

Evaluating Classical Identity and Its Alternatives

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Western Classical theory of identity encompasses either the concept of identity as introduced in the first-order logic or language or as it is employed in the higher-order languages. In first-order extensional language or logic, identity ('=') is commonly introduced as a binary predicate satisfying the laws of reflexivity and unrestricted Indiscernibility of Identicals (In.Id.)¹. Other classical formal features of identity, i.e., symmetry and transitivity follow from the above two principles taken together². From these features some additional classical characteristics or principles of identity follows:

- A. Identity holds necessarily and permanently. It is a non-contingent and non-temporary relation.
- B. There is always a determinate fact of identity.
- C. Identity is Absolute. 'x is the same *f* (fundamental thing-kind or sortal) as y' is short for 'x is *f* and y is *f* and x is identical with y'. The absolutist and sortalist version of identity asserts that if x is the same *f* as y and y also belongs to *g* (another sortal) then x is the same *g* as y.

Analysing classical identity, if not defining, in terms of indiscernibility demands that at least the Principle of In.Id. must be defended as a valid logical Principle. If identity is analyzed or explained in terms of indiscernibility and we accept that second order quantificational logic is problematic, then to deal with properties in first order logic and in a purely extensional setting we can characterize identity in a Quinean way.

Quine asserts that in first order logic identity can be included as a logical constant but then we need not treat identity as a primitive simple predicate. For any theory T that has a finite lexicon of primitive terms, Quine argues, $x=y$ will be an abbreviation of a complex sentence and thus identity is eliminable in favour of a complex predicate construed by exhaustion of all the primitive predicates of the theory. Suppose a formula $A(x, y)$ as the conjunction of all possible substitutions in the predicates of the language, in a sense that there is an exhaustion of all the primitive predicates of the theory. Then identity between x and y ($x = y$) is characterized by such a formula³.

But, if objectual identity is understood in terms of indiscernibility, then, how can we differentiate identity from congruence? Congruence is also an equivalence relation that obeys indiscernibility principle. Relata of congruence relation, in a given class of properties, share all their properties. In.Id. (as formulated in first order logic) in fact axiomatizes a congruence relation. Call this the 'Leibniz congruence'. If we take identity as a logical constant and introduce identity in terms of indiscernibility then actually we are letting identity to merge into congruence. In logic and mathematics, congruence is usually contrasted with identity. If C is the class of all properties whatsoever (including location properties and properties like that of being Ram etc.) then congruence relative to C is equivalent to identity. If C is some restricted class then congruence relative to C does not imply identity, e.g. if C is the class of shape properties then congruence relative to C is just sameness of shape. In first order logic congruence plays the

same inferential role as that of identity. But congruence relation most of the times does not express identity. For example, a relation, say, *being paired with the same intension* is a congruence relation but not identity. But, probably, the logicity of identity cannot be restored without its being interpreted as Leibniz congruence. If a material equivalence relation satisfies the substitutivity principle or the principle of In.Id. then all that we get is identity in the sense of Leibniz congruence. It is a terminological issue whether an equivalence relation satisfying unrestricted Indiscernibility Principle be called ‘congruence’ instead of ‘identity’.

Many among those philosophers who consider that self-identity or trivial identity does not require any grounding principle want to distinguish Leibniz congruence or identity as a logical constant from the self-identity which is primitive and undefinable. They assert that the decision that x and y share all their properties requires the self-identity of x and y each. Even if the general notion of trivial identity is primitive, we can use our primitive notion of identity to understand identity for objects of specific ontic kind, say, persons, events, material objects etc, for we now say something extra for the objects for which it holds.

Thus a primitivist about identity embraces the view that identity is simple and the so-called problems or puzzles associated with identity are not at all problems about identity rather they are problems about property-possession of objects or of coincidence or about concepts whose extensions are far narrower than the field of identity, like the concepts of being a ship or a person. But even a primitivist would admit that In.Id. is explicative of our normal and intuitive understanding of identity because it is entailed by but not entailing our ordinary understanding of identity.

I

Classical characteristics of necessity and permanence, determinacy, and absoluteness of identity do not remain unchallenged in the contemporary western analytic tradition. Alternative conceptions of contingent and temporary identity, indeterminate identity, and relative identity have been proposed challenging necessity and permanence, determinacy, and absoluteness of classical identity respectively. Since the principle of In. Id. is, directly or indirectly, behind these classical characteristics, challenging the principle is common to almost every challenger of the classical conception of identity.

The strong version of Relative identity⁴ (RI) maintains that identity under a sortal concept does not entail indiscernibility and therefore x and y could be the same under one sortal but distinct under another sortal. There are *only* or *merely* RI relations which are also equivalence relations not satisfying unrestricted In.Id. There is plurality of relative identities like ‘is the same apple as’, ‘is the same word as’ etc. Geach in course of his denial of absolute identity claims that a two-place predicate satisfying reflexivity and In. Id. in a given theory expresses nothing more than mere indiscernibility. So, there can not be any expression of absolute identity.

The soft version of RI⁵ does not altogether abandon the principle of In.Id., but offers a restricted indiscernibility principle so as to bear the burden of identity-claim of the relativists. When we say, ‘x is the same book as y’, x and y are distinct objects but relatively identical, i.e.,

relatively equivalent. There is also absolute identity. Strictly identical objects can not differ at all. But just as strictly distinct objects may have the same size, so, strictly distinct objects may be the same book, statue or water. RI is a coherent idea if it is characterized by the logic of general similarity. The challenge for the soft RI theorists, then, is to explain the fact that being similar in *one* respect (for example, the respect denoted by ‘is the same book as’) entails being similar in so many other respects, in an entirely predictable and systematic manner.

Contingent identity theorists claim that certain identities can be contingent and the principle of In.Id. does not apply to modal properties such as necessary identity. Gibbard⁶ in his famous defense of contingent identity constructs a case involving a particular clay-statue and the lump of clay to show that their relation is of contingent identity. Suppose that a particular clay statue (named ‘Goliath’) is composed out of a piece or lump of clay (named ‘Lumpl’). Suppose further that Goliath and Lumpl came into existence and pass out of being at the same instants of time. So, it can be said that they are identical in the sense that they are coincidents, i.e., having the same spatio-temporal extent. Gibbard presupposes this coincident identity thesis. But again suppose a situation (possible world) in which before they went out of existence the statue is dropped and shattered into pieces or it might have been rolled into a ball. Then what happens to their identity? In that case the statue is destroyed but not the clay. Lumpl outlives Goliath. Goliath is identical to Lumpl in the actual world but distinct in some other possible worlds. Gibbard also refuses to consider modal predicates like *being necessarily identical to Lumpl* as expressing genuine property. Modal properties, for him, are not properties of individuals and hence are excluded from the purview of In.Id.

A section of the supporters of worldly indeterminacy accept indeterminacy in property-possession as well as indeterminacy in identity⁷: there is indeterminacy in whether an object possesses a certain property or not and sometimes there is no fact of the matter whether a pair of objects is one and the same thing or instead different things. They do not consider *being indeterminately identical with a* as expressing a genuine property. One can not prove non-identity from indeterminacy. In classical logic In.Id. and its contrapositive are equivalent. But if there is a possibility of truth-value gaps, inferences using the contrapositive of In. Id., i.e., if some property ϕ is a property of x but not of y , then $x \neq y$, are not always valid.

II

The question is whether the challengers of the classical view of numerical identity are really talking about identity rather than some other weaker equivalence relation. Apart from Geach, all other challengers claim that they are actually concerned with classical identity, the two-place equivalence relation satisfying reflexivity and the principle of the In.Id. Otherwise they would miss the point of debate. They more or less take a two-pronged strategy: either impose a completely general and systematic constraint on the In.Id. or uphold the unrestricted version of the principle but exclude some troublesome contexts from its reach by claiming either that these contexts do not determine properties or even if they express properties, these are not under the scope of the principle.

But this strategy itself is not beyond suspicion. Both Gibbard and worldly indeterminate identity theorists can be accused of being blatantly arbitrary. They exclude only those contexts which are in possible conflicts with their accepted views. They both are begging questions in so far as they presuppose their views and reject all other contexts which do not comply with their views. Deutsch's restriction of the principle is methodologically less suspect but the restriction based on general similarity does not invariably guarantee indiscernibility of the class of objects unified by a similarity relation. Contingent or Occasional identity also is one of the results of grounding identity on similarity. We can not deny that the idea of similarity unites the various senses and conceptions of sameness. But most of the alternative conceptions of identity presuppose that the desired indiscernibility can be achieved from the similarity relation, interpreting identity in terms of indiscernibility. The standard conception of identity also introduces identity in terms of indiscernibility and the notion of similarity unites its various senses or layers. But the standard conception does not ground indiscernibility on similarity. Herein lies the distinction between the standard and most of the alternative conceptions of identity. The goal for both the standard and alternative conception is to account for certain metaphysical phenomena and explain various experiences and usages of identity. It is a verbal issue whether we call those experiences and usages that they are of 'identity' but the underlying metaphysical issues are not verbal.

III

The followers of Wittgensteinian logic (W-logic) claim that the adaptation of W-logic with its exclusive interpretation of variables makes the identity sign, and with it the appeal to classical objectual identity as its semantic value, superfluous. All uses of the identity sign in first-order logic can be eliminated by adopting W-logic, without thereby giving up any of the expressive power of FOL⁻. Wittgenstein's proposal in the *Tractatus* involves fundamental revision of the syntactical rules for interpreting quantifiers and its variables. The change of variable by itself signifies change of object. Each free individual variable has an assignment which makes it such that its referent is distinct from every other free individual variable. Identity must be *shown* in the formal grammar of an ideal language.

I maintain that the possibility of *eliminating* a principle by means of another convention or principle should not be encouraged if the elimination is based on the prior assumption that the accepted principle will explain away all alternatives. Different conceptions of identity have been put forward as the explanatory principle of certain metaphysical contexts, cognitive experiences and linguistic usages. The mechanisms behind those conceptions may be different and it may be fairly a stipulation what to call 'identity'. Strict demarcation of various relations may be left wanting but that should not be, in principle, a strong ground for rejecting alternative conceptions as far as they are logically consistent. Multiple approaches to explaining a given set of phenomena are acceptable when there are, for each principle or approach, strong empirical reasons and evidences to accept them.

If numerical identity is analyzed in terms of indiscernibility then one has to stipulate, for avoiding any confusion, her understanding of property and possession of properties in the

concerned logic and metaphysics. One has to, for example, make clear whether ‘genuine property’ in her system means only worldly-characteristics having ontological loading or it covers every features including modal ones and in which respect indiscernibility is to be understood. Quine’s analysis of identity in terms of indiscernibility shows this much that our attempt to add simultaneously more than one versions of identity to the predicate calculus, actually ends up with only one. He argues that in standard first-order logic any two identity predicates are provably coextensive. But it does not really follow, neither he argues, that there is a unique identity relation, for there may be interpretations of ‘=’ which satisfy reflexivity and In.Id but do not coincide in all their attributions of identity. Thus, the question of so-called genuineness of identity largely depends on specified meta-language containing its own identity relation. But there can also be metaphysical and logical frameworks where numerical identity and difference are not qualitatively explicable.

The concept of identity is one of the most fundamental or basic concepts in our system of thought. The concept covers almost the entire field of metaphysics and a substantial portion of logic, language and epistemology. Its overarching generality is responsible for its deceptive simplicity. With this perspective, we should not hesitate to embrace a pluralist stance, at least at the phenomenal level, in explaining the phenomenon of identity. A pluralist stance is the position that whether any phenomenon or certain phenomena can be explained in terms of a single principle or by a single approach is an open question. Of course, one may argue, that a particular approach or conception scores points over other conceptions in being better satisfying desirable features of explanation like that of being simpler, more comprehensive etc. But the fact that a particular approach or conception explains the phenomena fairly well and much better than the others need not imply that the approach does not have limitations with regard to other features of explanation or that the approach does not leave unexplained certain aspects of the phenomena.

NOTES AND REFERENCES

¹ Reflexivity: For all x , x is the same thing as x .

Indiscernibility of Identicals (intuitive version): If x is numerically the same with y , then x and y share all the same properties. Or If x is identical with y , then x is F if and only if y is F , where ‘ F ’ is interpreted by specifying the intended replacements for this letter. Sharing all the same properties or complete indiscernibility is often termed as ‘qualitative identity’.

² If x is numerically the same with y . Then y is numerically the same with x . This is symmetry of identity. If x is numerically the same with y and y is numerically the same with z . Then, z is numerically the same with x . This is transitivity of identity.

³ The following Quinean formula ‘simulates’ identity for x and y as long as x and y share all the primitive predicates of T : $(P(x, z) \equiv P(y, z)) \cdot (P(z, x) \equiv P(z, y)) \cdot (Q(x) \equiv Q(y))$

⁴ Geach, P., 1962, *Reference and Generality*, Ithaca: Cornell University Press. & ‘Identity’, 1967, *Review of Metaphysics*, 21.

⁵ Deutsch H., 1998, ‘Identity and General Similarity’, *Noûs* 32

⁶ Gibbard, Allan, ‘Contingent Identity’, 1975, *Journal of Philosophical Logic*, 4.

⁷ Parsons, T., 2000, *Indeterminate Identity: Metaphysics and Semantics*, Oxford: Clarendon Press. & Parsons, T., and P. Woodruff, 1995, ‘Worldly Indeterminacy of Identity’, *Proceedings of the Aristotelian Society*, 95.

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