

IDENTITY AND
SPATIO-TEMPORAL
CONTINUITY

BY

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PREFACE

Most of the material here presented was originally given in lectures at Oxford in Michaelmas Term, 1964. Under the title 'The Absoluteness of Identity' it was submitted in 1965 to an American journal, accepted by that journal, and then delayed by corrections and amplifications which made it much too long for publication in that manner. The text can be read continuously without much reference to the notes, but in many cases the notes are integral to any full defence of the positions taken up.

I have a number of acknowledgments to make, in particular to Professor P. T. Geach, Mr. W. A. Hodges, and Professor B. A. O. Williams. These are spelled out in the notes to the text, but I cannot forbear to make a grateful general acknowledgment of my indebtedness to Williams' own views and writings on this troublesome subject.

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INTRODUCTION

This monograph proposes and attempts to resolve one problem about the notion of identity. The problem is a wholly general one and in the first instance I answer it purely formally. Some defence is offered in 1.2 and 1.7 of the formal principles which I use to get to that answer, but I must emphasize that it is not my intention to offer any complete defence of these principles in this monograph. After two or three indications of the grounds for supposing them to be incontrovertible principles and partially definitive of what we mean by *identical* or *same*, I concern myself almost entirely with their consequences, which are many and complex. In particular, the negative answer to the original question leaves us with a number of interesting problems about the identity of persisting material substances. These are the problems which are then taken up.

Spatio-temporal continuity or coincidence and bodily continuity have regularly figured in recent discussions of such problems as 'What is the principle of individuation?' and 'What is personal identity?'. I think that the notion of spatio-temporal coincidence itself has been assumed to be perfectly clear or quite easy to clarify. That it is clarifiable I am inclined to agree, but the result of clarifying it is not in every case to leave things exactly as they were, or as they seemed to be when the notion was originally imported into these discussions. In Part Four I attempt to give colour to this claim so far as it concerns personal identity.

It gradually became evident to me in constructing this work that for the future of metaphysics no single part of the philosophy of science was in more urgent need of development than the philosophy of biology. It is well known that Aristotle believed something like this but it seems to be the misfortune of that particular philosopher that few of the things he said can be understood or believed until they are laboriously rediscovered. And it is a misfortune of present-day analytical philosophy that it has not inspired the production of any writings in the philosophy of biology which are both worthy to succeed the seminal writings of J. H. Woodger and capable of illuminating present day

philosophical discussions of classification and individuation in the way Aristotle would have argued that they require. To this important task I incite those better qualified than I am to undertake it.

PART ONE

1.1. *A problem about identity. The thesis of the relativity of identity.*

Can a be the same f as b and not the same g as b ? More precisely, can this happen even when a or b is itself a g ? It is commonly supposed, I think, that it is this sort of possibility which provides the principal grounds for the doctrine, which I shall call D, that, if someone tells you that $a=b$, then you should always ask them ‘the same *what* as b ?’¹

I shall try to show that it cannot be the rationale of D, if D has any rationale, that a might be the same f as b but not the same g as b . Nor, for that matter, can it be derived as a consequence of D. It is not in fact a possibility at all. This matter is treated in Part One. In the following Part, I shall say what I think the rationale of D (limited here to persisting material particulars) really is, and then go on to say something about the purely formal characterization of the notion of a substance or sortal concept.

The doctrine which I shall try to refute in this Part may be more fully stated like this: since there are, or may be, a whole battery of sortal concepts under which a material particular a may fall, and under which it may be counted, individuated, and traced through space and time, a may coincide with some specified material particular b when individuated under some of these sortal concepts and not coincide with b , but be wholly distinct from b , when individuated under others.² So the notion of identity is concept- or sortal-relative, i.e. relative to different possible answers to the question “ a is the same *what* as b ?” I call this R or *the relativisation thesis*.³ In addition to R and D there will be occasion to mention a further thesis, C, *the counting thesis*, namely this:

C: to specify the something or other under which a and b coincide is necessarily to specify a concept f which qualifies as adequate for this purpose, and hence as a *sortal*, only if it yields a *principle of counting* for f s.

It will be my submission that D, R and C are by no means equivalent. D is true.⁴ R is false. C is false.⁵

I shall call an individuating or sortal concept which adequately answers the question 'same *what?*' for an identity-statement s , a *covering concept* for s , and reserve the letters f and g to represent such sortal concepts. In the case of an identity ' $a=b$ ' supplemented with covering-concept f , I shall write ' $a=f=b$ '. The range of ordinary predicate variables, ϕ, ψ , includes both sortal predicates and non-sortal predicates.

The realistic discussion of the relativisation thesis requires not only formal argument but also detailed and in some cases rather lengthy and difficult analysis of examples. For those with little patience or goodwill for the latter kind of activity it will be enough to read section 1.2 below where the principal logical component in the argument is summarized and formalized,⁶ and section 3.1 of Part Three where the reasoning of the first two Parts is summarized.

1.2. *Leibniz' Law and the difficulties of relative identity.*

Plainly the fact that there are many different sortal concepts under which one may trace or individuate an individual a does not straightforwardly imply the possibility of getting different answers to the question whether a coincides or not with some mentioned individual b . For all the alternative procedures of individuation with alternative covering concepts might, when they yielded *any* answer, yield the same answer to that question. My contention is precisely that they must do so. I shall argue that the formal properties of identity provide logically compelling reasons why, where $(\exists f)(a=f=b)$, all different procedures of individuating a (provided they really do individuate a) *must*, if they yield any answer at all, yield the same answer with respect to a 's coincidence with b . This is to say that

$$((\exists f)(a=f=b)) \supset ((g)(g(a) \supset a=g(b));$$

which is to say R is false.

Plausible seeming cases of R are hard to find or contrive. I shall try to show exactly how each of the examples I have been able to find or contrive

- (i) violates the formal properties of identity if construed in a way favourable to R, and

- (ii) does not in any case have the logical form which it might seem to have, and which it would need to have to provide an example supporting R.

Although (i) and (ii) overlap they make up essentially distinguishable parts of the consideration of each example.

Under (i) the basic logical difficulty with each supposed example of R is the collision of R with Leibniz' Law. This Law states in its classical unrestricted form that if a is the same as b (or better, if a is the same f as b or $(\exists f)(a =_f b)$), then whatever is true of a is true of b and whatever is true of b is true of a . The most direct way of demonstrating the incompatibility of this Law with R, which says that for some a, b, f and g

$$(a =_f b) \ \& \ (a \neq_g b) \ \& \ (g(a)),$$

is to take the ϕ in Leibniz' Law

$$(1) \ (a =_f b) \supset (\phi) (\phi a \equiv \phi b)$$

as including in its range the predicable ' $a =_g x$ '. It is extremely

important that, as will appear, there are less direct and more satisfying ways of demonstrating the incompatibility than this,⁷ but if one does proceed in this direct way then the premiss

$$(2) \ (a =_f b) \ \& \ (g(a))$$

can quickly be made to contradict the supposition that $(a \neq_g b)$.

(1) immediately gives

$$(3) \ (\phi) ((a =_f b) \supset (\phi a \equiv \phi b)).$$

Hence with the predicable ' $a =_g x$ ',

$$(4) \ (a =_f b) \supset ((a =_g a) \equiv (a =_g b)).$$

But then, by *modus ponens* and the first limb of (2), we can detach the consequent of (4) to get

$$(5) \ (a =_g a) \equiv (a =_g b)$$

But by the reflexivity of ' $=_g$ '

$$(6) \ (g(a)) \supset (a =_g a).$$

And so by the second limb of (2)

$$(7) \quad (a \underset{g}{=} a).$$

Hence, by *modus ponens* with (7) and (5),

$$(8) \quad (a \underset{g}{=} b).$$

But this shows that with $(a \underset{f}{=} b)$ & $g(a)$ we can disprove $(a \underset{g}{\neq} b)$ and can thus disprove R.

The second component in the discussion of each apparent example of R is to assign it some other analysis. It will be for the reader to judge whether the distinctions employed in this cause, (ii) above, are independently plausible distinctions. If he thinks they are not plausible, or not independently plausible, or fanciful distinctions, then it is consistent with my short-term intention that he should be led to question the validity of the formal principles which define the traditional concept of identity.⁸ That is to say the logicians' concept of identity defined by Leibniz' Law and the principles of transitivity, reflexivity and symmetry. For in this essay my principal objective is simply to indicate the connexion between Leibniz' Law and R (*viz.* incompatibility) and enlarge our still very imperfect understanding of the *application* of the logicians' notion of identity. I shall draw out some of its implications for the Aristotelian notion of a substance. It is worth being a good deal clearer about what these two notions really are before we defer to the philosophers who would have us discard either of them.

It is not my long term intention, all the same, that this need for distinctions should discredit the classical notion of identity or undermine the formal principles which define it. Their basis seems to me to be *a priori* and incontrovertible, and the concept they define still seems to me, at least when it is properly understood in the light of a correct defence of D, to give the only consistent and clear concept there is either of identity or of substance. And I doubt if we can do without either of these notions. So there may be some point in prefacing a discussion of R with a brief indication of the grounds I think there are for preferring to hold on to Leibniz' Law rather than accept R, or accept any special thesis whatever which conflicts with this law.

If Leibniz' Law were not controverted, I should remark that