And Yet They Are Not Three Gods But One God

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1

Christians believe that the love of one person for another is an essential part of the internal life of God. This is consonant with the Christian belief that all good things in creation are, in some way or other, copies or images of the uncreated. God himself, Christian theology teaches, could not invent the idea of a good that was not prefigured in his own nature, for in the radiant plenitude of that nature, all possible goods are comprehended. And this holds for the supreme good, love. All forms of human love are (we believe) copies of the love that is internal to God. The natural affections of the family, friendship, sexual love (insofar as it is uncorrupted), the charity that will endure when faith has been swallowed up in sight and hope in fulfillment—all of these are creaturely images of the love that already existed, full and perfect and complete, when Adam still slept in his causes.

Like Christians, Jews and Muslims believe that power and goodness and wisdom and glory are from everlasting to everlasting. But only Christians believe this of love, for the eternality of love is a fruit of the uniquely Christian doctrine of the Holy Trinity. The doctrine of the Trinity is no arid theological speculation. It is not a thing that Christians can ignore when they are not thinking about philosophy or systematic theology. The doctrine of the Trinity ought to have as central a place in Christian worship and religious feeling as the doctrines of the Crucifixion and Resurrection.

Let me give one example of how the doctrine of the Trinity touches the deepest concerns of Christians. When we think of our hope of salvation, we tend to think of something individual. If you had asked me a year ago what I thought salvation consisted in, I think I should have

said something like this: Each of us bears within him an image of God that has been distorted by sin, and his salvation will be accomplished when—if—that image has been restored in Christ. I do not mean to imply that I now think that this answer is wrong; but I do now think that it is incomplete. The Christian hope is not merely a hope about what will happen to us as individuals. The Beatific Vision is not something that each of the saints will enjoy separately and individually, alone with God. *Vita venturi saeculi* is a corporate life, the life of the Church Triumphant. And the establishment of this corporate life will consist in the whole Body of Christ coming to be an undistorted image of God. If you and I are one day members of the Risen Church, then you will indeed be a restored image of God and I shall indeed be a restored image of God. But there is more: The love we have for each other will be a restored image of the love that the Persons of the Trinity have for one another.

But can this really be? If the "eternal life we are by grace called to share, here below in the obscurity of faith and after death in eternal light"[1] is the life of the Trinity, had we not better worry about the very logical possibility of the Christian hope? For how can the love of one person for another be internal to the life of God, who is, after all, one being? ("Hear, O Israel, the Lord our God is one Lord.") Must not Jew and Muslim and unbeliever join in demanding of us that we disclose the ill-concealed secret of all the Christian ages: that we are mere polytheists? Or if we are not mere polytheists, then are we not something worse: Polytheists who are also monotheists, polytheists engaged in a pathetic attempt to remain loyal to the God of Israel through sheer force of reiterated logical contradiction? For do we not say all of the following things? There is one divine Being, but there are three distinct Persons, each of whom is a divine Being; and the one divine Being is a Person, though not a fourth Person in addition to those three; nor is he any one of the three.[2]

My primary purpose in this paper is to explore one way of replying to the charge that Christians are either simple polytheists or else polytheists and monotheists at the same time. I shall not be terribly unhappy if the reply I propose to explore turns out to be unsatisfactory. The Trinity has always been described as a mystery, as something that surpasses human understanding. If one is unable to answer satisfactorily questions posed by a mystery—well, what should one expect?

Now if the Christian faith were a human invention, a theory devised by human beings to explain certain features of the world, then we should be wrong to be complacent about our inability to answer pointed questions about it. In such a case, if, after lengthy, determined, and serious

effort to answer these questions, we should find ourselves still unable to answer them, then we ought to consider replacing our theory with one that does not pose these apparently unanswerable questions. But, as the pope recently had occasion to remind the Roman Church in Holland, the faith is no human invention. It is, quite simply, news.

Have we ever been promised by God that we shall understand everything he tells us well enough to resolve all the intellectual difficulties it raises? God's concern with us—just at present, at any rate—is not the concern of a tutor who fears that we shall fail to grasp some nice point: God fears that we shall lose the end for which we were made. His concern with us is entirely practical. It may well be that if I had the opportunity to ask God to explain his triune nature to me, he would say, "What is that to thee? Follow thou Me." It is, as Thomas à Kempis observed, better to be pleasing to the Holy Trinity than to be able to reason about the mysteries of the Holy Trinity.[3] It may be that it is important for us to know that God is (somehow) three Persons in one Being and not at all important for us to have any inkling of how this could be—or even to be able to answer alleged demonstrations that it is self-contradictory. It may be that we *cannot* understand how God can be three Persons in one Being. It may be that an intellectual grasp of the Trinity is forever beyond us. And why not, really? It is not terribly daring to suppose that reality may contain things whose natures we cannot understand. And if there were such natures, it would not be so very surprising if the highest nature of all were among them. As to alleged demonstrations of contradiction—well, our faith is: There is some way to answer these demonstrations, whether or not *we* can understand it.

The world, of course, has a handy word for this sort of thing: "obscurantism." I would remind the world of certain cases that have arisen in twentieth-century physics. An electron, we are told, is both a wave and a particle. One can ask pointed questions about *this* thesis. A wave is a spreading, periodic disturbance; a particle is lump of stuff; How can something be both? I think that there are two equally respectable answers to this question: (1) No one knows; (2) Quantum field theory explains how something can be both a wave and a particle.[4] Let us suppose that the second of these answers is correct, and that some people, those who are at home in quantum field theory, know how something can be both a wave and a particle. Still, there was an interval during which physicists went about saying that electrons were both waves and particles, and had no satisfactory reply to the childishly simple question, "How can something be both a disturbance and a lump of stuff?" (I do not think anyone would say that there was a good answer to this question before Dirac formulated quantum field theory. I am willing to

be corrected on this point, however.) And I do not think that anyone should blame the physicists for this. I do not think that anyone should have blamed them even if quantum field theory had somehow never been discovered. There were certain undeniable but absolutely astounding experimental data (a "revelation" from nature, as it were); there was a theory that explained those data (a human invention, to be sure, and an extraordinarily brilliant one at that, but not a human invention in the way a motet or an abstract painting is—the theory purported to represent physical reality); and that theory implied that an electron had both a mass and a wavelength.

Might it not be that the Christian who accepts the doctrine of the Trinity, even though he is unable to answer certain pointed questions about it, is in a position analogous to that of quantum physicists before the advent of quantum field theory? The world, of course, will reply that the Christian "revelation" is a fantasy, while the revelation disclosed by nature in the double-slit experiment or in the phenomenon of electron diffraction comprises hard facts of observation. But may we not ask the world to consider the question hypothetically? Suppose the Christian revelation were *not* a fantasy. If the Holy Spirit really existed and had led the mind of the Church to the doctrine of the Trinity,[5] *then* might not the Trinitarian be in a position analogous to that of the physicist to whom nature had revealed the doctrine of the Duality? The world may abuse us for believing in God and revelation if it will, but I think the world should admit that once we have accepted something as a revelation, it is reasonable for us to retain it even if we cannot answer all the intellectual difficulties it raises; or at least the world should admit this if the subject matter of the putative revelation is one that it is plausible *a priori* to suppose we should find it very difficult to understand.

While I accept all this as a Christian, I could not help being disappointed as a philosopher if there were no good, humanly accessible replies to the pointed questions raised by the doctrine of the Trinity. These questions are, after all, questions about number, identity, discernibility, personhood, and being. That is to say, they are logical and metaphysical questions, and therefore questions that I am professionally interested in. In this paper, my main purpose is to explore one way of responding to these questions. I should say, first, that I do not endorse the way of looking at the Trinity I shall ask you to consider, but I do think it is worth considering. It is worth asking whether the theses I shall put forward for your consideration are coherent and whether such light as they cast on the doctrine of the Trinity is orthodox and catholic (in the nondenominational senses of those words). I should say, secondly, that I do

not propose to *penetrate* the mystery of the Trinity. I propose to state the doctrine of the Trinity (or part of it: the part that raises all those pointed logical and metaphysical questions) in such a way that it is demonstrable that no formal contradiction can be derived from the thesis that God is three persons and, at the same time, one being.

I do not propose to *explain* how God can be three persons and one being. Here is an analogy. I believe (and I hope that you do, too) that God exists necessarily—that, like a number or a proposition, he exists in all possible worlds; and I also believe (as I am sure you do, too) that, unlike numbers or propositions, he is a concrete being possessing causal powers. I have no idea how something could both exist necessarily and possess causal powers. And I think that no other human being does. How there could be something with both these features is a mystery. But I do not see any reason to suppose that a contradiction might be derivable from the thesis that God is both necessary and concrete, or from this thesis taken together with any plausible logical or metaphysical assumptions. It is in more or less this condition that I should like to leave the doctrine of the Trinity. But, as I have said, I shall not achieve even this modest goal in the present paper. I wish only to propose a way of stating that doctrine that can be shown to be free from formal inconsistency. Whether the doctrine, so stated, actually is the catholic faith (which I mean to keep whole and undefiled) will be a matter for further discussion.

The device I shall exploit for this purpose is the notion of relative identity, familiar to us from the work of Professor Geach. Professor Geach has discussed the abstract notion of relative identity in some detail, and has made some helpful and suggestive remarks about relative identity and the Trinity.[6] What I shall try to do is to expand these suggestive remarks in such a way as to enable us to see what a systematic and thoroughgoing attempt to express the propositions of Trinitarian theology in terms of relative identity would look like.[7] While the entire impetus of the thoughts of this paper is thus due to Professor Geach, we should not suppose that the idea of applying the notion of relative identity to the problems about identity and counting posed by the doctrine of the Trinity is an idiosyncratic whim of one twentieth-century Roman Catholic logician. Professor Geach, when alluding to the historical antecedents of his views—and rarely if ever does he do more than allude—usually manages to mention Thomas Aquinas. But the following (rather scattered) quotation from the *Quicunque Vult*—a document that was certainly in more or less its present form by about 500 A.D.—speaks for itself:

The Catholic Faith is this: That we worship one God in Trinity, and Trinity in Unity, neither confounding the Persons, nor dividing the Substance.

For there is one Person of the Father, another of the Son, and another of the Holy Ghost . . .

The Father eternal, the Son eternal, and the Holy Ghost eternal.

And yet they are not three eternals, but one eternal . . .

So likewise the Father is Almighty, the Son Almighty, and the Holy Ghost Almighty.

And yet they are not three Almighties, but one Almighty.

So the Father is God, the Son is God, and the Holy Ghost is God.

And yet they are not three Gods, but one God.

So likewise the Father is Lord, the Son Lord, and the Holy Ghost Lord.

And yet not three Lords, but one Lord.

For like as we are compelled by the Christian verity to acknowledge every Person by himself to be both God and Lord,

So we are forbidden by the Catholic Religion, to say, There be three Gods, or three Lords.[8]

Before turning to a detailed treatment of relative identity and the Trinity, I shall make some remarks on the meaning of the word *person* in Trinitarian theology.

2

Anyone who undertakes to give an account of the Trinity will find it hard to avoid falling into some heresy that is summarized in a helpful little article in the *Oxford Dictionary of the Christian Church*. Roughly speaking, these heresies are bounded on the one side by Modalism and on the other by Tritheism. Modalism, in its crudest form, holds that the Father, the Son, and the Holy Spirit are the same person and the same being, this one being or person being conceived, on various occasions, under each of these names in relation to an office, function, or "mode" appropriate to that name. (I say "in its crudest form" because Modalism may be variously disguised.) Thus, 'the Father' is simply a name of God, one we use when we are thinking of him as our creator and judge, rather than as (say) our redeemer or our comforter. Modalism is associated historically with Sabellius (it is sometimes called Sabellianism), and with Peter Damien. Tritheism is, of course, the thesis that there are three Gods. Of these two heresies, Tritheism would seem to be the more serious. If Modalism subverts the doctrine of the Incarnation of the Word

by flatly contradicting either our lord's divinity or else his consistent representation of himself and his Father as distinct persons, Tritheism strikes, by definition, at the very root of monotheism.

Nevertheless, it is Tritheism that I shall risk. I have two reasons. First, the language of the Creeds is as safe from a modalistic interpretation as any language could be. If a philosopher or theologian is guided by the Creeds, he will be directed resolutely away from Modalism, and I propose to be guided by the Creeds. Secondly, I think that Modalism is a far easier heresy than Tritheism to fall into in our time, and is, therefore, a doctrine that a Christian thinker ought to stay as far away from as possible. I have recently heard a priest of my own communion, guided, I suppose, by a desire to avoid saying anything that implied that God had a sex, bless the people at the end of Mass not with the prescribed words, ' . . . the blessing of God Almighty, the Father, the Son, and the Holy Ghost . . .' but rather with the words ' . . . God our Creator, God our Redeemer, and God our Sanctifier.' Note that what are enumerated in this formula are not persons but functions, offices, or modes, and that this formula has been used in place of a customary and familiar formula in which the divine Persons are enumerated. The "new" formula is no more a Trinitarian formula than is 'the God of Abraham, the God of Isaac, and the God of Jacob'. You may tell me that the three offices enumerated have been, in liturgy and tradition, associated respectively with the Father, the Son, and the Holy Spirit. I will reply that that is true, but does not affect my point. (Moreover the nature of that "association" or "appropriation" is a nice theological problem. Whatever it means, it does not mean that, e.g., only the Father was involved in the creation. The Nicene Creed says of the Son: 'by whom (*per quem*) all things were made', and in this it echoes Colossians 1:15–17 and the opening words of John's gospel.) My priest, of course, was not a Modalist and did not intend to preach Modalism. But note how easy it is for one whose purposes are remote from questions of Trinitarian theology inadvertently to use words that are, in context, Modalistic in tendency.

It is my intention in this paper to avoid Modalism by adhering rigorously to the doctrine that there are three distinct divine Persons. Two comments are in order.

(1) I shall ignore all problems related to the predication of wisdom, goodness, knowledge—and personality itself—and other attributes predictable of created persons to the divine Persons. Such predication is, I think, as much a difficulty for the Unitarian (i.e., the Jew or Muslim) as for the Trinitarian, and I think it is the *same* difficulty for the Unitarian and the Trinitarian. In any case, I cannot attend to all the problems of philosophical theology at once.

(2) It is sometimes contended that 'person' in Trinitarian theology does not mean what it means in everyday life or in the philosophy of mind or even in non-Trinitarian applications of this word to God. Professor Geach has answered this contention with his usual vigor, and I am of his party:

> [S]ome will protest that I am equivocating between the normal use of the term 'person' and its technical theological use. I reject the protest. The concept of a person, which we find so familiar in its application to human beings, cannot be clearly and sharply expressed by any word in the vocabulary of Plato and Aristotle; it was wrought with the hammer and anvil of theological disputes about the Trinity and the Person of Christ.[9]

He goes on to say, "The familiar concept of a person finds linguistic expression not only in the use of a noun for 'person' but also in the use of the personal pronouns. . . . " In addition to the uses of personal pronouns in connection with the divine Persons that Geach proceeds to cite, we may call attention to the English translation of the *Quicunque Vult* quoted above (" . . . to acknowledge every Person by himself to be both God and Lord"), and the closing words of Proper 27 of the Episcopal Church: " . . . where with thee, O Father, and thee, O Holy Ghost, he liveth and reigneth ever, one God, world without end."[10]

3

In this section, I shall outline a system of formal logic I shall call Relative-Identity Logic, or RI-logic for short.[11] I shall also attempt to answer the question: On what assumptions is a logic of relative identity of philosophical interest?

A formal logic comprises a vocabulary and a set of formation rules, a set of rules of inference, and, sometimes, a set of axioms. We shall require no axioms.

The vocabulary of RI-logic will consist of certain predicates of English (including 0-place predicates: closed sentences), the usual sentential connectives, variables, the universal and existential quantifiers, and suitable punctuation marks.[12] It will *not* include the identity sign, the description operator, or any terms other than variables.

We shall assume that our vocabulary contains all English predicates that conform to the following three constraints.

(1) Our stock of English predicates will not include any that contain the informal analogues of the things we have pointedly excluded

from our formal apparatus: identity, descriptions, demonstratives, and names. Thus we exclude 'α is identical with some Albanian', 'The tallest man is rich', 'That is a dog', and 'α is Jack's father'. It would cause no *formal* difficulties to include such predicates in the language of RI-logic, since a formal logic does not "interact" with the semantic content (if there is any) of the items it manipulates formally, but to do so would be confusing and contrary to the motivating spirit of RI-logic.

(2) With the exception of a special class of predicates noted in (3) below, our stock of English predicates will include no predicates containing count-nouns. (A count-noun is a noun that has a plural form and which can be modified by the indefinite article.) Thus we exclude: 'α is an apple', 'α owns three horses', and 'α has more children than β'. Some acceptable predicates are: 'α is heavy', 'α is made of gold', 'α is spherical' and 'α is taller than β'. We shall not, however, be really fanatical about excluding count-nouns. We shall be liberal enough to admit count-nouns that are mere grammatical conveniences. For example, we shall admit 'α has six sides' because one might just as well express what is expressed by this predicate by writing 'α is six-sided'. The rough rule is: A count-noun is "all right" if its use does not commit its user to there being things it counts. If one says, "The box weighs four pounds," one does not lay oneself open to the following sort of ontological interrogation: "Just what is a 'pound'? What properties do these 'pounds' have? You say the box weighs four of them; but how many of them are there (in all, I mean)?"

(3) Consider phrases of the form 'α is the same N as β', where 'N' represents the place of a count-noun. Sometimes predicates of this form are used in such a way as to imply that α and β are Ns and sometimes they are not. If I say, "Tully is the same man as Cicero," I imply that Tully and Cicero are men. If I say, "The Taj Mahal is the same color as the Washington Monument," I do not imply that these two edifices are colors. Let us call a predicate of the form 'is the same N as' a *relative-identity predicate* (or "RI-predicate") if it is satisfied only by Ns. A predicate that is not an RI-predicate we call an *ordinary* predicate. Thus, 'is the same man as' is an RI-predicate, and 'is the same color as' is an ordinary predicate—as are 'is green', 'is round', and 'is taller than'. (Actually, we should not say that predicates of the form 'is the same N as' are or are not RI-predicates *in themselves*, for a predicate of this form may be used sometimes as an RI-predicate and sometimes as an ordinary predicate. Consider, for example, 'Magenta is the same color as bluish-red'. In this sentence, 'is the same color as' functions as an RI-predicate.

In the sequel, I shall ignore this complication.) Count-nouns—seriously meant count-nouns like 'apple', 'horse', and 'child'—may turn up in our stock of English predicates in just one way: as components of RI-predicates. Thus we admit 'α is the same apple as β', 'α is the same horse as β', and so on.

Having introduced RI-predicates, we may introduce ordinary predicates of the form 'α is a(n) N' (e.g., 'α is an apple'; 'α is a child') by abbreviation: 'α is an apple' abbreviates '$\exists\beta$ α is the same apple as β,' and so on. To be an apple, in other words, is to be the same apple as something.

The formation rules of RI-logic are the obvious ones.

The rules of inference of RI-logic are simply the rules of ordinary quantifier logic—developed as a system of natural deduction—supplemented by two rules for manipulating RI-predicates. Since RI-predicates are closely connected with the idea of identity, we should expect these rules to be in at least some ways analogous to the inference-rules governing classical identity. This is indeed the case. The two rules are:

Symmetry From $I\alpha\beta$, infer $I\beta\alpha$
Transitivity From $I\alpha\beta$ and $I\beta\gamma$, infer $I\alpha\gamma$.

Here, of course, 'I' represents any RI-predicate and the Greek letters represent any variables. Using these two rules, we may prove something that will be a minor convenience to us, the general fact of which the following statement is an instance: '$\exists y$ x is the same apple as y' is equivalent to 'x is the same apple as x'.[13] "Right-to-left" is simply an instance of Existential Generalization. We proceed from left to right as follows: We have 'x is the same apple as z' by Existential Instantiation; from this we infer 'z is the same apple as x' by Symmetry; from these two sentences, 'x is the same apple as x' follows by Transitivity.

This result is a convenience because it allows us to regard, e.g., 'x is an apple' as an abbreviation for 'x is the same apple as x' instead of for '$\exists y$ x is the same apple as y', which will simplify the typography of the sequel. This result also makes it clear why we have no rule corresponding to the reflexivity rule of classical identity logic. A reflexivity rule for RI-predicates would look like this: From any premises, infer $I\alpha\alpha$. But if we had this rule, we could prove, e.g., that everything is the same apple as itself—that is to say, we could prove that everything is an apple.

Do we need further rules for manipulating RI-predicates? It might be argued that we must have such rules if RI-logic is to be at all interesting. Developments of the classical logic of identity always include

some rule or axiom motivated by the intuitive idea that if x is identical with y, then x and y satisfy all the same predicates. In fact, all the classical principles of identity can be derived from a reflexivity rule ('From any premises, infer $\alpha = \alpha$') and an "indiscernibility" rule: 'From any premises, infer

$$\alpha = \beta \rightarrow (F \ldots \alpha \ldots \leftrightarrow F \ldots \beta \ldots).'$$

Here $F \ldots \alpha \ldots$ represents a sentence in which β does not occur, and $F \ldots \beta \ldots$ represents the result of replacing any (or all) free occurrences of α in $F \ldots \alpha \ldots$ with β. For example:

$$x = y \rightarrow (\exists w \ z \text{ is between } x \text{ and } w. \leftrightarrow \exists w \ z \text{ is between } y \text{ and } w).$$

If RI-logic is to be interesting (it might be argued), it must be supplied with some analogue of this rule. What would this analogue be? It will certainly *not* do to have the following rule (call it 'The Proposed Rule'): 'Where I is any RI-predicate, from any premises infer

$$I\alpha\beta \rightarrow (F \ldots \alpha \ldots \leftrightarrow F \ldots \beta \ldots)'.$$

For example:

$$x \text{ is the same man as } y \rightarrow (z \text{ is west of } x \leftrightarrow z \text{ is west of } y).$$

If we added the Proposed Rule to RI-logic, we should get a logic that treated RI-predicates as if they were all of the form 'x is an N & $x = y$', where N is a count-noun and '$=$' represents classical, absolute identity.[14] For example, the resulting logic would treat 'x is the same apple as y' as if it had the logical properties ascribed to 'x is an apple & $x = y$' by the classical logic of identity.

We may put this point more precisely as follows. Call a sentence like 'x is the same apple as y' that is formed from an RI-predicate and two occurrences of variables, an *RI-expression*. Call the sentence 'x is an apple & $x = y$' the *classical image* of the RI-expression 'x is the same apple as y'. Similarly 'z is a horse & $z = w$' is the classical image of 'z is the same horse as w'; the definition is obvious. More generally, the classical image of a *sentence* of the language of RI-logic is got by replacing each occurrence of an RI-expression in that sentence with its classical image.

Adding the Proposed Rule to RI-logic has this consequence:

A sentence is a theorem of RI-logic if and only if its classical image is an instance of a theorem of the classical logic of identity.

By an instance of a theorem of the classical logic of identity, I mean a sentence that results from such a theorem by substituting English pred-

icates (consistently) for all of its predicate-letters. (Of course most instances of theorems of the classical logic of identity are not classical images of any sentence of RI-logic; '$x = y$ & x is green. $\rightarrow y$ is green', for example, is not.) The following three sentences are instances of theorems of the classical logic of identity:

x is an apple & $x = y$. $\rightarrow.y$ is an apple & $y = x$

x is an apple & $x = y$ & y is an apple & $y = z$. $\rightarrow.x$ is an apple & $x = z$

w is an apple & $w = y$. $\rightarrow$ (w is green $\leftrightarrow y$ is green).

Therefore (if the above thesis about adding the Proposed Rule to RI-logic is correct), the sentences of which these are the classical images are theorems of RI-logic supplemented by the Proposed Rule. (Hereinafter, 'RI-logic +'.) For example, the sentence

w is the same apple as $y \rightarrow$ (w is green $\leftrightarrow y$ is green).

is a theorem of RI-logic + . And it is, I think, intuitively obvious that a sentence is a theorem of RI-logic + if and only if its classical image is an instance of a theorem of the classical logic of identity. It does not seem to be overstating the case to say that RI-logic + treats 'α is the same N as β' as a stylistic variant on 'α is an N & $\alpha = \beta$'. If RI-logic + is the correct logic for reasoning about relative identities, then there is no point in having a special logic for reasoning about relative identities. The correct principles for reasoning about relative identities follow from the correct principles for reasoning about absolute identities. One need do no more than put a check mark beside each instance of a theorem of the logic of classical identity that is a classical image of some sentence in the language of RI-logic and say, "These are the formal truths about so-called relative identities. You may pronounce, e.g., 'z is an apple & $z = y$' as 'z is the same apple as y' if you care to."

A logic of relative identity will be interesting only if there are instances of theorems of the classical logic of identity that are the classical images of *non-theorems* of that logic of relative identity. A philosophically interesting logic of relative identity must be (in that sense) "weaker" than the classical logic of identity. (As with para-consistent logic, "intuitionist" logic, quantum logic, and David Lewis's counterfactual logic, a good deal of the philosophical interest of the topic arises from the fact that certain sentences that one might expect to be theorems are not theorems.) I propose to achieve this end as follows: to resist the temptation to supply RI-logic with any special rules of inference beyond Symmetry and Transitivity. This, of course, will not insure that RI-logic

is of any philosophical interest. It is certainly of no formal interest. Considered formally, it is simply the quantifier calculus with its two-place predicates partitioned into two classes, within one of which Symmetry and Transitivity apply. What interest it has must come from two sources: first, from the thesis that this rather weak logic does indeed embody all the formal principles of inference that one should have when one reasons about relative identities, and, secondly, from such applications as it may have. The main philosophical interest of "intuitionist" logic lies in the claim that it embodies all the principles of formal reasoning the mathematician can legitimately employ. Quantum logic has no philosophical interest apart from its intended application.

The effect of having no special rules of RI-logic beyond Symmetry and Transitivity (and that comes down to having neither the Proposed Rule nor any restricted version of it) is exemplified by the following case:

x is the same apple as $y \rightarrow$ (x is green $\leftrightarrow y$ is green)

will not be a theorem of RI-logic, despite the fact that its classical image

x is an apple & $x = y$. $\rightarrow$ (x is green $\leftrightarrow y$ is green)

is an instance of a theorem of the classical logic of identity. More generally, RI-logic differs from RI-logic + in the following way. Call sentences of the following form *dominance sentences*:

$$I\alpha\beta \rightarrow (F \ldots \alpha \ldots \leftrightarrow F \ldots \beta \ldots),$$

where $F \ldots \alpha \ldots$ is a sentence in which β does not occur, and $F \ldots \beta \ldots$ is like $F \ldots \alpha \ldots$ except for having free occurrences of β at some or all places at which $F \ldots \alpha \ldots$ has free occurrences of α. All dominance sentences are theorems of RI-logic + . In general, dominance sentences are not theorems of RI-logic — unless they are instances of theorems of the sentential calculus, or are of the type 'x is the same apple as $y \rightarrow$ (x is the same apple as $z \leftrightarrow y$ is the same apple as z)'.

In refusing to add the Proposed Rule (or any restricted version of it) to RI-logic, we are in effect saying that each dominance sentence embodies a substantive metaphysical thesis — or perhaps in some cases a trivial metaphysical thesis, but at any rate a *metaphysical* thesis, one that ought not to be underwritten by the formal logic of relative identity. If there were a formal criterion by which we could separate the trivial metaphysical theses from the substantive ones, then we might consider adopting a restricted version of the Proposed Rule, one that yielded only the trivial theses. But there could not be such a formal criterion: If

some dominance sentences are substantive and some trivial, the distinction lies in the English meanings of the predicates they contain.

In refusing to adopt the Proposed Rule we are (in effect) saying to whoever proposes to construct a derivation containing RI-predicates: "If you think that a dominance sentence like 'x is the same apple as $y \rightarrow$ (x is green $\leftrightarrow y$ is green)' is *true*, you are perfectly free to introduce it into your derivation *as a premise*. But then defending it is your responsibility. Formal logic alone does not endorse it." If someone does regard the dominance sentence 'x is the same apple as $y \rightarrow$ (x is green $\leftrightarrow y$ is green)' as true, let us say that he regards the RI-predicate 'is the same apple as' as *dominating* the predicate 'is green'. (If he believed that x and y might be the same apple and nevertheless be of different colors, then he would deny that sameness among apples "dominated" color.) Informally, for I to dominate F is for I to "force indiscernibility" in respect of F. Formally, an RI-predicate I dominates a predicate F (F may be of any polyadicity and be either ordinary or RI) if all sentences of the form '$I\alpha\beta \rightarrow (F \ldots \alpha \ldots \leftrightarrow F \ldots \beta \ldots)$' are true. We say that an RI-predicate that dominates every predicate is *dominant*. It seems a reasonable conjecture that most of us would regard, e.g., 'is the same apple as' and 'is the same horse as' as dominant.

The question now arises, *are* there any RI-predicates that are not dominant? Are there any false dominance sentences? If all dominance sentences are true (if all RI-predicates are dominant), then the Proposed Rule can never lead from truth to falsity. And if the Proposed Rule can never lead from truth to falsity, then the project of constructing a logic of relative identity is of no interest. It can be accomplished by stipulating that a sentence is a "theorem of the logic of relative identity" if and only if its classical image is an instance of a theorem of the classical logic of identity. There is, after all, no point in refusing to include the Proposed Rule among the rules of inference of a logic of relative identity if that rule can never lead from truth to falsity. And the Proposed Rule can lead from truth to falsity only if some RI-predicates are not dominant.

A trick of Professor Geach's shows that some RI-predicates are not dominant.[15] Let us introduce an RI-predicate 'is the same surman as' by the following definition:

> α is the same surman as $\beta = df$ α is a man and β is a man and α and β have the same surname.

Thus, John Locke is the same surman as Don Locke. It is evident that 'same surman' fails to dominate a great variety of predicates: 'is alive in

the twentieth century', 'has never heard of Kant', 'is the same man as', and so on. Or, at least, 'same surman' fails to dominate these predicates if it really is an RI-predicate. But it would seem to be: 'surman' is a count-noun ("John Locke is a surman"; "Geach and Locke are two surmen") and if x is the same surman as y, then x and y are both surmen (i.e., each is the same surman as himself).

But this trick, it seems to me, does not show that the project of constructing a logic of relative identity is of interest. It is true that 'is the same surman as' is non-dominant. But it is also easily eliminable from our discourse. Anything we can say using 'is the same surman as' we can say without it; we need only use the (presumably dominant) RI-predicate 'is the same man as' and the ordinary predicate 'has the same surname as'. Let us say that if a non-dominant RI-predicate has these features, it is *redundant*. More explicitly: a non-dominant RI-predicate is redundant if everything we can say by making use of it we can say using only dominant RI-predicates and ordinary predicates. If the *only* non-dominant RI-predicates are in this sense redundant, then there is no real point in having a special logic of relative identity. If the only non-dominant RI-predicates are redundant, then—at least when we are engaged in constructing formal derivations—why not just translate all of our premises into sentences containing only dominant RI-predicates and ordinary predicates? Having done that, we may replace each premise that contains RI-predicates with its classical image and employ the classical logic of identity. If it pleases us, we may replace all occurrences in our conclusion of, e.g., 'x is a man & y is a man & x and y have the same surname' with 'x is the same surman as y'. In short, the "surman" trick provides us with no motivation for constructing a logic of relative identity. A logic of relative identity will be of interest only if there are *non-redundant* RI-predicates that are not dominant.

Are there non-redundant RI-predicates that are not dominant? Is there a non-redundant RI-predicate that fails to dominate some predicate? It is tempting to think that if there is such a relation as classical, absolute identity, the answer must be No. (If that is right, the project of constructing a logic of relative identity is interesting only on the assumption that classical, absolute identity does not exist.) Consider, say, 'is the same apple as'—which we shall suppose for the sake of the example not to be redundant—and 'is green'. Suppose that there is such a relation as classical identity. Obviously (one is tempted to say), if x is the same apple as y, then $x = y$. We have as an instance of a theorem of the logic of classical identity: $x = y \rightarrow$ (x is green $\leftrightarrow y$ is green). Hence, if x is the same apple as y, then x is green if and only if y is green. That is, 'is the

same apple as' dominates 'is green'. Essentially the same argument could be constructed for the general case: to show that for any non-redundant RI-predicate I and any predicate F, I dominates F.

The tricky step in the argument for the general case will be the premise that, for just any non-redundant RI-predicate I, if Ixy then $x = y$. (A redundant RI-predicate R may, of course, be such that Rxy & $\sim x = y$. The two Lockes are the same surman but not absolutely identical.) Is this true? Does every non-redundant RI-predicate dominate classical identity, assuming there to be such a relation as classical identity? Put the question this way. Call a predicate *subdominant* if it is dominated by every RI-predicate other than those that, like 'same surman', are redundant; Is it a part of the *concept* of classical identity (whether or not any relation in fact falls under that concept) that it be subdominant?

If the answer to this question is Yes, then RI-logic is an interesting topic only if classical identity does not exist. (And it seems to be the consensus among the friends of relative identity that classical identity does not exist.)

I am unsure what to say about the subdominance of classical identity. I know of only three relevant arguments, and they are inconclusive.

First, one might argue that if there is such a relation as classical identity, then, for any non-redundant RI-predicate 'is the same N as', the following equivalence should hold:

x is the same N as y $\leftrightarrow$ .x is an N & $x = y$.

And it obviously follows from this that every non-redundant RI-predicate dominates classical identity. I think that those friends of relative identity who assume that their position is incompatible with the existence of classical identity have something like this in mind. (But why exactly should one accept this equivalence? Call a count-noun *proper* if, unlike 'surman', it does not form a redundant RI-predicate. Why is it incoherent to suppose that, where N is a proper count-noun, x is an N, y is an N, x and y are the same N, and x and y are not absolutely identical?)

Secondly, one might argue *ad hominem* that the philosopher who believes that RI-logic is an interesting topic should not mind denying that classical identity is subdominant. After all, he must hold that *some* predicate is not subdominant. Now the really puzzling thing—one might argue—is that *any* predicate should fail to be subdominant. Once someone has admitted *that*, he should have no scruples about saying of any *given* predicate—classical identity, for example—that *it* is not subdominant.

Thirdly, one might point out that all the theorems of the logic of classical identity follow from '$x = x$' and '$x = y \rightarrow (F \ldots x \ldots \leftrightarrow F \ldots y \ldots)$' by quantifier logic. This fact suggests that only two properties are constitutive of the *idea* of classical identity: identity is *universally reflexive* and it *forces absolute indiscernibility*. And it is hard to see how these two properties might entail subdominance.

As I have said, I regard these arguments as inconclusive. In the sequel, therefore, I shall neither assume that classical identity exists nor that it does not exist.

We may note in this connection that it is possible for one to employ in certain contexts a symbol that behaves like the classical identity-sign without thereby committing oneself to the existence of classical identity. The contexts in which one may do this can be described as follows. Let G be a one-place predicate. Let us say that an RI-predicate I *G-dominates* a predicate F if all sentences of the form

$$G\alpha \ \& \ G\beta. \ \rightarrow \ [I\alpha\beta \rightarrow (F \ldots \alpha \ldots \leftrightarrow F \ldots \beta \ldots)]$$

are true. Suppose that, for the duration of a certain project, one is willing to restrict the scope of one's generalizations to objects that satisfy G. And suppose that one believes (1) that all of the RI-predicates one is employing in this project G-dominate all of the predicates one is employing, and (2) that, for any x, if Gx, then for some RI-predicate I that one is employing, Ixx. Then one may introduce a predicate '$=$' as the disjunction of all the RI-predicates that one is employing and one may regard this predicate as governed by the two rules that define the logical behavior of the classical identity-sign. (That is, Reflexivity and the Indiscernibility of Identicals; see above.)

A philosopher who denies the existence of classical, absolute identity may find materials in the procedure I have outlined for an explanation of the fact that most philosophers and logicians have assumed that there is such a relation as classical identity. Might it not be that all commonly used RI-predicates G-dominate all commonly used predicates, where G is some predicate that comprehends all the objects that philosophers typically think of as central or paradigm cases of "objects"? If this were so, it would go a long way toward explaining how a belief in absolute identity could be pervasive but incorrect. (One might compare an explanation of this sort with the usual explanations of how a belief in absolute, Euclidean space could be pervasive but incorrect. Each sort of explanation postulates a natural but unwarranted inference from "local" features of the world to the features of the world as a whole.)

Now whether or not there is such a relation as classical identity, RI-logic is of interest only if there is an RI-predicate I (from now on,

when making generalizations about RI-predicates, I shall regard the qualification 'non-redundant' as "understood") and a predicate F such that I does not dominate F. We should have such an I and F if there were some count-noun of English N (from now on, when making generalizations about count-nouns, I shall regard the qualification 'proper' as "understood") such that, for some x and y, x is green and y is not green and x is the same N as y. (In this case 'is the same N as' fails to dominate 'green'.) Or we should have such an I and F if there were two count-nouns of English, M and N, such that, for some x and y, x is an M and x is an N and y is an M and y is an N and x is the same N as y and x is not the same M as y. (In this second case, 'is the same N as' fails to dominate 'is the same M as'. This second case has been said to be a necessary and sufficient condition for RI-logic being of interest; but it is not necessary, as the first case shows.)

How plausible is it to suppose that there is some RI-predicate that fails to dominate some predicate? (In the present section I shall examine the question whether there are such predicates insofar as this question touches on objects belonging to the natural world. Theological speculations are reserved for section 4.) The literature on relative identity suggests several candidates for this position, several of which are worthy of careful examination. I pick one as representative. It is sometimes said that there are such things as "quantities of clay" (and of other stuffs, of course). A clay vase is a quantity of clay, a clay statue is a quantity of clay, and an unformed lump of clay that no potter or sculptor has touched is a quantity of clay. ('Quantity' does not here mean *amount*; 'quantity' is like 'lump', only even less demanding: a lump has to be in one piece — one would suppose — while a quantity may be scattered to the four corners of the earth.) It is sometimes suggested that the RI-predicate 'is the same quantity of clay as' does not dominate, e.g., 'is less than one hour old'. It is suggested that it may be that there is a vase and there is a lump of clay (currently vase-shaped and coincident with the vase) such that the former is the same quantity of clay as the latter, despite the fact that the vase is less than one hour old and the lump more than one hour old. (For no vase could ever have been of a radically different shape — spherical, say — while a lump of clay might be vase-shaped now and have been spherical yesterday.) A philosopher who doubts the philosophical utility of the concept of relative identity will not be moved by these suggestions, however. He will contend that there is no need to suppose that 'is the same quantity of clay as' fails to dominate 'is less than one hour old'. He will suggest that it is simpler to suppose (a) that there is such a relation as absolute identity, (b) that 'x is the same quantity of clay as y' is equivalent to 'x is a quantity of clay & $x = y$', and (c) that it *can* be true

of a vase that *it* was once spherical; he will suggest that a clay vase *is* (absolutely) just a quantity of clay; one that was once (say) spherical and is now vase-shaped. In other words, this philosopher will suggest that "being a vase" is a *status* that a quantity of clay may temporarily acquire, much as "being a president" is a status that Ronald Reagan has temporarily acquired: Just as the President existed before he was a president, so the vase existed before it was a vase. I have not the space to consider all the cases that have been devised by philosophers in the attempt to show that there are non-dominant RI-predicates (ones having only natural objects in their extensions), but I think that the enemies of relative identity will be able to produce replies to them as effective as the reply I have suggested for the case of the clay vase. I can find nothing in the natural world to suggest that there are any non-dominant RI-predicates. As far as I am able to tell, RI-logic has no utility outside Christian theology. (This need not raise doubts about the coherency of Christian doctrine. Like quantum mechanics and the more rarefied parts of pure mathematics, the doctrine of the Trinity treats of objects extraordinarily different from the objects of ordinary experience, ones that are perhaps *sui generis*. If it could be shown that a certain exotic non-classical logic had an application — if anywhere — in quantum physics or in the study of the non-constructive infinite, this result would not necessarily raise doubts about the coherency of quantum physics or the non-constructive infinite. Of course, someone who already believed that one of these things was incoherent might regard this result as providing indirect confirmation for his belief: if, e.g., quantum mechanics is hospitable to a logic in which conjunction fails to distribute over disjunction — he might say — that's one more strike against quantum mechanics.)

Let us close our discussion of RI-logic with a brief look at the topic of singular reference. The language of RI-logic contains no singular terms. Given our decision to be non-committal about the existence of classical, absolute identity, this is no accident. The philosopher who eschews classical, absolute identity must also eschew singular terms, for the idea of a singular term is — at least in currently orthodox semantical theory — inseparably bound to the classical semantical notion of reference or denotation; and this notion, in its turn, is inseparably bound to the idea of classical identity. It is a part of the orthodox semantical concept of reference that reference is a many-one relation. And it is a part of the idea of a many-one relation — or of a one-one relation, for that matter — that if x bears such a relation to y and bears it to z, then y and z are absolutely identical. (That's what it says on the label.) For example, if 'the tallest man' denotes y and denotes z, then y and z are absolutely identical. (This point "works" better in respect of descriptions

than in respect of proper names. The friends of singular terms must concede that, e.g., 'John Frederick Harris' might, and in fact does, name numerically distinct objects. Let us ignore this awkward fact, which can be dealt with in various ways, and remarkably messy and *ad hoc* ways they are, too.)

If the RI-logician has no singular terms at his disposal, how shall he accomplish singular reference? Must he be content with general statements? In a sense, the answers are: He shan't accomplish it, and he must be content with them. In *what* sense does he face these unpleasant consequences? In any sense of "singular reference" in which the idea of singularity is infected with the idea of classical, absolute identity. This is pretty evident when you think about it. Nevertheless, the RI-logician is not without resources. He has the resources to accomplish *relative* singular reference, a sort of singularity of reference that stands to classical, absolute singularity of reference—the sort that is supposedly accomplished by singular terms—as relative identity stands to classical, absolute identity. Relative singular reference can be accomplished by a device suggested by Russell's theory of descriptions. It is illustrated by the following examples of translations of English sentences containing (what are traditionally called) definite descriptions into the language of RI-logic.

The king is bald

∃x (x is a king & ∀y (y is a king → y is the same king as x) &
    x is bald).

The queen is the monarch

∃x (x is a queen & x is a monarch &
    ∀y (y is a queen → y is the same queen as x) &
    ∀y (y is a monarch → y the same monarch as x)).

Or, at any rate, this is one way to translate these two English sentences into the language of RI-logic; this is the way to do it without making any suppositions about dominance. But if we assume, e.g., that 'is the same man as' dominates 'is the same king as', it might be more natural and useful to translate 'The king is bald' as

∃x (x is a king & ∀y (y is a king → y is the same man as x) & x is
    bald).

4

In the present section, I shall show how to translate certain central theses of Trinitarian theology into the language of RI-logic. The vocabulary we shall employ would hardly do for devotional purposes, but (I hope) we can use it to express certain of the *propositions* that are expressed in devotional discourse about the Trinity. It will not be difficult to show that what we want to say about the Trinity in this vocabulary is free from formal contradiction.

We have, to start with, two undefined RI-predicates:

is the same being as[16]

is the same person as.

We shall not assume that either of these predicates dominates the other. And, of course, we shall not assume that either of them is eliminable in favor of dominant RI-predicates and ordinary predicates. It is of particular importance that we not assume that 'same being' dominates 'same person', for that would entail that if x is the same being as y and x is a person, then x is the same person as y. (In at least one other context—the theology of the Incarnation—it would be important not to assume that 'same person' dominates 'same being'.)

I do not refrain from defining these predicates because I think that there is any particular difficulty about what it is to be a being or a person. Something is a being (is the same being as something) if it has causal powers. A being is a person (something that is the same being as something is also the same person as something) if it is self-aware and has beliefs and plans and acts on the basis of those beliefs to execute those plans. (As Boethius says, a person is an individual substance of a rational nature.) But to say this much is not to give a general account of '*same* being' or '*same* person'. If we regard a definition of a sentence in the austere fashion of logicians as a recipe for eliminating that sentence *salva extensione* in favor of another sentence containing the same variables free, then the account I have given of 'person' and 'being' provides us with definitions of 'x is the same being as x' (or, equivalently, of 'x is the same being as something') and 'x is the same person as x', but not of 'x is the same being as y' or 'x is the same person as y'.[17] (It allows us, for example, to define 'x is the same being as x' as 'x has causal powers'.)

If we believed that there were such a relation as classical, absolute identity, and if we believed that this relation was subdominant, then we *could* extract from our account of 'person' and 'being' definitions of 'same person' and 'same being'. For example:

x is the same being as $y = df\ x$ has causal powers & $x = y$.

The reason that the existence and subdominance of classical identity would enable us so to turn a definition of 'x is the same being as x' into a definition of 'x is the same being as y' is that the subdominance of classical identity (its domination by all RI-predicates) entails the conditional

x is the same being as $y \rightarrow x = y$;

and from this conditional one may infer (by the rules of the classical logic of identity) the biconditional

x is the same being as $y \leftrightarrow .x$ is the same being as x & $x = y$.

But if the above definition of 'is the same being as' were correct, it would follow that if a person x and a person y are the same being, then x and y are the *same* person.[18] The Trinitarian must, therefore, assume either that classical, absolute identity does not exist, or that, if it does exist, it is not dominated by 'is the same being as'. (Or, at least, he must make one or the other of these assumptions if his thinking about the Trinity is to be based on a logic of relative identity. This result is essentially an application to the case of a relative-identity treatment of the Trinity of a point made in section 3 about relative-identity treatments of anything: If there is such a relation as classical, absolute identity, and if it is subdominant, then all RI-predicates are dominant.) Nothing, of course, prevents him from introducing by the device outlined in section 3 a predicate that behaves within a certain restricted area of his discourse — say, the part that does not have to do with the Trinity — in the way the classical identity-predicate is supposed to behave throughout all discourse.

We shall have several ordinary predicates, which will be introduced as we need them. The first is 'is divine'. A *definiens* for 'x is divine' might look something like this:

x is necessarily existent; essentially almighty, all-knowing, and perfect in love and wisdom; essentially such that nothing contingent would exist unless x willed it.

But you may have your own ideas about how to define this predicate. Since any reasonable list of the attributes constitutive of divinity must include attributes implying power and knowledge, the following would seem to be a conceptual truth, and I shall assume it to be such:

CT1 $\forall x$ (x is divine $\rightarrow .x$ is a being & x is a person).

Indeed, the first conjunct of the consequent is, strictly speaking, redundant, since any person is, necessarily, a being:

CT2 $\forall x$ (x is a person $\rightarrow x$ is a being).

It follows from CT1 that something is a divine Person if and only if it is a divine Being:

CT3 $\forall x$ (x is a person & x is divine. $\leftrightarrow .x$ is a being & x is divine).[19]

We shall assume that 'is the same being as' dominates 'is divine'; that is we shall assume

CT4 $\forall x \forall y$ (x is the same being as $y \rightarrow$ (x is divine $\leftrightarrow y$ is divine)).

The most important consequence of CT4 is that if a being is divine, then any being who is the same being as that being is divine. (We shall not assume that 'same person' dominates 'divine'. We shall not need this assumption, and it might cause difficulties for the theology of the Incarnation, since, on the obvious interpretation of the doctrine of the Incarnation, there is an x such that x is divine and there is a y such that y is not divine and x is the same person as y. Owing to similar considerations, we should not want to assume that 'same person' dominated such predicates as 'is a man' and 'was born in the world'.) It follows from CT1 and CT4 that if x is a divine Person and y is the same being as x, then y is *a* person. It does not, of course, follow that y is the *same* person as x.

Let us now introduce abbreviations for 'same being', 'same person', and 'divine':

$\underline{B}\alpha\beta$ α is the same being as β

$\underline{P}\alpha\beta$ α is the same person as β

$D\alpha$ α is divine.

(In virtue of CT1, 'Dx' may be read, 'x is a divine Person' or 'x is a divine Being'. If 'a God' is equivalent to 'a divine Being' — as I suppose it to be —, 'Dx' may also be read 'x is a God'.) We underline '$\underline{B}$' and '$\underline{P}$' to remind us that they abbreviate RI-predicates. We shall further abbreviate, e.g., '$\underline{B}xx$' as '$\underline{B}x$'.

We may express using only these three predicates three central propositions of Trinitarian theology:

(1) There is (exactly) one God
$\exists x$ (Dx & $\forall y(Dy \rightarrow \underline{B}yx)$)

(2) There are (exactly) three divine Persons

$\exists x \exists y \exists z$ *(Dx & Dy & Dz &~Pxy & ~ Pxz & ~ Pyz &*

$\forall w (Dw \rightarrow . Pwx$ v Pwy v $Pwz))$

(3) There are three divine Persons in one divine Being

[There are three divine Persons] & $\forall x \forall y (Dx$ & $Dy. \rightarrow Bxy)$.

It is easy to see that (1) through (3) and CT1 through CT4 together compose a set of sentences from which no contradiction can be derived in RI-logic.

To show this, let us consider the following reinterpretation of our three predicates. (Admittedly, it is rather unedifying; it has been chosen for its mnemonic virtues.)

$B\alpha\beta$ α is the same breed as β

$P\alpha\beta$ α is the same price as β

$D\alpha$ α is a dog

Now assume that there are exactly three dogs and that nothing besides these dogs has either a breed or a price. Assume that these dogs are for sale at different prices and that each is a purebred dachshund. Given these assumptions, it is easy to verify by inspection that the sentences (1) through (3) and CT1 through CT4 are true on the proposed reinterpretation of 'B', 'P', and 'D'.

This reinterpretation of our predicates shows that no formal contradiction can be deduced from (1) through (3) and CT1 through CT4 by standard quantifier logic, since (by a well-known property of quantifier logic), no formal contradiction can be deduced in that logic from a set of sentences that are true on some interpretation. The only rules of RI-logic other than those of quantifier logic are Symmetry and Transitivity. Since 'x is the same breed as y' and 'x is the same price as y' express symmetrical and transitive relations, it follows that no formal contradiction can be deduced from (1) through (3) and CT1 through CT4 by the rules of RI-logic. (Nothing I have said should be taken to imply that 'is the same breed as' and 'is the same price as' are relative-identity predicates. In fact these predicates are *not* RI-predicates, at least as we are using them. On this point, see our discussion of 'is the same color as' on p. 249.)

Our consistency result shows that 'Something is a divine Person if and only if it is a divine Being' [CT3] is formally consistent with 'There are three divine Persons' [(2)] and 'There is one divine Being' [(1)]. This formal result can be understood philosophically as follows. Without classical identity, there is no absolute counting: there is only counting by

Ns. For example, if propositions (1) and (2) are true: Counting divine Beings by beings, there is one; counting divine Persons by beings, there is one; counting divine Beings by persons, there are three; counting divine Persons by persons, there are three. But if someone asks us how many divine Beings there are, it is presumably a "conversational implicature" of his question that he wishes us to count divine Beings by beings—that is, by the count-noun *he* used. And the same goes for, "How many divine Persons are there?" That is why 'There is one divine Being' is a natural English translation of the symbolic sentence (1) and 'There are three divine Persons' is a natural English translation of the symbolic sentence (2). If, on the other hand, there is such a thing as absolute identity, there is such a thing as absolute counting. For example, if absolute identity exists, it follows from (2) and CT3 that there are three divine Beings and three divine Persons, counting absolutely. If absolute identity not only exists but is subdominant, an absolute count of Ns will force the same count on all relative counts of Ns. (In that case, of course, CT3, (1), and (2) could not all be true.) If absolute identity exists but is not subdominant—if, in particular, it is not dominated by 'same being'—then it may be true that there is one divine Being counting by beings and, at the same time, true that there are three divine Beings counting absolutely.

Let us now turn to the problem of singular reference.

We must find some way, using only the resources of RI-logic, to do the work of the English singular terms 'God', 'the Father', 'the Son', and 'the Holy Spirit'.[20] We have seen how to supply a relative-identity surrogate for classical definite descriptions. The singular term 'God' should obviously be thought of as an abbreviation for 'the divine Being' or (like the Arabic 'Allah') 'the God'. Thus, using our relative-identity surrogate for classical definite descriptions, we may translate the English sentence 'God made us' into the language of our RI-logic as

$\exists x (Dx$ & $\forall y (Dy \rightarrow Byx)$ & x made us).

It will be convenient to abbreviate 'Dx & $\forall y (Dy \rightarrow Byx)$' as '$Gx$ (and similarly for other variables). 'Gx' may be read 'x is one God' (*cf.* Deut. 6:4) or 'x is the only God' or 'x is the divine Being'. The word 'God' in English is sometimes a common noun ('There is one God') and sometimes a proper noun ('In the beginning, God created the heavens and the earth'). When 'God' is a common noun in English, it is a count-noun. In the special vocabulary of the present section of this paper, the work done by the English count-noun 'God' is done by the predicate 'is divine': 'There is a God' is read 'Something is divine'. The work done by the English proper noun 'God' is also done by 'is divine': to say what is said

by an English sentence of the form 'God is ø', we say 'The only God (the one God, the divine Being) is ø'. Or, making use of the above abbreviation, '∃x(Gx & øx)'.

But how shall we translate English sentences containing the terms 'the Father', 'the Son', and 'the Holy Spirit'?[21] It is a commonplace of Trinitarian theology that the Persons of the Trinity are individuated by the relations they bear to one another. Two relations, the Creeds tell us, individuate the Persons; we may express them by these predicates:

α begets β

α proceeds from β through γ.

(I hope that the wording of the second of these is acceptable to both the Eastern and the Western Churches.)[22] These two relations hold only within the Godhead:

CT5 $\forall x \forall y(x$ begets $y \rightarrow .Dx \& Dy)$

CT6 $\forall x \forall y \forall z(x$ proceeds from y through $z \rightarrow .Dx \& Dy \& Dz)$.

Every divine Person enters into the "procession" relation:

CT7 $\forall x(Dx \rightarrow .(\exists y \exists z \ x$ proceeds from y through $z)$v
                $(\exists y \exists z \ y$ proceeds from x through $z)$v
                $(\exists y \exists z \ y$ proceeds from z through $x))$.

If x, y, and z enter into the "procession" relation with one another, then x, y, and z are distinct Persons:

CT8 $\forall x \forall y \forall z(x$ proceeds from y through $z \rightarrow .{\sim}\underline{P}xy \& {\sim}\underline{P}xz \&$
       ${\sim} \underline{P}yz)$.[23]

If x, y, and z enter into the "procession" relation with one another, then no other Persons do (nor do x, y, and z enter into it in more than one way):

CT9 $\forall x \forall y \forall z \forall t \forall u \forall v \ (x$ proceeds from y through z & t proceeds from u through $v. \rightarrow . \underline{P}xt \& \underline{P}yu \& \underline{P}zv)$.

The two relations, procession and begetting, are not independent:

CT10 $\forall x \forall y \forall z(x$ proceeds from y through $z \rightarrow y$ begets $z)$

CT11 $\forall x \forall y \ \exists z(x$ begets $y \rightarrow z$ proceeds from x through $y)$.[24]

Begetting has features analogous to the features ascribed to procession in CT8 and CT9:

CT12 $\forall x \forall y(x$ begets $y \rightarrow {\sim}\underline{P}xy)$

CT13 $\forall x \forall y \forall z \forall w(x$ begets y & z begets $w. \rightarrow . \underline{P}xz \& \underline{P}yw)$.[25]

It will be convenient to introduce three one-place predicates by definition:

α begets $=df \ \exists\beta \ \alpha$ begets β

α is begotten $=df \ \exists\beta \ \beta$ begets α

α proceeds $=df \ \exists\beta\exists\gamma \ \alpha$ proceeds from β through γ.

Propositions CT5–13 entail that each of these predicates is satisfied (if at all) by a divine Person; that if x and y satisfy any given one of them, then $\underline{P}xy$; and that if x satisfies one of them and y another, then ${\sim}\underline{P}xy$. We may therefore treat 'the Father', 'the Son', and 'the Holy Spirit' as equivalent to, respectively, 'the Person who begets', 'the Person who is begotten' and 'the Person who proceeds'. More exactly, we shall read, e.g., 'The Father made us' as

$\exists x(x$ begets & $\forall y(y$ begets $\rightarrow \underline{P}yx)$ & x made us).

Let us abbreviate 'x begets & $\forall y(y$ begets $\rightarrow \underline{P}yx)$' as '$Fx$'("$x$ is the Father"). Let us abbreviate 'x is begotten & $\forall y(y$ is begotten $\rightarrow \underline{P}yx)$' as '$Sx$' ("$x$ is the Son"). Let us abbreviate 'x proceeds & $\forall y(y$ proceeds $\rightarrow \underline{P}yx)$' as '$Hx$' ("$x$ is the Holy Spirit"). (And similarly for other variables.)

I now present a list of Trinitarian sentences of English and some proposed translations into our formal vocabulary. All of the translations are provable from (1) through (3), and CT1 through CT13. Note, by the way, that (2) and (3) are provable from (1) and the CTs.

(4) God is the same being as the Father
     $\exists x \ \exists y(Gx \& Fy \& \underline{B}xy)$.

(5) God is a person[26]
     $\exists x(Gx \& \underline{P}x)$.

(6) God is the same person as the Father
     $\exists x \ \exists y(Gx \& Fy \& \underline{P}xy)$.

(7) God is the same person as the Son
     $\exists x \ \exists y(Gx \& Sy \& \underline{P}xy)$.

(8) The Son is the not the same person as the Father
     ${\sim}\exists x \ \exists y(Fx \& Sy \& {\sim}\underline{P}xy)$.[27]

Or we might write (giving 'not' "narrow scope"),

$\exists x \ \exists y(Fx \& Sy \& {\sim}\underline{P}xy)$.[28]

We should note that (6), (7), and both versions of (8) are—formally, at least—consistent. More generally: let **S** be the set of sentences containing (1) through (8) and CT1 through CT13; we can show that no formal contradiction is deducible from **S** in RI-logic.[29] We can show this by an extension of the "three dogs" reinterpretation of 'B', 'P', and 'D' that we employed earlier. Reinterpret our "Trinitarian" predicates as follows:

α begets β	α barks at β
α proceeds from β through γ	α prances from β to γ

Now let our three dogs be A, B, and C. Suppose that C prances from A to B and does no other prancing and that nothing besides C prances. Suppose that A is barking at B and at nothing else and that nothing besides A barks. Given these assumptions, and our earlier assumptions about prices and breeds, it is easy (if somewhat tedious) to verify by inspection that all the members of **S** are true on the proposed reinterpretation. Note that the reinterpretation for 'Px' in (5) should be 'x is the same price as x'. It follows that no formal contradiction is deducible from **S** in RI-logic.

In order to verify by inspection that all members of **S** are true, it is necessary to remove the abbreviations in (4)-(8). For example, here is sentence (4) in unabbreviated form:

$$\exists x \exists y(Dx \ \& \ \forall z(Dz \rightarrow \underline{B}zx) \ \& \ \exists w(y \text{ begets } w) \ \&$$
$$\forall z(\exists w \ z \text{ begets } w. \rightarrow \underline{P}zy) \ \& \ \underline{B}xy).$$

The tedium of verifying (4) - (8) on the "three dogs" reinterpretation can be somewhat reduced if we supply appropriate "derived" reinterpretations for the defined predicates 'G', 'F', and 'S':

$G\alpha$	α is a member of the only breed of dog
$F\alpha$	α barks and any barking dog is the same price as α
$S\alpha$	α is barked at and any dog that is barked at is the same price as α.

It is important to realize that the "three dogs" reinterpretation of our predicates is not intended to provide a model (in any sense) for the Trinity. For one thing, as we have noted, 'is the same price as' and 'is the same breed as' are not even RI-predicates. The only purpose of the reinterpretation is to show that for no sentence is it possible to derive both that sentence and its negation from **S** by Transitivity, Symmetry, and the rules of quantifier logic. The argument is essentially this: If a contradiction can be formally deduced from **S**, then the story of our three dogs is inconsistent; but that story is obviously consistent.

Does it seem paradoxical that (6), (7), and (8) are consistent? We must remember that it is an essential part of the position we are exploring that the English sentences (6), (7), and (8) do not wear their real, underlying logical structures on their sleeves: They are not really of the forms '$\underline{P}gf$', '$\underline{P}gs$', and '$\sim\underline{P}fs$'. According to this position, the underlying logical structures of these sentences are given by their RI-translations; and no sentence in the language of RI-logic could be of these forms, for that language contains no terms but variables. We should note that '$\sim(\underline{P}xy \ \& \ \underline{P}xz \ \& \ \sim\underline{P}yz)$' is an easily proved theorem of RI-logic, and is, therefore, by our consistency result, formally consistent with (6), (7), and (8). The tendency to think that the consistency of (6), (7), and (8) is paradoxical is rooted, I think, in our tendency to suppose that 'God', 'the Father', and 'the Son' are singular terms (in the orthodox semantical sense).

Other "paradoxical" groups of sentences can be found. For example:

(9) God is begotten
$\exists x \ (Gx \ \& \ x \text{ is begotten})$

(10) God is unbegotten
$\exists x \ (Gx \ \& \sim x \text{ is begotten}).$

These two sentences are formally consistent with, and, in fact, provable from, the members of **S**. Are they theologically acceptable? Well, one sometimes sees references in Christian theological writing (usually in rhetorical opposition) to begotten and unbegotten Deity, so I suppose that they are.

A perhaps more serious problem of the same sort is raised by the Incarnation. It seems plausible to define 'x is incarnate' as '$\exists y(y$ is a human being $\& \ \underline{P}xy)$'. On this reading, however, 'God is unincarnate'— '$\exists x(Gx \ \& \ \sim\exists y(y$ is a human being $\& \ \underline{P}xy))$'—will "come out true."[30] I think that the best course for the philosopher who proposes to express the doctrines of the Trinity and the Incarnation in the language of RI-logic is to insist that this sentence is literally true but misleading. He will be able to adduce in his support the demonstrable facts that (if Jesus of Nazareth is the same person as one of the divine Persons), then 'God is incarnate' is true and 'it is not the case that God is incarnate' is false. But I can do no more than allude to the problems raised by the Incarnation.

I have shown how to represent certain Trinitarian sentences of English in our formal vocabulary, and I have shown that no contradiction can be deduced in RI-logic from the formal translations of these sentences. I note in passing that there are interesting sentences express-

ible in terms of the predicates we have at our disposal that allow us to make distinctions that cannot be made easily in English. Consider this sentence

(11) $\exists x(Gx \ \& \ Fx)$.

This sentence expresses a truth; or at least it is provable in RI-logic from the members of **S**. How shall we express its content in English? Not, certainly, as 'God is the same being as the Father' or 'God is the same person as the Father', for these are the equivalents, respectively, of the RI-sentences (4) and (6). I would suggest: 'God and the Father are one absolutely'. It might be said that the ideas conjured up by the predicate 'are one absolutely' are contrary to the spirit of RI-logic. Perhaps so; but sentence (11) is a perfectly respectable sentence, and I am at a loss for a better informal expression of its content. We may note that if my suggestion for translating (11) into English is followed out consistently, the English sentence 'God and the Son are one absolutely' will express a truth, and the English sentence 'The Father and the Son are one absolutely' will express a falsehood.[31]

I have said that in this paper I should risk Tritheism. Have I fallen into Tritheism? What can be said with certainty is this. The sentence (1)

$\exists x(Dx \ \& \ \forall y(Dy \rightarrow \underline{B}yx))$,

which—it may be argued, at any rate—expresses the thesis of monotheism, does not yield a formal contradiction in RI-logic; nor does the whole set of sentences **S** that we have "endorsed," and to which (1) belongs, yield a contradiction. Consider, moreover, the sentence

$\exists x \exists y(Dx \ \& \ Dy \ \& \ \sim\underline{B}xy)$,

which—it may be argued, at any rate—expresses the thesis that there are two or more Gods. The negation of this sentence can be formally deduced from (1). But these results do not protect us from all the dangers of Tritheism. Perhaps the most objectionable—I do not say the only objectionable—feature of polytheism is that if one believes that Zeus and Poseidon are real and are two divine beings and two divine persons, one must admit that one has no guarantee that Zeus and Poseidon will not demand contrary things of one. And there is nothing in the notion of "same being," taken by itself, that entails that two divine Persons who are the same Being will not, despite their being the same Being, demand contrary things of one. It must certainly be a feature of any adequate Trinitarian theology that whatever is demanded of one by any divine Person is demanded by all, and, more generally, that the idea of a clash of divine wills is as impossible as the idea of a round square. I am point-

ing out only that the impossibility of a clash of wills among the divine Persons is not a simple consequence of their being one Being. (It may be that, owing to their perfect knowledge and wisdom, no two divine Persons could will differently. If so, this has nothing in particular to do with the unity of being of the divine Persons: the same consequence would follow if there were two divine Persons who were also two beings.)

I believe that the (conceptual) danger of a clash of divine wills can be eliminated in a conceptually satisfying (i.e., non-arbitrary) way if we accept what I shall call the Principle of the Uniformity of the Divine Nature. This principle turns on the notion of a non-Trinitarian—or, as I shall say, "normal"—predicate applicable to God. Roughly speaking, a normal predicate is one that someone who believed that there was exactly one divine Person might coherently apply to that Person.[32] For example: 'made the world'; 'is compassionate'; 'spake by the Prophets'. The Principle of the Uniformity of the Divine Nature is simply this: 'is the same being as' dominates all normal predicates. Formally (where 'N' represents any normal predicate), all sentences of the following form are true:

$$\underline{B}\alpha\beta \rightarrow (N \ldots \alpha \ldots \leftrightarrow N \ldots \beta \ldots).$$

(We may note that CT4 is of this form.) Since such predicates as 'commands Moses to return to Egypt' and 'tells Saul to enter Damascus' are normal, the Principle of the Uniformity of the Divine Nature rules out the possibility of a Homeric clash of divine wills. And it rules out a good many other things; it entails, for example, that it is false that the Father made the world and the Son did not. It is a way of saying formally what the *Quicunque Vult* says in the words, "*Qualis Pater, talis Filius, talis et Spiritus Sanctus*"[33]—although the writer of those words was not thinking primarily of the relations God bears to his creation, but rather of his *intrinsic* normal attributes.[34]

I will close by mentioning some important philosophical questions about the Trinity that I have not touched on. Consider, for example, the relations that individuate the Persons. Are the Persons individuated *only* by these relations, as most of the classical Trinitarian theologians seem to have supposed? Or might it be that each of the Persons has certain intrinsic (non-relational) attributes that are not shared by the others? Put the question this way. The Father begets the Son, and the Holy Spirit proceeds from the Father through the Son. Why do these two relations hold among the three divine Persons in just *this* way? Is it a brute fact, the three Persons being absolutely descriptively identical except for the manner in which they are related? Or does each of the three Persons have a proper nature of his own, in addition to the nature (Divinity) that is common to all three, in which these relations are

"grounded"? To say so might threaten the traditional doctrine of the Divine Simplicity. But the doctrine of purely relational individuation seems to imply the (surely repugnant) thesis that it is intrinsically possible that the Person who is in fact the Holy Spirit beget the Person who is in fact the Father.

A second problem we have not considered, but which has bulked large in the speculations of the great Trinitarian theologians, can be stated very succinctly: Why *three* Persons? I could go on at some length about the problems I have not considered, but I will not. I have been concerned in this paper to touch only on those features of Trinitarian theology most closely connected with problems of counting, identity, and predication.

Even in this limited area of investigation, I have left the mystery of the Holy Trinity untouched. It is one thing to suggest that 'is the same being as' does not dominate 'is the same person as'. It is another thing to explain how this could be. I have no explanation of this fact (if it is a fact); nor do I think that we could hope to discover one in this life, in which we see only disordered reflections in a mirror. One day, perhaps, we shall see face to face and know as we are known.[35]

NOTES

1. Paul VI, "Credo of the People of God" (pronounced 30 June 1968), *Acta Apostolicae Sedis* 60 (1968), 9.

2. Keith Yandell has called my attention to the following passage from St. Augustine's *On Christian Doctrine* (I, 5, 5):

> Thus there are the Father, the Son, and the Holy Spirit, and each is God and at the same time all are one God; and each of them is a full substance, and at the same time all are one substance. The Father is neither the Son nor the Holy Spirit; the Son is neither the Father nor the Holy Spirit; the Holy Spirit is neither the Father nor the Son. But the Father is the Father uniquely; the Son is the Son uniquely; and the Holy Spirit is the Holy Spirit uniquely.

Yandell has also called my attention to the marvelously splenetic Socinian attacks on the doctrine of the Trinity that are cited in Leonard Hodgson's *The Doctrine of the Trinity* (New York: Charles Scribner's Sons, 1940), pp. 219 ff. I wish I had the space to reproduce them all. Here is my favorite, from a work that was (understandably) published anonymously in 1687. It has been ascribed to the notorious Socinian John Biddle.

> You may add yet more absurdly, that there are three persons who are *severally and each of them true God*, and yet there is but one true God:

this is *an Error* in counting or numbering; which, when stood in, is of all others the most brute and inexcusable, and not to discern it is not to be a Man.

3. Thomas à Kempis, *The Imitation of Christ*, I, 1.

4. The idea of drawing an analogy between a Christian mystery and the wave-particle duality is due to John Polkinghorne (formerly Professor of Mathematical Physics in Cambridge University, and now an Anglican parish priest). See his book of Christian apologetic *The Way the World Is* (Grand Rapids, Mich.: Eerdman's, 1983). Fr. Polkinghorne's position on the wave-particle duality is that quantum field theory *shows* how an electron can be both a wave and a particle (i.e., can be both diffracted on its way to a detector and give up its energy to the detector in a particle-like manner). My impression from reading popular works on quantum mechanics is that not all physicists and philosophers of physics are willing to say this. If there is indeed real disagreement on this point, I expect it is philosophical disagreement: disagreement about what counts as *really* having "shown how something can be." One man's "showing how something can be both X and Y" is another man's "constructing a formalism that allows you to treat something as both X and Y without getting into trouble." Fr. Polkinghorne, by the way, has written an excellent popular book on quantum mechanics, *The Quantum World* (New York: Longman, 1984).

5. Some might prefer to say: to an explicit and systematic statement of that which is present implicitly and in an unsystematic form in scripture.

6. I have paid special attention to "Identity" and "Identity—A Reply" in *Logic Matters* (Oxford: Basil Blackwell, 1972), pp. 238–249, and to "Ontological Relativity and Relative Identity" in Milton K. Munitz, ed., *Logic and Ontology* (New York: New York University Press, 1973). On the matter of relative identity and the Trinity, my main sources are *The Virtues* (Cambridge: Cambridge University Press, 1977), pp. 72–81 and Peter Geach and G. E. M. Anscombe, *Three Philosophers* (Oxford: Basil Blackwell, 1963), pp. 118–120. I do not claim that Geach would agree with everything I say about relative identity in this paper, either in the abstract or in relation to the Trinity.

7. This has been attempted at least once before, by A. P. Martinich. See his papers, "Identity and Trinity," *The Journal of Religion* 58 (April 1978), pp. 169–181, and "God, Emperor, and Relative Identity," *Franciscan Studies* 39 (1979): pp. 180–191. The relative-identity treatment of Trinitarian doctrine of the present paper was devised when I was unaware of these papers; the two treatments are thus independent developments of Geach's work. My treatment differs from Martinich's principally in devoting a good deal of attention to the problem of translating English sentences containing the singular terms—at least they have the syntax of singular terms—'God', 'the Father', 'the Son', and 'the Holy Spirit' into the language of relative identity. I do not accept any of Martinich's supposed examples of non-theological "cases of relative identity."

8. The translation is that of *The Book of Common Prayer* (According to the Use of the Episcopal Church, New York: Seabury Press, 1979), p. 864f. In the Prayer Book of 1662, the *Quicunque Vult* is printed following the Order for

Evening Prayer. The Latin text I have used (on the advice of Eleonore Stump) is that of J. N. D. Kelly, *The Athanasian Creed* (London: Adam & Charles Black, 1964), pp. 17–20. The Prayer Book translation is accurate enough (allowing for changes in English since 1549), although it sometimes departs from the literal sense of the Latin in aid of liturgical euphony. (For example, the title of the present paper, literally translated, would be 'And yet [they are] not three Gods, but there is one God'.) I do not know what Latin text Cranmer—or whoever—used, but it does not seem to have been significantly different from the text in Kelly's book. We may note that in several places the Creed makes use of a grammatical device that English idiom resists: the use of adjective as substantive: 'And yet not three eternals [*aeterni*] but one eternal [*aeternus*]'. "Three eternal *whats*?" the English speaker wants to ask. (After all, they *are* three eternal *personae*.) I take '*tres aeterni*' to be equivalent to '*tres substantiae aeternae*'; I would defend this reading on the basis of the earlier warning about "dividing the substance." It is possible that the earliest users of the Creed—and the Scholastics as well—would dispute my contention that there are, after all, three eternal *personae*, on the ground that this implies that the *aeternitas* of the three *personae* is "divided." I am not sure what that means, however. *I* mean only that there are three *personae* and that it is true of each that *he* is eternal. The eternity ascribed to each person can be "the same," though I am not sure what that is supposed to imply. I certainly want to say that the word 'eternal' is applied to each Person in the same *sense*, if that helps.

9. *The Virtues*, p. 75.

10. Geach cites Ps. 89:26, Ps. 2:7 (it is, of course, rather a controversial reading of these verses to regard them as describing exchanges between two Persons of the Trinity!), and John 17:5. My two citations represent not "intra-Trinitarian" discourse, but unreflective and incidental creedal and liturgical recognition of the personhood (in the ordinary sense) of the Father, the Son, and the Holy Spirit. The sources I cite are not supposed to be authoritative (the personal aspect of 'by himself' has no basis in the Latin Creed, which says only 'acknowledge each Person *singillatim* to be') but merely typical.

11. I have learned something from all of the following papers and books: John Perry, "The Same F," *The Philosophical Review* 79 (1970); Eddy M. Zemach, "In Defense of Relative Identity," *Philosophical Studies* 26 (1974); Nicholas Griffin, *Relative Identity* (Oxford: the Clarendon Press, 1977); John Perry, "Relative Identity and Number," the *Canadian Journal of Philosophy* 8 (1978); Harold W. Noonan, *Objects and Identity* (The Hague: Martinus Nijhoff, 1980); David Wiggins, *Sameness and Substance* (Cambridge: Harvard University Press, 1980); William P. Alston and Jonathan Bennett, "Identity and Cardinality: Geach and Frege," *The Philosophical Review* 93 (1984). But the first drafts of section 3 and 4 of the present paper were written before I had read any of these papers and books, and I have found no reason to revise anything I have said in the light of their content. I do not, of course, mean to imply that what is said in this paper supersedes all previous work on the subject; I mean only that what I say here

about the concept of relative identity and its logic does not seem to me to require any revisions in the light of what I have read in the authors cited above.

12. "To avoid accusations of provincialism, we should mention that the preferred status of English is a matter only of the authors' convenience; the subsequent treatment would apply as well to French, German, or Coptic" (Donald Kalish and Richard Montague, *Logic: Techniques of Formal Reasoning* [New York: Harcourt, Brace & World, 1964], p. 5).

The somewhat unusual employment of English predicates as items in the vocabulary of a formal logic will make our exposition more compact. Thereby we generate "directly" as theorems what Kalish and Montague (p. 9) call 'literal English translations of theorems', and it is these that we shall be primarily interested in. The description of the content of our stock of English predicates that follows in the text is of no formal significance. As long as we restrict our attention to purely formal matters—the statement of formation-rules and rules of inference—we need assume nothing more definite than that we have gone through the class of English predicates and have picked out (somehow) a certain set of them to be our vocabulary items. We must also assume, of course, that each of the chosen predicates has a clear and definite number of "places." And we must assume that our two-place predicates have (somehow) been partitioned into two classes, the "ordinary two-place predicates" and the "relative-identity" predicates (*vide infra*). Exactly how these things are to be done is irrelevant to our statement of the formation- and inference-rules of RI-logic, which presupposes only that we have a stock of predicates and a partition of the two-place predicates.

In the text that follows, there are examples and illustrations that presuppose that particular English predicates (e.g., 'is green') belong to the vocabulary of RI-logic. The specially scrupulous may wish to replace illustrative statements of the type "'x is green → x is green" is a theorem of RI-logic' with the corresponding statements of the type 'On the assumption that "is green" belongs to the vocabulary of RI-logic, "x is green → x is green" is a theorem of RI-logic'.

13. Two sentences are equivalent in RI-logic if their biconditional is a theorem of RI-logic. In the present section, I shall assume that the reader is familiar with the usual conventions for omitting universal quantifiers.

14. I shall not pretend to be careful about use and mention in the remainder of this paper. The content of general statements about words and symbols will be conveyed impressionistically.

15. See the article "Identity" cited in n. 6.

16. Or 'is the same substance as' or 'is the same *ousia* as'. Geach employs the predicate 'is the same God as' to do essentially the task that I assign to 'is the same being as', as does Martinich in the articles cited in n. 7.

17. I can imagine here someone making the following remarks: "Say that a being that is self-aware, etc., is *rational*. You have said, in essence, that 'person' means 'rational being'. But, then, by what we may call 'the principle of intensional substitution',

x is the same person as y ↔ x is the same rational being as y.

But, evidently,

> x is the same rational being as $y \leftrightarrow .x$ is the same being as y &
> x is rational & y is rational.

It is obvious that 'same being' dominates 'rational':

> x is the same being as $y \rightarrow (x$ is rational $\leftrightarrow y$ is rational$)$.

But from these three sentences there follows by RI-logic:

> x is the same being as $y \rightarrow (x$ is the same person as $z \leftrightarrow y$ is the same person as $z)$.

That is, 'same being' dominates 'same person'."

But I have not said that 'person' means 'rational being'; not if that entails that 'person' and 'rational being' can replace each other in any context *salva extensione*. I have said only that 'x is the same person as x' and 'x is the same being as x & x is rational' can replace each other in any context *salva extensione*.

18. The subdominance of classical identity entails 'x is the same being as $y \rightarrow (x = x \leftrightarrow x = y)$', since '$x = x$' does not contain '$y$' and '$x = y$' is like '$x = x$' except for containing a free occurrence of 'y' where '$x = x$' contains a free occurrence of 'x'. '$x = x$' is a theorem of the logic of classical identity. From these two sentences the conditional in the text follows. The biconditional is proved as follows. *Left-to-right*: assume the antecedent; '$x = y$' follows from the antecedent and the just-proved conditional; the other conjunct of the consequent, 'x is the same being as x', follows from '$x = y$' and the antecedent by Substitution of Identicals. *Right-to-left*: assume the antecedent; the consequent follows by Substitution of Identicals.

Suppose 'x is the same being as y' means 'x has causal powers & $x = y$'. If x is the same person as x (i.e., if x is a person), and if x is the same being as y, then it follows by Substitution of Identicals (since '$x = y$' follows from the definition of 'x is the same being as y'), that x is the same person as y.

19. "But doesn't CT3 entail that the number of divine Persons is the same as the number of divine Beings?" No. This apparent paradox will be cleared up in a moment.

20. I call these phrases 'singular terms' because they have the syntax of singular terms: they are noun-phrases that require a singular verb. But I do not mean to imply that they have the *semantic* features that orthodox philosophical semantics ascribes to what it calls "singular terms" (and which orthodox semantics, for all I know, takes to be part of the meaning of 'singular term'). In particular, I do not mean to imply that there is a relation—call it 'reference' or what you will—such that if, e.g., 'God' bears this relation to x and to y, then x is absolutely identical with y. I do not know of a phrase that has the syntactical but not the semantic implications of 'singular term'.

21. And what of the phrase 'the Holy Trinity'' itself? I take these words to be short for 'the Father, the Son, and the Holy Spirit', much as 'the Holy Family' is short for 'Jesus, Mary, and Joseph'. One might say, "In this painting, the

Holy Trinity *is* represented as present in the Eucharist." But then one might say, "In this painting, the Holy Family *is* shown entering Jerusalem."

22. I allude, of course, to the *filioque* controversy. As I understand the present state of this controversy, the concern of the Eastern Church is to say nothing that could be taken as a denial of the doctrine that the Father alone is the *fons et origo* of Deity, while the concern of the Western Church (i.e., Rome) is to do justice to Jesus' statements about his relation to the Paraclete, especially John 16:14–15. It is my understanding that many theologians, both Roman Catholic and Orthodox, believe that the formula 'the Holy Spirit proceeds from the Father through the Son' does justice to both of these concerns. But I speak under correction.

23. It is perhaps tendentious to call CT7 and CT8 "conceptual truths," since they together entail that if there are any divine Persons, there are at least three (a thesis shared by Catholic Christians and atheists, but rejected by Arians, Jews, Muslims, and, probably, most agnostics). What I mean by calling CT5–13 "conceptual truths" is this. Trinitarians *allege* that certain relations hold within the Godhead—that is, among the various divine Persons. CT5–13 display certain properties that Trinitarians *say* are essential to these relations. Arians, Jews, and Muslims can agree that CT5–13 display properties that are essential to the Trinitarian concepts of "procession" and "begetting" (just as they can agree that *being square* is an essential component of the concept of a round square), and go on to comment that these concepts are like the concept of a round square in that nothing could possibly fall under them.

24. Since 'x begets $y \leftrightarrow \exists z$ (z proceeds from x through y)' is a logical consequence of CT10 and CT11, it is formally possible to define 'begets' in terms of 'proceeds'. But I doubt whether such a definition would be seen as a fruitful "move" by Christologists or by Trinitarian theologians whose concerns are wider than the logical issues addressed in the present paper.

25. CT12 and 13 are redundant; they can be deduced from CT8–11.

26. That is, God is an "individual substance of a rational nature"; (5) is not meant to imply that God is a *prosopon* or an *hypostasis*.

27. The formal translations of the following English sentences are also deducible from (1) through (3) and CT1–13: 'The Father is the same being as the Son'; 'The Father is the same being as the Holy Spirit'; 'The Son is the same being as the Holy Spirit'; 'God is the same person as the Holy Spirit'; 'God is the same being as the Son'; 'God is the same being as the Holy Spirit'; 'The Father is not the same person as the Holy Spirit'; 'The Son is not the same person as the Holy Spirit'.

28. The "wide-scope" version of (8) would be accepted by Catholic Christians, Arians, Jews, Muslims, and atheists. The "narrow-scope" version would be accepted by Catholic Christians alone.

29. S is logically somewhat redundant. Given (1), CT1, CT2, CT4, and CT6–11, one can prove (2), (3), CT3, CT5, CT12, and CT13.

30. This sentence will "come out true" in the sense that its symbolic translation is deducible from S and the proposition that some divine Person is unincarnate: ' ∃x (Dx & ~∃y (y is a human being & Pxy))'.

31. I.e., ' ∃x(Gx & Sx)' and '~∃x(Fx & Sx)' are deducible from S.

32. 'Normal' should not be confused with 'ordinary'.

33. As the Father is, so also are the Son and the Holy Spirit.

34. I say "primarily" because the sharing of the predicate 'is Lord' equally by the Persons is asserted in the section of the Creed that is introduced by these words; and this predicate expresses a relational attribute of God.

35. A part of this paper was read at the December, 1985 meeting of the Society of Christian Philosophers. The commentator was Eleonore Stump. An overlapping part was read at the University of Notre Dame, at the conference on which this book is based. The commentator was Keith Yandell. The two commentators have had considerable influence on the final form of this paper. Michael Detlefsen made extremely valuable comments on section 3. He is, of course, not responsible for the confusions that remain—all the more so because I have imprudently resisted some of his criticisms.

Eschatological Pragmatism

JAMES ROSS

1. INTRODUCTION

What is the truth maker for Christian faith in the Second Coming, the final resurrection, judgment, heaven and hell? Is it the reality to come? Not in the way many suppose. For one thing, a belief's 'being so' does not often consist in some part-by-part match with reality. For another, there are special features of the historical elements of the faith (both backward and forward looking) that suggest that truth, in these matters, consists in cognitive consonance between belief *in via* and cognition in the end.[1]

Truth is rightness of understanding, measurable by the mind alone. In these cases, the right way of understanding (the faith) is the way that is cognitively consonant with how the last things will be experienced. In other cases, there are other measures of "right understanding."

There are two special features of Christian faith in "the last things" that suggest that " 'being so' consists in *cognitive consonance*, the fulfillment of our expectations." The two factors are the *analogia fidei* and "the development of doctrine," as theologians call them.[2] First, what the formulated faith means is determined at a *remove* from the believer. It is determined by the faith of the church, and that by the scripture, which in turn, interprets God's saving acts, some of which continue through to the end of the world, and are thus not completed yet, and others of which are yet to come, like the last things. Second, how the faith is understood by the church and individuals varies with time. Contrast a fourth-century Byzantine understanding of universal kingship and fatherhood with what we would think now; they would never have imagined universal kingship in a world without kings.[3] And it has to work out that every believer, united in faith with the church, no matter at what time he lives, has the truth. That means, too, that every later community of faith