ONTOLOGY AND QUINE

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I INTRODUCTION

In this paper, I will mainly discuss the need for two different verbs like 'exist' and 'subsist' to correctly express the being of entities by considering Quine's ontology. To do this, I will first take a brief look at Quine's ontology.

In his articles and books, Quine repeatedly claims that there exist those and only those entities over which bound variables of a theory range. Here, Quine of course presupposes that theories are expressed as first–order quantification theories. He says, more specifically, 'Existence is what existential quantification expresses.'[1] For example, if $(\exists x)$ Fx holds in a theory, then there is, or exists, some thing which has the property F, which expresses the ordinary reading of the formula. According to Quine, the sentence $(\exists x)(x=a)$ means that *a* exists.[2] So, if a theory asserts $(\exists x)$ (x= pegasus), then the theory commits itself to the existence of Pegasus.

First of all, Quine admits the existence of physical objects. He regards as a physical object 'the material content of any portion of space–time, however irregular and discontinuous and heterogeneous.'[3] Roughly speaking, he regards as physical objects all parts of both bodies like dogs and substances like milk as well as those bodies and substances themselves. He then admits the existence of abstract entities like classes and numbers. The reason why Quine does so is not that he thinks they exist but that it is useful to do so in various sciences. He says in his *Word and Object,* 'The reason for admitting numbers as objects is precisely their efficacy in organizing and expediting the sciences.'[4] However, Quine does not want to admit the existence of those abstract objects like attributes, relations, and propositions mainly because they lack a standard of identity.[5]

Though Quine recognizes the importance of attributes and propositions, he wants to dispense with them not only because he thinks they lack a standard of identity but also because he holds the principle of Ockham's razor, i.e. the principle that one should not assume more entities than are really needed. Quine thinks that if two theories have the same explanatory value and one is ontologically committed to fewer objects than the other, he chooses the former.

Ⅱ ABSTRACT ENTITIES

We, as well as Quine, know for sure that there are physical objects like dogs, horses, milk, stone, etc. in this world. Nobody would disagree with this. But, if we move on to the existence of abstract objects like attributes and relations, then it is not so easy to straightforwardly say that they are, or that they exist, in the world. For example, the attribute 'being human' does not exist in the same way as a man like Quine exists in the world. We say, however, that John is human, which means that John has the attribute 'being human.' It seems to me that in order for us to say so, there must be such an attribute as 'being human' in some way or other. The attribute 'being human' is some thing which all people have and we can recognize that they have it. Our recognition of that attribute suggests its existence in some sense.

There is another type of thing such as Pegasus, unicorns, Sherlock Holmes, etc. This type of entity appears in fictions and stories. Though they are fictitious entities, we cannot claim that they do not exist in any sense. The statement 'Pegasus exists' is not completely false, though we do not think Pegasus exists in the real world like actual physical objects do. 'Pegasus exists' could mean that Pegasus exists in Greek mythology.

According to Quine, mathematical entities like classes, numbers, and functions are considered to be of the same type of entity as that of attributes and propositions.[7)] Namely, he does not think that classes, numbers, and functions exist in the same sense that physical objects do. I agree with him on this point since I clearly see the difference between the existence of classes, numbers, etc. and the existence of actual physical objects. For example, the class {New York, Boston, Chicago} of cities cannot be found in the real world. What we can find is the three cities which exist in the United States. However, we feel no oddity to the existence claims of classes and numbers mainly because mathematics greatly prevails in our ordinary life; it is quite normal to claim that there is a number between 8 and 10. Though classes, numbers, and functions can be said to exist, the kind of being of those abstract entities is very different from the kind of being of actual physical objects.

Ⅲ EXISTENCE AND SUBSISTENCE

In Section II, we considered abstract entities like attributes, fictitious characters, numbers, etc. and saw that they have some kind of being other than that of actual physical objects. Those abstract entities are, to sum up, mind–related entities in the sense that they can be grasped only through our mind or brain.[8] They are not self–existing entities like actual physical objects. Therefore, the kind of being of abstract entities must not be expressed by the word 'existence' which is only suitable for actual physical objects but must be expressed by some other word. I will call it 'subsistence' in this paper.

Concerning numbers, Quine sees the difference between the existence of numbers and the existence of actual physical objects. However, he admits in his theory sentences like $(\exists x)\ (x=100)$, which means that the number 100 exists, not because he thinks numbers really exist but because they are useful in his theory. This, nonetheless, means that abstract entities like numbers are given a fulfledged status of existence in parallel with actual physical objects and that the existence of entities, concrete or abstract, are uniformly expressed without any distinction in his theory. The situation here is this: Quine's theory is expressed as a first–order quantification theory in which quantifiers have the objectual reading and, therefore, all sentences of the form $(\exists x)\ (x=a)$ inevitably assert the real existence of some object denoted by 'a,' concrete or abstract, in the domain. The more powerful a Quinean theory becomes in the sense that it can talk about various entities in various sciences, the more objects, concrete or abstract, it will be ontologically committed to. This situation should be avoided because we, as well as Quine, do not want to commit ourselves to the real existence of abstract entities. To avoid such a situation, we must find a new type of theory. Before we consider such a new type of theory, it might be helpful to first look at Meinong's ontology.

At the beginning of this section, I gave a kind of being, i.e. subsistence, to abstract entities. Subsistence is different from existence. From this, we can say that there are entities or objects that do not exist. And this is one of Meinong's basic claims. I myself agree with Meinong on various points. For example, I agree with him that 'every thing is an object, whether or not it is thinkable (if an object happens to be unthinkable then it is something having at least the property of being unthinkable).'[9] In this wider sense of object, our applying the word ‘object’ to some thing does not require our commitment to the existence of that thing, though Quine’s notion of object does commit us to it.[10] Then, even round squares are objects, although they are impossible objects as Meinong calls them. Of course, we do not think that round squares are objects in the ordinary sense. However, it could be convenient to use the word ‘object’ to refer to round squares; otherwise we will not be able to utter the following sentences: ‘Such objects as round squares do not exist,’ and ‘John believes that round squares are existing objects in some place of this universe.’ It seems to be better to take the word ‘object’ as a very wide concept in this way.

Someone may claim that round squares subsist in some fictitious world. However, I am not sure at present that they can be considered to subsist at least in such a world. I have an inclination to agree with Meinong that impossible objects like round squares do not have any kind of being, i.e. they neither exist nor subsist.[11] I will consider this again later.

Ⅳ A NEW TYPE OF THEORY

In this section, we will consider what kind of new theory we need in order to express the two kinds of being, i.e. existence for actual physical objects and subsistence for abstract objects. We will consider this within the setting of first–order logic.

As we saw before, the sentence $(\exists x)\ (x = 100)$ asserts the real existence of the number 100 if we read the quantifier in it objectually. If we read the quantifier substitutionally, i.e. if we read the sentence as ‘there is a name x such that “$x = 100$” is true,’ then it does not assert the existence of the number 100. It only asserts the existence of a name. In a first–order quantification theory with the substitutional reading of quantifiers, sentences cannot express the real existence of actual physical objects in the world and ontological commitment to those objects disappears. Quine puts it this way: ‘When substitutional quantification serves, ontology lacks points.’[12] He also says that substitutional quantification would not serve as an account of being.[13] I agree with this.

It seems to me that there is yet a third reading of quantifiers. We may read $(\exists x)$ Fx and (x) Fx as ‘there subsists some thing x such that x has the property F’ and ‘for every (subsistent) thing x, x has the property F,’ respectively. Then, the sentence $(\exists x)$

(x=100) does not commit us to the real existence of the number 100. We do not have to admit the existence of abstract objects like numbers and classes because of their efficacy or utility like Quine does. The following remark must quickly be stated here: the bound variable 'x' in $(\exists x)$ Fx and (x) Fx ranges over not only subsistent objects but also existent objects; that is, existent objects can also be said to subsist but not all subsistent objects can be said to exist. This might seem strange since we have so far talked as if the verb 'subsist' could only be applied to abstract objects. However, if we remember that abstract entities are mind–related entities in the sense that they can be grasped only through our mind or brain,[14] then the strangeness of applying the verb 'subsist' to actual physical objects may disappear since those physical objects can also be grasped by our mind or brain. We can think of and imagine them as we think of and imagine abstract objects. We can think of, e.g., Quine as consisting of a certain set of properties and similarly we can think of, e.g., the attribute being human as itself consisting of a certain set of properties like being intelligent and being able to speak, etc. Every object (except impossible ones) can be said to have the property of being subsistent and every actual physical object can be said to have the property of being existent as well as the property of being subsistent.

Let us call the new reading of quantifiers the 'subsistential reading.' A first–order quantification theory with the subsistential reading of quantifiers can now have a predicate, say 'E,' to express existence non–trivially in the following sense: a formula like Et cannot be replaced by another equivalent formula consisting only of logical symbols including '=,' whereas a formula such as 'Et' ('E' is a predicate for 'exist') of an objectual first–order quantification theory can be replaced by an equvalent formula $(\exists x)(x=t)$. In a subsistential first–order quantification theory (SQT, for short), the sentence (1) must hold:

(1) $(x)(Ex \rightarrow (\exists y)(y=x))$.

We may possibly add the sentence (2) to preclude talks about impossible objects if we assume they have no kind of being:

(2) $(x)(Fx \leftrightarrow (Fx \wedge Ex) \vee (Fx \wedge -Ex \wedge (\exists y)(y=x)))$, where 'F' is a predicate.[15]

Let us now look at some arguments by Quine in the light of an SQT. Quine thinks that ordinary languages are ontologically misleading in that names like proper nouns and definite descriptions tend to claim the existence of the objects to which those names (purport to) refer. For example, the statements 'The present King of France is bald' and 'Pegasus flies' are, according to Quine, ontologically misleading since they tend to give us the impression that both the present King of France and Pegasus exist. I agree with him on this point. However, I do not agree with him that we should apply a Russellian theory of description to those statements containing definite descriptions or proper nouns in order to clarify the ontological status of objects which those descriptions or proper nouns (purport to) refer to. According to Quine (and Russell), the statement 'The present King of France is bald' can be translated as a formula like $(\exists x)\ (Fx \wedge Bx \wedge (y)\ (Fy \rightarrow y = x))$ of an objectual quantification theory, where 'F' and 'B' are predicates for 'being a King of France' and 'being bald,' respectively.[16] But, since *there is* no King of France, the formula and also the original English statement turn out to be false. It seems, however, that the statement 'The present King of France is bald' might be true in some fiction in which there is one and only one King of France. This means that in an SQT containing information about such a fiction, we cannot derive a contradiction from the two sentences $\neg(\exists x)\ (Fx \wedge Ex)$ and $(\exists x)\ (Fx \wedge Bx \wedge (y)\ (Fy \rightarrow y = x))$, where the former means that there exists no King of France and the latter means that there subsists exactly one King of France and he is bald.

Here, we are of course assuming that the Russellian analysis of definite descriptions (RADD, for short) is right. However, RADD would not be a good way of handling definite descriptions in an SQT. If we take the statement 'The present King of France is bald,' à la Russell and Quine, as having the meaning in an SQT that there exists exactly one King of France and he is bald, then the statement turns out to be false since there exists no King of France. I do not think this is a desirable result because the definite description in the statement fails to denote anything in the real world and because I hold, as many other philosophers do, that when a definite description fails to denote anything, the statement containing it is neither true nor false (or, has no truth value).[17] I would like to say that SQT's admit some sentences to be neither true nor false and that definite descriptions should be translated as terms like $(\iota x)\ Fx$ (the x that has the property F).[18] Then, the statement 'The present King of France is bald' could be translated as two different sentences of an SQT: (1) $B\ (\iota x)\ Fx$ and (2) $B\ (\iota x)\ (Fx \wedge Ex)$. (1) means that the present (subsistent) King of France is bald, and it can be true in an SQT which contains information of some fictitious story about the present King of France. On the other hand, (2) means that the present existent King of France is bald, and it can be neither true nor false in an SQT which contains information of the real world.

Let us next consider the statement 'Pegasus flies.' According to Quine, proper nouns can be paraphrased as definite descriptions and then analysed by RADD. For example, the proper noun 'Pegasus' is first paraphrased as a definte description like 'the thing that pegasizes,' using a fancy predicate 'pegasize.'[19] Then, the statement becomes 'The thing that pegasizes flies,' which Quine translates into an objectual quantification theory as a sentence like $(\exists x)\ (Px \wedge Fx \wedge (y)\ (Px \rightarrow y = x))$. Since for Quine Pegasus does not exist in any sense, the sentence and the original English statement become false.[20] But, I do not think that the statement 'Pegasus flies' is simply false. Let the statement be translated as Fp ('p' is a term for Pegasus) in an SQT. I think that Fp is true in the SQT if it contains information about Greek mythology and that if it contains no information about Greek mythology then Fp becomes neither true nor false in the SQT because the term 'p' has no referent.

Furthermore, Quine's analysis of the statement 'Pegasus flies' is very unnatural, though he does not analyze the very statement in his article "On What There Is." He claims that the fancy verb 'pegasize' is a primitive word and the noun 'Pegasus' can be considered to be a derivative of 'pegasize.' But, if this claim were true, then his name 'Willard Van Orman Quine' would also be a derivative of the verb 'willard–van–orman–quinize.' This would be an awkwardly unnatural claim.

Finally, let us consider impossible objects like round squares. Quine does not admit any impossible objects in his ontological theory.[21] However, someone might claim that impossible objects can subsist in some fictitious world. There would be nothing wrong in imagining a story in which there is a round square cupola at Berkeley College. But, the question is whether or not we should extend our theory SQT to include information about fictions in which impossible objects are claimed to be. It would be nice if we could find a way to describe such impossible objects without committing the SQT to either existence or subsistence of them. But, I am not sure that we can do so. On the other hand, it might be better to exclude from the SQT all information about fictions which claim some sort of being of impossible objects. It might still be better to exclude from the SQT all sorts of fictitious objects.[22] This last way would give a good reason to invent a logical theory of fictions.[23] The point here is that the answer to the above question depends on what kind of SQT we need.

CONCLUSION

In this paper, I explained the two kinds of being of objects, i.e. existence and subsistence, and considered a third reading of quantifiers of a first–order quantification theory in order to correctly express those two kinds of being in such a theory. There might be other ways to handle those two kinds of being within the setting of first–order logic. However, I think that SQT's can be an appropriate way to do so and that objectual quantification theories which Quine strongly holds are not suitable for an explication of ontology.

Since we want to express more than one kind of being, we would naturally need more than one word for them. Eskimos have many words to express the different colors of snow. They are not playing with those words. There are subtle differences in color of snow and Eskimos can correctly describe them. Similarly, there are differences in being of objects. We should realize this and distinguish such differences by using different words. Having the word 'existence' alone is not enough to theorize ontology.

NOTES

1. Quine (1969), p. 97.
2. ibid, p. 94.
3. Quine (1981), p. 10.
4. Quine (1960), p. 237.
5. ibid, p. 244.
6. ibid, p. 209. This means that Quine does not accept higher–order sentences like $(\exists P)(x)Px$ in his theory.
7. ibid, p. 233.
8. I am not saying that abstract entities are mental entities or ideas. This point is very subtle. I will not discuss it in this paper. Viewing fictitious entities like Pegasus from outside those fictions describing them, they may be considered to be abstract entities. Of course, many of them are physical objects in the fictions.
9. Edward (1967), vol. 5, p. 261.
10. Quine (1969), p. 96.
11. Edward (1967), p. 261.
12. Quine (1969), p. 107.
13. ibid, p. 108.
14. See p. 87 of this paper.
15. (2) and the valid sentence $(x)(-Ex \rightarrow (\exists y)(y=x) \vee -(\exists y)(y=x))$ would yield the sentence $(x)(Ex \vee (\exists y)(y=x))$, which means that every thing either exists or subsists.
16. Quine (1961), p. 6. Quine's original example is 'The author of Waverley was a poet.'
17. Of course, a statement's being neither true nor false is different from its having no truth–values. But, I will not consider it in this paper.
18. I am assuming here that the descriptive operator is a primitive logical symbol in the lan-

guage of SQT's.
19. Quine (1961), p. 8.
20. ibid, p. 3.
21. ibid, p. 5.
22. Parsons (1982), p. 507.
23. cf. Woods (1974).

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