions about conceivability. However that may be, what seems to be a likely candidate for response-dependence is membership of an artefact kind (e.g. being a car, an artwork, or a sewing machine). For it does not seem to be conceivable that we could be systematically mistaken about which objects belong to such kinds. After all, it is we ourselves who invented the kinds.

If this intuition is correct, and if it supports the idea that membership of an artefact kind is a response-dependent property, then there is a response-dependent component in at least some identity relations, namely in those that obtain between artefacts. For, according to the criterion outlined above, two objects a and b are identical only if they share their essential attributes. When a and b are artefacts, it is plausible to assume that among those essential attributes there be will properties corresponding to artefact kinds. And if this is so, then the attribution of identity will sometimes involve the attribution of a response-dependent property.

6 CONCLUSION

The starting point of this paper was a suggestion made by Strawson in 'Entity and Identity'. On the basis of that suggestion a criterion of identity through time was developed which apparently is able meet all the conditions that criteria of identity may be expected to meet: precision, adequacy, non-circularity, and compatibility with certain logical features usually attributed to the identity relation. In addition, the criterion turned out to be perfectly general in being applicable to all spatio-temporal particulars. The final formulation of the criterion was: $a = b$ if and only if (i) a and b share their qualitative essential properties, and (ii) a and b have

¹⁷ The concept of response-dependence I am using here derives from Wright 1994, and more specifically, from his discussion of 'The Euthyphro Contrast'.

occupied the same place at the same time. Three objections were considered and found unconvincing. First, the objection that the criterion creates a regress ad infinitum. Second, the objection that the criterion fails to be neutral in debates about personal identity. Third, the objection that the criterion is too neutral in such debates.

In addition, it was observed that the criterion does not involve the idea of continuation and that it should not be applied across possible worlds. Finally, a possible response-dependent element in the criterion was uncovered.¹⁸

ABSTRACT

The aim of this paper is to derive a perfectly general criterion of identity through time from Locke's Principle, which says that two things of the same kind cannot occupy the same space at the same time. In this way, the paper pursues a suggestion made by Peter F. Strawson almost thirty years ago in an article called 'Entity and Identity'. The reason why the potential of this suggestion has so far remained unrealized is twofold: firstly, the suggestion was never properly developed by Strawson, and secondly, it seemed vulnerable to an objection that he himself raised against it. Consequently, the paper's aim is to further develop Strawson's suggestion, and to show that the result is not vulnerable to the objection that seemed fatal to its underdeveloped predecessor. In addition, the paper aims to defend Locke's Principle against alleged counterexamples such as those produced by Leibniz, Fine and Hughes.

REFERENCES

- Anderson, C. A. (2001) 'Alternative (1*): A Criterion of Identity for Intensional Entities', in Anderson, C. A. & M. Zelény, eds., pp. 395-427.
 Anderson, C. A. & M. Zelény, eds. (2001) *Logic, Meaning and Computation*. Kluwer Academic Publishers.

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- Burke, M. B. (1980) 'Cohabitation, Stuff and Intermittent Existence', in *Mind* 89, pp. 391-405.
- Fine, K. (2000) 'A Counter-example to Locke's Thesis', in *The Monist* 83, pp. 357-361.
- Forbes, G. (1987) 'Is There a Problem About Persistence?', in *Proceedings of the Aristotelian Society Supplementary Volume* 61, pp. 137-155.
- Hughes, C. (1997) 'Same-Kind Coincidence and the Ship of Theseus', in *Mind* 106, pp. 53-68.
- Johnston, M. (1987) 'Is There a Problem About Persistence?', in *Proceedings of the Aristotelian Society Supplementary Volume* 61, pp. 107-136
- Leibniz, G.W. (1996[1765]) *New Essays on Human Understanding*. P. Remnant & J. Bennett (trans.) Cambridge: Cambridge University Press
- Lowe, E. J. (1988) 'Substance, Identity, and Time', in *Proceedings of the Aristotelian Society Supplementary Volume* LXII, pp. 61-78.
- Lowe, E. J. (1989) 'What Is a Criterion of Identity?', in *The Philosophical Quarterly* 39, pp. 1-21.
- Lowe, E. J. (1991) 'One-Level Versus Two-Level Identity Criteria', in *Analysis* 51, pp. 192-194.
- Perry, J. (1970) 'The Same F', in *The Philosophical Review* 79, pp. 181-200.
- Quine, W. V. (1960) *Word and Object*. Cambridge (Mass.): MIT Press.
- Quine, W. V. (1987) *Quiddities*. Cambridge (Mass.): The Belknap Press.
- Sider, T. (2001) 'Criteria of Personal Identity and The Limits of Conceptual Analysis', in *Philosophical Perspectives* 15, pp. 188-209.
- Strawson, P. F. (1976) 'Entity and Identity', reprinted in P. F. Strawson (1997) *Entity and Identity and Other Essays*. Oxford: Clarendon Press.
- Wiggins, D. (1968) 'On Being in the Same Place at the Same Time', in *The Philosophical Review* 77, pp. 90-95.
- Wiggins, D. (1980) *Sameness and Substance*. Oxford: Blackwell.
- Williamson, T. (1990) *Identity and Discrimination*. Oxford: Blackwell.
- Williamson, T. (1991) 'Fregean Directions', in *Analysis* 51, pp. 194-195.
- Wright, C. (1994 [1992]) *Truth and Objectivity*. London: Harvard University Press.

