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META-ONTOLOGY

Quine has called the question 'What is there?' "the ontological question". But if we call this question by that name, what name shall we use for the question, 'What are we asking when we ask "What is there?" '? Established usage, or misusage,[1] suggests the name 'the meta-ontological question', and this is the name I shall use. I shall call the attempt to answer the meta-ontological question 'meta-ontology' and any proposed answer to it 'a meta-ontology'. In this essay, I shall engage in some meta-ontology and present a meta-ontology. The meta-ontology I shall present is broadly Quinean. I am, in fact, willing to call it an exposition of Quine's meta-ontology. (We must distinguish Quine's meta-ontology from his ontology – from his various theses about what there is and isn't. Quine's meta-ontology comprises such propositions as his theses on quantification and ontological commitment. His ontology comprises such propositions as the proposition that there are no propositions.)

Quine's meta-ontology may be formulated as a fairly short list of theses: about five, depending on how one divides them up. Let us say five. Some of the theses I shall list have never been explicitly stated by Quine – the first in the list certainly has not –, but I do not doubt that he would accept all of them.

THESIS 1. BEING IS NOT AN ACTIVITY

What J. L. Austin said of 'exist' – we shall consider the relation between 'exist' and 'be' presently –, he might equally well have said of 'be': "The word is a verb, but it does not describe something that things do all the time, like breathing, only quieter – ticking over, as it were, in a metaphysical sort of way" (Austin 1962). In order to understand what we are denying when we deny that being is an activity, let us try to understand those who accept, or talk as if they accepted, what we are denying. Let us try to get into their minds.

Some activities are more general than others. What am I doing now? I am writing. I am writing a philosophical essay. These are both answers

to the question I have asked, but the correctness of the latter entails the correctness of the former, and the correctness of the former does not entail the correctness of the latter. Let us say that an activity A is *more general than* an activity B if a thing's engaging in B entails its engaging in A and the converse entailment does not hold.

We may ask with respect to each thing (or, at least, with respect to each thing that engages in any activity) whether there is a most general activity it engages in: an activity it engages in in virtue of engaging in any activity at all. If I understand them correctly, many representatives of the existential-phenomenological tradition would answer Yes; they would call this activity the thing's "being" or "existence".

We may also ask whether there is a most general activity *simpliciter*, an activity that things engage in in virtue of engaging in any activity at all. At least some representatives of the existential-phenomenological tradition would, I believe, answer No. As I interpret Sartre, for example, he would say that your and my most general activity (*être pour-soi*) is not the same as the most general activity of a table (*être en-soi*). Thus Sartre can say that the table and I have different kinds of *être*, since the most general thing the table does (just standing there; undergoing externally induced modifications) is not the most general thing I do (being conscious of and choosing among alternative possibilities; acting for an end I have chosen from a motive I have created).

Now I do not wish to deny that there is a most general activity that I engage in. I suppose that if I had to put a name to it, I should call it 'lasting' or 'enduring' or 'getting older'. But I would differ from Sartre and from most other members of the existential-phenomenological tradition on two points. First, I would say that I share this most general activity with everything – or at least with every concrete inhabitant of the natural world. Secondly, I would say that it is just wrong to call this activity 'existing' or 'being' or '*être*' or to use any word for it that contains a root that is related to '*être*' or '*esse*' or '*existere*' or '*to on*' or '*einai*' or '*Sein*' or 'be' or 'am' or 'is'.

I cannot say that "lasting" or "enduring" has nothing to do with being, for being (like truth and identity) is what the medievals called a transcendental, and has a great deal to do with everything. But, in my view, enduring is no *more* intimately connected with being than are color or shape or intelligence or the ability to ride a bicycle, for the plain reason (as Newman said in another connection) that one idea is not another idea.

There is, of course, a vast difference between rational beings and mere inanimate objects. I believe this quite as firmly as Sartre does. But to insist, as I do, that this difference does not consist in the one sort of thing's having

a different sort of being from the other's is not to depreciate it. The vast difference between me and a table does not consist in our having vastly different sorts of being (*Dasein*, *dass sein,* "that it is"); it consists rather in our having vastly different sorts of *natures* (*Wesen*, *was sein*, "what it is"). If you prefer, what the table and I are *like* is vastly different. This is a perfectly trivial thing to say: that a vast difference between A and B must consist in a vast difference in their natures. But if a distinction can be made between a thing's being and its nature, then this trivial truth is in competition with a certain statable falsehood. And if one denies the trivial at the outset of one's investigations, one is bound to get into trouble down the road.

THESIS 2. BEING IS THE SAME AS EXISTENCE

Many philosophers distinguish between being and existence (see, for example, Parsons 1980). That is, they distinguish between what is expressed by 'there is' and 'exists'. Following Quine, I deny that there is any substance to the distinction: to say that dogs exist is to say that there are dogs, and to say that Homer existed is to say that there was such a person as Homer. This may seem obvious, but on reflection it can seem less obvious. Suppose I am discussing someone's delusions and I say, "There are a lot of things he believes in that do not exist". On the face of it, I appear to be saying that there are things – the poison in his drink, his uncle's malice, and so on – that do not exist. Perhaps someone who reflects on this example will conclude that it is not obvious that to be is the same as to exist. But whether or not it is obvious, it is true. There *is* no nonexistent poison in the paranoid's drink. There *is* no such thing as his uncle's malice. In sum, there are no things that do not exist. This thesis seems to me to be so obvious that I have difficulty in seeing how to argue for it. I can say only this: if you think that there are things that do not exist, give me an example of one. The right response to your example will be either, "That does too exist", or "There is no such thing as that".

Since I know of no way of arguing for the identity of being and existence (other than a case-by-case examination and refutation of all known attempts to give examples of non-existent objects), I shall have to try to find some means other than argument of persuading you to see things as I do. I will tell you a funny story. At least I think it's funny. But I expect that if you think that there is an important difference between 'there is' and 'exists', you will find the story more annoying than funny. (This expectation is grounded on a certain amount of empirical evidence: W. V. Quine thinks the story is funny and Terence Parsons thinks it is annoying).[2]

One day my friend Wyman told me that there was a passage on page 253 of Volume IV of Meinong's *Collected Works* in which Meinong admitted that his theory of objects was inconsistent. Four hours later, after considerable fruitless searching, I stamped into Wyman's study and informed him with some heat that there was no such passage. "Ah", said Wyman, "you're wrong. There is such a passage. After all, you were looking for it: there is something you were looking for. I think I can explain your error; although there *is* such a passage, it doesn't *exist*. Your error lay in your failure to appreciate this distinction". I was indignant.

My refusal to recognize a distinction between existence and being is simply my indignation, recollected in tranquility and generalized.

THESIS 3. BEING IS UNIVOCAL

And, we might add, since existence is the same as being, existence is univocal. Many philosophers have thought that 'there is' and 'exists' mean one thing when they are applied to material objects, and another when they are applied to, say, minds, and yet another when they are applied to (or withheld from) supernatural beings, and one more thing again when applied to abstractions like numbers or possibilities. This is evidently an extremely attractive position. Undergraduates fall effortlessly into it, and it is very hard to convince anyone who subscribes to it that it is false, or even that it is not obviously true. But it is false. Perhaps the following consideration will show why it is at least not obviously true. No one would be inclined to suppose that number-words like 'six' or 'forty-three' mean different things when they are used to count different sorts of object. The very essence of the applicability of arithmetic is that numbers may count anything: if you have written thirteen epics and I own thirteen cats, then the number of your epics *is* the number of my cats. But existence is closely tied to number. To say that unicorns do not exist is to say something very much like saying that the number of unicorns is 0; to say that horses exist is to say that the number of horses is 1 or more. And to say that angels or ideas or prime numbers exist is to say that the number of angels, or of ideas, or of prime numbers, is greater than 0. The univocacy of number and the intimate connection between number and existence should convince us that there is at least very good reason to think that existence is univocal.

The thesis that existence is equivocal has found its most outspoken twentieth-century exponent in Ryle, who says,

It is perfectly proper to say, in one logical tone of voice, that there exist minds and to say, in another logical tone of voice that there exist bodies. But these expressions do not

indicate two different species of existence . . . . They indicate two different senses of 'exist', somewhat as 'rising' has different senses in 'the tide is rising', 'hopes are rising', and 'the average age of death is rising'. A man would be thought to be making a poor joke who said that three things are now rising, namely the tide, hopes and the average age of death. It would be just as good or bad a joke to say that there exist prime numbers and Wednesdays and public opinions and navies; or that there exist both minds and bodies. (Ryle 1949)

To my mind, there are at least two reasons why it sounds silly to say, "There exist prime numbers and Wednesdays and public opinions and navies". For one thing, 'There exist Wednesdays' and 'There exist public opinions' sound pretty silly all by themselves. Secondly, it is hard to think of any excuse for mentioning all these items in one sentence, no matter what one says about them. I invite you to try to devise a sentence about the items in Ryle's list that does *not* sound silly. If we restrict ourselves to just two of the items in the list, we can produce an entirely plausible sentence: 'The Prime Minister had a habit of ignoring the existence of things he didn't know how to deal with, such as public opinion and the Navy'. But we need not make up examples. Here is a real one.

In the U.S.S.R . . . as we know, there is a prohibition on certain words and terms, on certain phrases and on entire...parts of reality. It is considered not only impermissible but simply indecent to print certain combinations of graphemes, words, or ideas. And what is not published somehow ceases to exist . . . . There is much that is improper and does not exist: religion and homosexuality, bribe-taking and hunger, Jews and nude girls, dissidents and emigrants, earthquakes and volcanic eruptions, diseases and genitalia. (Venclova1983, p. 34)

Later in the same essay, the author says,

In the novel of a major Soviet prose writer who died recently the main characters are blinded and start to suffocate when the peat bogs around Moscow begin burning. The peat bog fires actually exist, but then so does Brezhnev's regime. (p. 35)

I conclude that Ryle has made no case for the thesis that existence is equivocal. I know of no argument for this thesis that is even faintly plausible. We must therefore conclude that existence is univocal, for the clear and compelling argument for the univocacy of existence given above (the argument from the univocacy of number and the intimate connection between number and existence) is unopposed.

THESIS 4. THE SINGLE SENSE OF BEING OR EXISTENCE IS ADEQUATELY CAPTURED BY THE EXISTENTIAL QUANTIFIER OF FORMAL LOGIC

This ought to be uncontroversial. But we find people making statements like this: 'Truth-conditions for quantified statements can be given without

raising the question whether the objects in the domain of quantification exist. Therefore, quantification has nothing to do with existence. The term "the existential quantifier" is, in fact, a misnomer. We ought to call it something else – perhaps "the particular quantifier" '. Now of course I do not think that there are any non-existent objects, and, therefore, I do not think that any domain of quantification could comprise non-existent objects. But that is not what I want to discuss at present. Rather, I want to discuss the nature of quantification. I want to give an account of quantifiers and variables as they appear from the perspective afforded by Quine's meta-ontology. It will be clear that if this account is correct, then Thesis 4 should be no more controversial than the thesis that the ordinary sense of the "sum" of two numbers is adequately captured by the arithmetical symbol '+'.

I shall present the account of quantification that is endorsed by Quine's meta-ontology by showing how to introduce variables and the quantifiers into our discourse as abbreviations for phrases that we already understand.[3] (This, I believe, is the *only* way – other than ostension – in which one can explain the meaning of any word, phrase, or idiom.) It will be clear that the quantifiers so introduced are simply a regimentation of the 'all' and 'there are' of ordinary English.

We begin by supplementing the pronominal apparatus of English. We first introduce an indefinitely large stock of third-person-singular pronouns, pronouns whose use carries no implications about sex or personhood. These pronouns are to be orthographically and phonetically diverse, but semantically indistinguishable. Let three of them be: 'it_x', 'it_y', 'it_z'; let the others be of the same sort.

Now let us call the following phrases *universal quantifier phrases*:

It is true of everything that it_x is such that

It is true of everything that it_y is such that

It is true of everything that it_z is such that

$$\vdots$$

Call the following phrases *existential quantifier phrases*:

It is true of at least one thing that it_x is such that

It is true of at least one thing that it_y is such that

It is true of at least one thing that it_z is such that

$$\vdots$$

Any reader of this essay is likely to have a certain skill that will enable him to turn complex general sentences of English into sentences whose generality is carried by quantifier phrases and pronouns. For example:

> Everybody loves somebody;

> It is true of everything that it$_x$ is such that if it$_x$ is a person, then it is true of at least one thing that it$_y$ is such that it$_y$ is a person and it$_x$ loves it$_y$.

Such sentences, sentences whose generality is carried by quantifier phrases and pronouns, may be hard to read or even ambiguous because of uncertainty about where the 'that'-clauses that follow 'everything' and 'at least one thing' and 'such that' end. This difficulty is easily met by the use of brackets:

> It is true of everything that it$_x$ is such that (if it$_x$ is a person, then it is true of at least one thing that it$_y$ is such that (it$_y$ is a person and it$_x$ loves it$_y$)).

A more complex example:

> Anyone who acts as his own attorney has a fool for a client;

> It is true of everything that it$_x$ is such that (if it$_x$ acts as the attorney of it$_x$, then it is true of at least one thing that it$_y$ is such that (it$_y$ is a client of it$_x$ and it$_y$ is a fool)).

What we have now is a supplemented and regimented version of English. (The only features of the sentences of this new "version" of English that keep them from being sentences of ordinary English are the "new" pronouns and the brackets. If we were to replace each of the subscripted pronouns with 'it' and were to delete the brackets from these sentences, the sentences so obtained would be perfectly good sentences of ordinary English – perfectly good from the grammarian's point of view, anyway; no doubt most of them would be stilted, confusing, ambiguous, unusable, and downright silly sentences.) But this supplemented and regimented English is a bit cumbersome, in large part because of the unwieldiness of our "quantifier phrases" and the difficulty of writing or pronouncing all those annoying subscripts. We can to some degree remedy this defect by introducing a few systematic abbreviations:

1. Abbreviate subscripted pronouns by their subscripts, italicized and raised to the line. (Call these abbreviated pronouns 'variables'.)

2. Abbreviate 'it is true of everything that (*x* is such that' by '∀*x*(' – and similarly for the other variables.

3. Abbreviate 'it is true of at least one thing that (*x* is such that' by '∃*x*(' – and similarly for the other variables.

Our second example, so abbreviated, is:

> ∀*x*(if *x* acts as the attorney of *x*,
>
> ∃*y*(*y* is a client of *x* and *y* is a fool)).

What we have now, of course, are quantifiers and variables. We have, or so I claim, introduced quantifiers and variables using only the resources of ordinary English. And to do this, I would suggest is to *explain* quantifiers and variables.

We may attribute to Frege the discovery that if the pronominal apparatus of English (or German or any reasonably similar natural language) is supplemented in this way, then it is possible to set out a few simple rules of syntactical manipulation – rules that can today be found in any good logic textbook – such that a truly astounding range of valid inference is captured in the sequences of sentences that can be generated by repeated applications of these rules. It is these rules that give quantifiers and variables their point. The odd-looking, stilted, angular rewriting of our lovely, fluid English tongue that is the quantifier-variable idiom has only one purpose: to force all that lovely fluidity – at least insofar as it is a vehicle of the expression of theses involving generality and existence – into a form on which a manageably small set of rules of syntactical manipulation (rules that constitute the whole of valid reasoning concerning matters of generality and existence) can get a purchase. But while it is these rules that provide the motivation for our having at our disposal such a thing as the quantifier-variable idiom, they are not the source of the meaning of that idiom, the meaning, that is, of sentences containing quantifiers and variables. The meaning of the quantifiers is given by the phrases of English – or of some other natural language – that they abbreviate. The fact that quantifiers are abbreviations entails that we can give them the very best definition possible: we can show how to eliminate them in favor of phrases that we already understand.[4]

Let us now return to Thesis 4: that the single sense of being or existence is adequately captured by the existential quantifier of formal logic. It should be evident that if our explanation of the meaning of the quantifiers – and of the existential quantifier in particular – is correct, then this thesis must be true. If our explanation is correct, then the sentence

> ∃*x* *x* is a dog

is an abbreviation for

> It is true of at least one thing that it$_x$ is such that it$_x$ is a dog.

That is,

> It is true of at least one thing that it is such that it is a dog.

That is,

> It is true of at least one thing that it is a dog.

That is,

> At least one thing is a dog.

That is,

> There is at least one dog.

The existential quantifier therefore expresses the sense of 'there is' in ordinary English. And, if the second thesis is correct, 'There is at least one dog' is equivalent to 'At least one dog exists', and the existential quantifier expresses the sense of the ordinary 'exists' as well. (The name 'the existential quantifier' is therefore no misnomer. There is no need to search out some alternative name like 'the particular quantifier'.) Or this much is true if we have indeed given a correct account of the quantifiers. Many philosophers – proponents of the "substitutional" interpretation of quantification, for example – would dispute the account of the quantifiers that I have presented. A defense of the Quinean account of quantification, however, will not be possible within the scope of this essay.

Let us now turn to the last of the five theses that constitute the Quinean meta-ontology. Unlike the first four theses, the fifth cannot be stated in any useful way in a single sentence. It is a thesis about the best way – the only reasonable way – to attempt to answer (and to conduct disputes about alternative answers to) "the ontological question": What is there? Being a thesis about strategy, it involves a large number of pragmatic considerations, and it therefore requires a somewhat lengthy statement.

The fifth thesis pertains to the part of Quine's meta-ontology that is marked out by the words 'the criterion of ontological commitment'. These words are not always perfectly understood. It would appear that many philosophers think that the words 'Quine's Criterion of Ontological Commitment' are a name for a thesis about what the "ontological commitments" of a theory – any theory – are. Many philosophers seem to think

that Quine believes that there exists a well-defined class of objects called "theories", and that he believes that he has devised a technique that can be applied to "theories" so as to reveal an objectively present (but often hidden) feature or aspect of their content called their "ontological commitments". This technique could be described as follows: recast the theory in the quantifier-variable idiom, or in "the canonical notation of quantification"; consider the set of all sentences that are formal consequences of the recast theory; consider the members of this set that are closed sentences beginning with an existential quantifier phrase whose scope is the remainder of the sentence; it is these sentences that reveal the ontological commitments of the theory. Each of them will consist of an existential quantifier followed by a variable followed by a sentence in which that variable alone is free.[5] Suppose, for example, that the variable that follows the quantifier is 'x', and that it has three free occurrences in the open sentence that follows the quantifier phrase. The sentence of our theory that is supposedly partly revelatory of the theory's ontological commitments may therefore be schematically represented like this:

$$\exists x \ldots x \ldots x \ldots x.$$

An open sentence expresses a condition on objects. The ontological commitment of our theory that this exercise has revealed to us is this: our theory commits us to the existence of at least one object that satisfies the condition we have expressed schematically as

$$\ldots x \ldots x \ldots x \ldots.$$

Here ends the description of what (in my view) many philosophers mistakenly believe is "Quine's criterion of ontological commitment". The trouble with this representation of "Quine's criterion of ontological commitment" is that it presupposes that there are well-defined objects called theories, and that each of them has a unique translation into the quantifier-variable idiom, or into "canonical notation". If we were to suppose that there were a class of well-defined objects called sentences, we could secure the first of these presuppositions by defining a theory as any class of sentences. This would be a highly artificial account of "theories", since it would normally be supposed that the general theory of relativity, say, or the theory of evolution, was not tied down to any particular class of sentences. But let us simply ignore this problem, and concentrate on the "unique translation" problem. There are two reasons why there is no such thing as the unique translation of a theory (or of a set of sentences) into the quantifier-variable idiom. First, the quantifier-variable idiom is not something that a given

sentence is "in" or "not in", as a given sentence is in, or not in, Hebrew characters, or italics, or French. Rather, the quantifier-variable idiom is something that is present in varying degrees in various sentences. Secondly, even if we ignore this fact, there will generally be alternative ways of translating a sentence or set of sentences into the quantifier-variable idiom. An example may make these points clear.

Let us consider the following sequence of sentences, a sequence of a type familiar to everyone who has taught logic:

> Every planet is at any time at some distance from every star
>
> $\forall x$ if x is a planet, x is at any time at some distance from every star
>
> $\forall x$ (x is a planet $\rightarrow$ $\forall y$ if y is a star, x is at any time at some distance from y)
>
> $\forall x$ (x is a planet $\rightarrow$ $\forall y$ (y is a star $\rightarrow$ $\forall t$ if t is a time, then x is at t at some distance from y))
>
> $\forall x$ (x is a planet $\rightarrow$ $\forall y$ (y is a star $\rightarrow$ $\forall t$ (t is a time $\rightarrow$ $\exists z$ (z is a distance & x is at t separated from y by z)))).

One should not think of the quantifier-variable idiom (or the canonical notation of quantification) as something that a sentence is "in" or "not in". Rather, this idiom (or this notation) is something that there is *more and more* of in each of the successive sentences in this sequence.[6] In ordinary English, there are various devices and constructions that do the work the quantifiers and variables do in the sentences of the above sequence. We can transform a sentence of English into a sentence that is not, strictly speaking, English by eliminating some of these devices and constructions in favor of quantifiers and variables. And if the English sentence is of any very great degree of complexity, there may be several "sites" within the sentence that afford opportunities to do so. In a given case, one or some or all the opportunities may be taken; how *much* of the original sentence is transformed – how many of the opportunities for the introduction of the canonical notation of quantification are taken – will depend on the purposes of the person who is introducing the notation.

But this description of the opportunities afforded by English sentences for the introduction of quantifiers and variables suggests that within each English sentence there is a fully determinate and objectively present array of "sites" at which quantifiers and variables could be introduced, and that each of these "sites" has features that dictate the precise way in which

these devices are to be introduced. If this were so, of course, then introducing quantifiers and variables into English discourse would always be a mechanical procedure. It may be that the introduction of quantifiers and variables is sometimes very close to being a mechanical procedure, but this is certainly not always the case. For one thing, a choice will sometimes have to be made between alternative ways of introducing these unambiguous devices into a sentence that is ambiguous as to quantificational import. But there is a more interesting way in which the task of introducing canonical notation can be more than mechanical. Sometimes the task requires a certain amount of creativity. For a minor instance of this, consider the four-place open sentence that occurs as a part of the final sentence in the above sequence of sentences. Where did the word 'separated' come from? A computer program – any program a human being could actually write, anyway – would probably have produced a sentence that contained, instead of 'x is at t separated from y by z', the sentence 'x is at t at z from y'. Why didn't I? Well, just because that sounds funny. For one reason or another, although one can say that A is at some distance from B, one can't say of some distance that A is at it from B. Or one can hardly say it. Recognizing that a slavish adherence to the "at" idiom of the original was going to bring me up against this fact of English usage, I cast about for an idiomatic alternative, and came up with the "separated from ... by ... " locution. This is creativity if you like; not a very impressive example of creativity if it is measured against many of the daily achievements of human beings, but (I think) greatly in excess of anything a computer could be expected to achieve. It would, of course, be absurd to suppose that the eventual introduction of the "separated from ... by ... " locution was in any way dictated by the content of the original English sentence. No doubt there are many other forms of words that would have served as well.

The introduction of quantifiers and variables can, moreover, be accomplished in ways that involve greater creativity than this. Consider again the final sentence in the above sequence. In my opinion, the open sentence 'z is a distance' does not make much sense, owing to the fact that I cannot give a coherent account of the properties that an object that satisfied it would have.[7] And since I think that the obvious intelligibility of the first sentence in the sequence, the sentence of ordinary English, does not presuppose that a phrase like 'ten miles' denotes a particular "distance", I am inclined to think that the final sentence in the sequence is not a correct paraphrase of the first – although the second, third, and fourth sentences are correct paraphrases of it.

One could say that the fourth sentence is "as far as one can go" as regards the introduction of quantifiers and variables to do the work done

by 'every', 'any', and 'some' in the sentence 'Every planet is at any time at some distance from every star'. One could say that the open sentence 'x is at t at some distance from y' simply affords no opportunity for the introduction of a quantifier. But if that is so, what about a sentence like 'If x is at some distance from y, and y is at some distance from z, then the distance from x to y is greater than the distance from y to z, or the distance from x to y is equal to the distance from y to z, or the distance from x to y is less than the distance from y to z'? This sentence obviously expresses a truth, or its universal closure does. Are we to say that this sentence is formed from *four unrelated* predicates, the one we have already mentioned, and three others ('the distance from **1** to **2** is greater than the distance from **3** to **4**' etc.)?[8] Surely this is incorrect. The logical structures of the antecedent and consequence of this sentence are more closely related than *that*. We could exhibit an intimate logical relation between the antecedent and the consequent if we were willing to assume that there were things called "distances" that "separated" spatial objects from one another, and that one and the same "distance" might simultaneously "separate" A and B (on the one hand) and B and a third object C (on the other). But we need not be willing to make such an assumption – which, as I have said, I do not find coherent – to exhibit such a relation. There are a lot of alternatives. One of them would be to introduce the predicate '**1** is **2** times farther from **3** than **4** is from **5**'. We need no other predicate involving spatial separation to express what is expressed by our sentence (whatever, exactly, 'what is expressed by our sentence' may mean; for now, let us take such expressions for granted):

> If x is 1 times farther from y than x is from y, and y is 1 times farther from z than y is from z, then $\exists n$ x is n times farther from y than y is from z, and $n > 1$ or $n = 1$ or $n < 1$.

(Or one might choose to omit the words 'and $n > 1$ or $n = 1$ or $n < 1$', regarding them as an "understood" consequence of the properties of the real numbers.) If we have this predicate at our disposal, we may replace the last clause in the final sentence in our sequence of sentences with 'x is 1 times farther from y than x is from y', thus enabling us to avoid the awkward problem of describing the nature of the objects that satisfy the open sentence 'z is a distance'.[9]

To sum up: the transition between "not being in" and "being in" the quantifier-variable idiom is not sharp but gradual – or, better, one's introduction of quantifiers and variables into a piece of English discourse consists in one's seizing some or all of the opportunities afforded by the sentences that discourse comprises for replacing certain constructions within

those sentences by constructions involving quantifiers and variables. And this is a procedure that may require a certain amount of creativity. A "mechanical" attempt to introduce the canonical notation of quantification may produce a result that is of dubious grammaticality. More importantly, certain ways of introducing quantifiers and variables that initially suggest themselves may seem to one on reflection to be philosophically objectionable: a way of introducing quantifiers and variables may produce a set of sentences that have as a formal consequence the existential generalization on an open sentence F such that, on reflection, one is unwilling to concede that there is anything that satisfies F. (For 'F' read 'z is a distance', 'x is a number', 'y is a set' ... .) And one may be convinced that the "initial" piece of English discourse carried no implication that there were F's, and that, nevertheless, the discourse contained logical structure that was somehow representable by constructions involving quantifiers and variables. It is at this point – to implement this conviction – that creativity is called for. And there is no unique, preexistent "hidden logical form" for this creativity to uncover. It is certainly not true that any translation of a piece of English discourse into the quantifier-variable idiom is as good as any other, but there will be many interesting cases in which the question whether one proposed translation is as good as another is a philosophical question, with all that *that* implies. (In some cases it may be that the question is an aesthetic or a scientific question. Some "proposed objects" offend the aesthetic sense of certain people, even if these people have no "hard" objections to them. Others may be beautiful and philosophically unobjectionable, but hard to fit in with currently accepted scientific theories.)

It is not true, therefore, that a theory, or a given piece of English discourse, has certain more-or-less hidden but objectively present "ontological commitments". Quine, moreover, is well aware of this fact, and he has not proposed any mechanical technique for uncovering them. (The thesis that a confessed pragmatist has made such a proposal is, surely, little short of incredible.) What then, *is* "Quine's criterion of ontological commitment"?

I have said that these words are a name for a certain thesis about strategy. More exactly, they are a name for the most profitable strategy to follow in order to get people to make their ontological commitments – or the ontological commitments of their discourse – clear. The strategy is this: one takes sentences that the other party to the conversation accepts, and by whatever dialectical devices one can muster, one gets him to introduce more and more quantifiers and variables into those sentences. (Or, if you will, one gets him to accept new sentences, sentences that come from the sentences he initially endorsed by the progressive replacement of devices

and constructions belonging to ordinary English by devices and constructions belonging to the canonical language of quantification. Our sequence of sentences about stars and planets and distances provides an example of what is meant by such "progressive replacement".) If, at a certain point in this procedure, it emerges that the existential generalization on a certain open sentence F can be formally deduced from the sentences he accepts, one has shown that the sentences that he accepts, and the ways of introducing quantifiers and variables into those sentences that he has endorsed, formally commit him to there being things that satisfy F.

"But if someone doesn't believe in, say, numbers, and if he sees that a certain introduction of quantifiers and variables into his sentences would have the result that '$\exists x$ x is a number' could be formally deduced from the result, why shouldn't he simply refuse to introduce canonical notation in that way and say, 'Thus far and no farther.' Why can't he stop playing Quine's game at will? In fact, why should he play in the first place?"

Well, any philosopher is perfectly free to resist the application of any dialectical ploy. But the following two points are in order.

– Sometimes, in simple cases involving little or no creativity, a refusal to accept the obvious proposal for the introduction of quantifiers and variables can border on the unintelligible. The symbol '$\exists$' is, after all, essentially an abbreviation for the English 'there are', just as '+' is essentially an abbreviation for the English 'plus'. Suppose, for example, that a certain philosopher maintains that some metaphysical sentences are meaningful – suppose, in fact, that he has actually spoken or written the sentence 'Some metaphysical sentences are meaningful'. And suppose that he is also a fanatical nominalist who has been known to say that strictly speaking there are no sentences. There is a perfectly obvious proposal for the introduction of the canonical notation of quantification into the English sentence 'Some metaphysical sentences are meaningful':

$$\exists x \; (x \text{ is a sentence \& } x \text{ is metaphysical \& } x \text{ is meaningful}).$$

But the philosopher who has written the sentence 'Some metaphysical sentences are meaningful' and who denies that (strictly speaking) there are any sentences had better resist this obvious proposal. And yet, given that '$\exists$' just *means* 'there are' (as '+' just means 'plus') it is very hard to justify such intransigence. (How should we understand someone who was willing to write or speak the sentence 'Two plus two equals four' and yet refused – and not because he was unfamiliar with the canonical notation of elementary arithmetic – to write or speak the sentence '$2 + 2 = 4$'?) As a matter of historical fact, Quine seems to have begun to talk of "the canonical notation of quantification" in ontological contexts because he

was confronted with philosophers who accepted English sentences whose obvious "symbolization" was of the form '$\exists x$ (Gx & Hx)', and who, nevertheless, rejected the corresponding English sentences of the form '$\exists x$ Gx'.[10]

—In more complicated cases, a refusal to go beyond a certain point in replacing the idioms of ordinary English with quantifiers and variables could leave English predicates that seem intuitively to be intimately logically related without any apparent logical relation. (We have seen an example of this above.) And this could leave one without any way to account for the validity of inferences that seem intuitively to be valid.

I will end with a little example of how a philosopher might appeal to the latter point in a dispute about what there is. The example is borrowed from David and Stephanie Lewis's classic essay "Holes" (Lewis et al. 1970).

Suppose that a certain materialist refuses to admit that the sentence 'There are exactly two holes in this piece of cheese' can be translated into the quantifier-variable idiom in this way:

> $\exists x \ \exists y$ (x is a hole & y is a hole & x is in this piece of cheese & y is in this piece of cheese & $\sim x = y$ & $\forall z$ (z is a hole & z is in this piece of cheese. $\rightarrow$.$z = x \lor z = y$)).

(One can well see why a materialist would not want to accept this translation: there would no doubt be occasions on which he accepted what was expressed on that occasion by the sentence of ordinary English; the proposed translation expresses a truth only in the case that there are objects that satisfy the open sentence 'x is a hole'; if materialism is true, then there are only material objects; no material object satisfies 'x is a hole'.) Suppose that one was carrying on an ontological discussion with such a materialist. The exact point of the discussion is not of much importance for present purposes. (One might be an opponent of materialism, or one might simply be trying better to understand what the materialist's position implies.) Here is how one might apply considerations about the validity of inference in such a discussion. One might ask the materialist to consider the ordinary English sentence 'If there are three caraway seeds in this piece of cheese, then there are more seeds in this piece of cheese than there are holes in this piece of cheese'. This sentence is obviously a logical consequence of 'There are exactly two holes in this piece of cheese'. Anyone who accepts the above "symbolization" of the latter sentence, and who accepts any symbolization of the former sentence that is constructed along similar lines, can easily account for the fact that the second sentence is a logical consequence of the first: the symbolization of the second is a formal consequence of the symbolization of the first. But our materialist cannot

accept this account of that fact, and must either be content to have no account of it or must find some other account of it. The only way that suggests itself to find an alternative account of this fact is this: find alternative symbolizations of the two sentences such that (i) the "new" symbolization of the second is a formal consequence of the "new" symbolization of the first, and (ii) neither of the new symbolizations is such that its truth requires the existence of objects satisfying some open sentence that – like 'x is a hole' – cannot be satisfied by objects acceptable to the materialist.

In the present case, it is easy enough to find such alternative symbolizations – if the materialist is willing to accept the existence of abstract objects of some sort. With some difficulty (as the Lewises have shown) alternative symbolizations can be found that do not presuppose the existence of abstract objects. But these "nominalistic" symbolizations are, not to put too fine a point upon it, bizarre – and they appeal to a very strong principle of mereological summation. Certain untoward consequences of a strict nominalistic materialism thus become evident only when one adopts Quine's strategy for clarifying ontological disputes – and it is unlikely that they would otherwise have been noticed. In my view, a general lesson can be drawn from this: All ontological disputes in which the disputants do not accept Quine's strategy of ontological clarification are suspect. If Quine's "rules" for conducting an ontological dispute are not followed, then – so say those of us who are adherents of Quine's meta-ontology – it is almost certain that many untoward consequences of the disputed positions will be obscured by imprecision and wishful thinking.[11]

NOTES

[1] Such coinages as 'meta-language' and 'metaphilosophy' (which I am imitating) are based on a misconception about the origin of the word 'metaphysics'.

[2] Quine's opinion was expressed in personal correspondence, Parsons's in Parsons 1982, p. 365.

[3] The following account of quantification is modeled on, but does not reproduce, the account presented in Quine 1940.

[4] This thesis about meaning and definition has able and articulate enemies. One of these enemies might want to adapt what David Lewis has said about the "semantic marker" method of doing semantics for natural languages; he might want to say that the technique we have presented for eliminating quantifiers from a sentence doesn't tell us "the first thing about the meaning of the ... sentence: namely, the conditions under which it would be true". (Lewis 1972, p. 169)

[5] Or it may be that no variables are free in that sentence. We ignore this special case.

[6] Or, rather than 'canonical notation', we might say 'canonical grammar'. See Quine 1960.

[7] See note 11 (p. 358) to van Inwagen 1990.

[8] For an account of 'predicates', see Quine 1966, §40–§42. Where I have used bold-face numerals, Quine uses circled numerals.

[9] To simplify the example, I have omitted the time variable. Strictly speaking, I should have introduced the predicate 'at **1**, **2** is **3** times farther from **4** than **5** is from **6**', and I should have replaced the last clause in the final sentence with 'at t, x is 1 times farther from y than x is from y'.

[10] See, for example, Quine's discussion (Quine 1951) of Carnap's distinction between "internal" and "external" questions, a distinction that allowed Carnap to dismiss as illegitimate the question, 'Are there numbers?', but to regard the question 'Is there a greatest pair of twin primes?' as legitimate.

[11] This essay is an adaptation of the first chapter of a book, *Being: A Study in Ontology*, which will be published by Oxford University Press.

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