***III Knowledge is true belief based on argument. – Plato, Theaetetus, 201 c-d***
***"Is Justified True Belief Knowledge?" – Edmund Gettier***

In Theaetetus Plato introduced the definition of knowledge which is often translated as "justified true belied". This definition is even today largely accepted. On the surface level it does seem to be true. We would not call something knowledge if it were not true. Also, we would feel quite hesitant to call something, which lacks justification knowledge. It was not until the 20th century that Edmund Gettier refuted Plato's definition of knowledge. However, Gettier's arguments were largely negative. If justified true belief is not knowledge, then what is? Is it even possible to provide a justification for all the things we know? In this essay I shall first address Gettier's criticism for Plato's definition of truth. I will proceed to consider the problems with correspondence as justification for beliefs. I shall also consider *a priori* knowledge and propose a theory of what could be called "collective mental entities" as an alternative to the theory of universals. I shall conclude with a brief consideration of what we have left after addressing the faults in different theories of knowledge.

Let us first consider justified true belief as definition of knowledge. Why did not Plato see true belief to be enough to qualify as knowledge? Let us consider an example. A journalist in a newspaper is feeling lucky and he predicts the outcome of a football game and publishes it in a newspaper before he has received information about who has won the game. If the journalist's guess is right, he has a belief which is true but can it be called knowledge? His belief is not based on anything but prediction and therefore it can be concluded that in order for a true belief to be knowledge it must have justification. So far, Plato's definition seems to hold. If the journalist has a belief that team A won the football match, team A really did win the football match and the journalist was there in the game to see that team A won, it seems safe to say that he *knows* that team A won the match. In that particular instance, there seems to be no problem. However, Edmund Gettier did provide examples of situations where justified true belief is not knowledge.

Let us consider an aquarium which has a goldfish in it. Peter believes that there is a goldfish in the aquarium. He looks at the aquarium and sees the goldfish. This seems like a solid case of justified true belief. However, suppose that Peter does not really see the goldfish but instead he sees a stone which looks exactly like the goldfish and the real goldfish is behind that stone. So, Peter beliefs that there is a goldfish in the aquarium, there really is a goldfish in the aquarium – so his belief is true – and he has a justification for his belief since he thinks he sees the goldfish in the aquarium. Can he be said to know that there is a goldfish in the aquarium? Gettier's considerations show that Plato's

widely accepted definition of knowledge is not really valid. Peter's justification for his belief is not really solid because he does not see the goldfish, he only thinks that he sees it. Therefore Plato's definition could be altered to say that knowledge is true belief which is based on valid argument. However, this only raises further problems, as we must now consider what those valid or true arguments are. In the case of Peter and the goldfish the validity of the justification seems to come from correspondence to the real world. Does his perception correspond to his belief? In the above example it did not because he believed that he saw a goldfish while in reality he saw a stone. How do we know if our beliefs correspond to reality? And to what parts of reality must our beliefs correspond for them to be knowledge? To answer these questions, we shall next consider the correspondence test for knowledge.

In his work *The Problems of Philosophy*, Bertrand Russell addresses the problem of beliefs. Russell is a 20th century empirics and one of the most influential analytic philosophers. Russell claims that a true belief must be a relation of mind to some object other than itself. The object, he notes, must in some cases be a complex whole, not a single object. For example, if I believe that my sister respects my mother, the object corresponding to my belief – supposing my belief is true – is not a single object but the complex whole "my sister respecting my mother". The objects of the belief are united by a relation, which in this case is respecting, and they have a direction – sister resecting mother is different to mother respecting sister. For the belief to be true there must be this complex whole - "my sister respecting my mother" – in the world independent of my mind and independent of me believing in it. Therefore in any belief-statement, there must be the subject, "I", the object, "my sister respecting my mother", and a relation which unites the subject and the object, the believing.

Russell's analysis of the belief-relation seems fair. It is true that a belief must be able to be true or false and therefore in a belief we must be able to distinguish between the subject and the object, which is often a complex whole. However, what I find problematic in Russell's considerations is the claim that the truth of the belief is always dependent on its correspondence to an object which exists independently of the mind. In the above example of my sister respecting my mother, it is fairly obvious that for that belief to be true it must correspond to my sister's actual respect for my mother, which is independent of me. However, in case of some other kinds of beliefs their truth-value does not seem to be connected to something independent of the subject as obviously. After all, there seem to be things that are not mind-independent and to say that the truth of the belief requires correspondence to something outside of itself would be to deny that there can be knowledge of mind-dependent things. After all, knowledge seems to require true beliefs.

Empiricists John Locke and David Hume made a distinction between things in perception that are due to the object and things that are due to the observer. Locke called the former category primary qualities and the latter secondary qualities. According to Locke, things such as mass are primary qualities since the mass is a property of the physical object and is independent of the observer. Whereas colour, for example, is a secondary quality since it is due to the observer. This is easy to proof, since there are colour-blind people and animals that do not see many colours. If the colour were a property of the object itself all perceivers would perceive it in the same way. Similarly, shape to some extent could be added to the list of secondary qualities, since from different perspectives objects seem to have different shapes. Same goes for texture. When perceived with a naked eye, the surface of the table appears to be smooth but a microscope would reveal that it rough – it has hills and valleys. These sorts of considerations are called *Arguments from Illusion* as they exemplify how our perception tends to deceive us. Similarly, Hume made the distinction between impressions, which are pure perceptions, and images, which are our mind interpreting the impressions.

If we are to accept the fact that there are things in the world which are due to ourselves, how do we check correspondence? One way to address this difficulty is to claim that there is a correspondence between things that seem mind-dependent and things outside ourselves. After all, the roughness and smoothness of the table can be explained in more objective terms by referring to the distance from which it is perceived and the arrangement of molecules. Furthermore, a peculiar thing like colour can be explained in terms of wavelength of light. However, wavelength of light is not the same as the colour red. Colours are what are often called qualia. They are qualitative properties that do not manifest in behaviour and are therefore incredibly difficult to explain in physical terms. Therefore, if I have a perception of a car that is red and I believe that the car is red, how do I check the correspondence?

In some sense this case resembles the case of Peter and the goldfish. It surely does seem that the car is red but the only proof I have of that is my perception. If we were to only assert the existence of the car, that would be easier since I could at least use many of my senses – sight, touch, hearing etc. – and I could ask people if they saw the car and they could describe it to me to make sure they perceive similar looking car. They can also tell me that they see that the car is red but how could they describe the red to make sure that their perception is similar? They cannot, since qualia are only qualitative properties. Therefore, I have a belief that the car is red, my justification for the car being red is that I perceive it as being red but is it true that the car is red? We could measure the wavelength of the light that is reflected from the surface of the car to see if it is in what in physics is

categorised a red. However, that wavelength is not redness, as redness is only qualitative. However, it does seem quite natural to say that I know that the car is red. However, the redness of the car is not strictly speaking a property of the car. It is a property which my mind has attributed to the car. If we are to accept that I can have knowledge about qualia, the claim that the truth of a belief requires a correspondence to something outside the mind of the subject of the belief, must be rejected.

We could say that the belief that the car is red corresponds to my perception of the car, but the perception is not independent of my mind. All in all, the knowledge about our perceptions seems to be quite special kind of knowledge. To know that we have a perception we do not need to check if it corresponds to something. We just know that we have a perception. It could be said that we know it *intuitively*. In that case, justification is not needed and in fact justification that would go beyond the mere existence of the perception cannot be provided; using the existence of the perception as a justification for the existence of the perception would be circular reasoning. Therefore the definition of knowledge should be broadened to include this rather peculiar but undeniably existing category of knowledge which we could describe as intuitive knowledge. Also, the consideration of qualia seem to indicate that in order for a belief to be true it does not necessarily have to correspond to something independent of the mind of the subject of the belief.

There seem to be other forms of knowledge as well, where the connection between the subject and the objects of the belief are not as clear. *A priori* knowledge has an equally peculiar correspondence to the outside world. The problem of a priori knowledge was considered extensively by Immanuel Kant. *A priori* knowledge is the kind of knowledge that does not require experience. Therefore the justification for *a priori* knowledge must be quite different. Kant, in the line with the empiricists we considered previously, made the distinction between a thing-in-itself and our perception of that thing. Kant held that the thing-in-itself is unknowable to us. He distinguished the phenomenal world and the neumenal world. The phenomenal world is the world we experience. In Kant's view the phenomenal world includes space, time, qualitative properties, and the like. The neumenal world does not have space or time. The thing-in-itself, which exists in the neumenal world, can never be known since as soon as we perceive something it becomes part of the phenomenal world. This distinction between phenomena and neumena is a very sensible one (and is not too different to the distinction Russell later made between sense-data and the physical object).

Previously, we discussed Arguments from Illusion which show that our perception of the world cannot be the same as the objective, mind-independent world. After all, if our perceptions were an accurate description of the world, some objects would have numerous different shapes, numerous

colours and numerous textures. That would be absurd. However, Kant's view is quite radical as he claims that space and time are also attributed by us. However, space and time are essentially relations of objects and without a mind perceiving multiple objects it seems quite strange to say that they would have a relation. Relations require comparison, and comparison is an intentional, mental activity. Even if there were some sort of relations independently of minds it is very difficult to understand what they would be like since they could not involve comparison and conceptualisation which are essential in our understanding of relations. For the sentence "my pen is next to my computer" to make sense, we must conceptualise those two objects to have some sort of relation to each other. The idea that there would exist some sort of network of relations of all objects to all the other objects independently of conceptualising them and "bringing them together" seems quite strange. At least relations would be meaningless without someone conceptualising them, as "next to" does not really mean anything outside the conceptual (and largely semantic) framework of humans.

Kant's distinction between phenomena and neumena is essential for *a priori* knowledge. Kant held that *a priori* knowledge is part of the phenomenal world, not the neumenal world. *A priori* knowledge includes things like logic and mathematics. After all, 2+2=4 seems to be true independent of us ever seeing two objects and two objects and calculating them together. Theoretically, it is possible for us to know that 2+2=4 even if we have never seen two objects and two objects making four objects. Seeing one case of two object and two objects making four objects is enough to make us realize that the particularity of that instance is irrelevant and the same rule applies in all possible situations.

In Kant's view 2+2=4 is a relation and relations are something attributed by ourselves to the world. They are due to our "nature", so to say. Indeed, in mathematics and logic there seems to be no object to which our knowledge corresponds. I have a belief that 2+2=4, it is true, but I have no justification for it. It is true *self-evidently*. There is no complex object 2+2=4 independent of my mind to which my belief could correspond. 2+2=4 is not a physical object. If anything, it appears to be mental. Therefore, Kant seems to be right in saying that there is knowledge which does not correspond to something outside ourselves and that knowledge cannot be justified further. However, Russell did address the problems raised by Kant and he claimed that there is a mind-independent object even in mathematics and logic that corresponds to our beliefs and therefore serves as some sort of justification for it. He claimed that mathematics and logic are composed of entities known as universals that are neither mental nor physical and therefore can serve as the objects corresponding to beliefs.

Russell's world of universals is very similar to Plato's world of ideas. He claims that universals exist independent of us, they are neither in space nor in time, they are eternal and unchanging. He claims that all words except proper names stand for universals. Thus, he is able to save relations from being just a property that our minds attribute to the world. In Russell's view, universals can also save *a priori* knowledge from becoming mind-dependent, which in his view would make it erroneous. Russell claims that all a priori knowledge deals with relations of universals. Therefore 2 and 4 are universals and there exists a universal which states the relation 2+2=4. Russell claims that if we would deny the existence of universals, mathematics and logic would become subjective. If mathematics was due to our nature, our nature could change and mathematics could change with it. In Russell's view it is impossible for there to be any possible world in which mathematics would be different and therefore it cannot be due to ourselves.

The theory of universals seems appealing but in my view it raises more questions than it answers. How do these universals exist? How do we get knowledge of them? How have they come to exist? Do the universals which stand for all possible words already exist? Did the universal "computer" exist before computers existed? Russell's attempts to address these questions are vague and unconvincing.[1] He just claims that universals are eternal and unchanging and that we have knowledge of some of them by being acquainted with them and knowledge of some of them by description. However, there seems to be no clear pattern to how we get knowledge of them. Of course, a theory being complex and hard to understand is no reason to reject it. However, the existence of some non-physical and non-mental entities seems like a relapse to ancient mysticism. It does not seem easy to prove that universals do not exist but I do not find the arguments for their existence very strong.

However, Russell's concern for mathematics not being certain does raise interesting questions. If mathematics is not a feature of the world then what is it? It seems to me that all words but proper names do not stand for universals but instead they refer to what could be called "collective mental entities". The truth of 2+2=4 is not dependent on some individual mind but it is dependent on all of the minds that know that 2+2=4. Similarly, relations neither exist independently of minds nor do they exist in virtue of some individual mind, but their existence is dependent on all the minds that know what those relations mean. Like was said previously, relations require conceptualisation which cannot be done without minds. However, it could be argued that claiming that mathematics and relations are collective mental entities is just as vague and mysterious as claiming that they are

[1] These considerations are mainly based on Russell's arguments in The Problems of Philosophy.

universals. I do not think this is true. Firstly, collective mental entities exist in this world, not in some mystical world of universals. Secondly, it erases the difficulty of new words being created, because collective mental entities are not eternal and unchanging.

How do these collective mental entities come to be? Firstly, we are able to form concepts by abstraction. For example, we can by abstraction create concepts such as "cat" to stand for all the animals that have similar properties. However, most importantly it seems to me that they are agreements that we make. Like Wittgenstein pointed out in Philosophical Investigations, words get their meaning because we make agreements on them. We have agreed what "next to" means and thus everyone who has agreed on that is acquainted with that relation. Mathematics and logic, on the other hand, seem to be features of human thought. The fact that we cannot think outside the laws of mathematic and logic, *does not mean that they are necessarily true* in all possible worlds. To assume such a thing would in my view be arrogant, as we would be assuming that human consciousness is able to apprehend not only everything as it exists but also everything that could possibly exist. It is possible that there are things in the universe that behave in a manner incomprehensible to us and that they are unknowable to us due to the limits of our comprehension and perception.

These considerations of seem to indicate that knowledge does not always require further justification and it not necessarily dependent upon things outside the mind that knows. Things like mathematics and logic are self-evidently true and they cannot be justified by anything. After all, we cannot justify logic by using logic and there does not seem to be any more basic system which we could use to justify the most basic principles of logic and mathematics. Numbers and their relations seem to be collective mental entities that exist in virtue of all the minds that have agreed on their meaning. Thus, 2+2=4 does not cease to be true if one person who knows it dies but it is very difficult to understand at least *how* it could be true if all minds ceased to exist. Therefore collective mental entities are subjective in some sense but they are not private, as we have agreed on their meaning.

Alongside mathematics and logic, knowledge of ethics an aesthetics seem to be largely *a priori*. The faults in naturalistic ethics have been pointed out by David Hume and G.E. Moore, among others, and for the purposes of this essay we can assume that moral goodness is not some natural property that exists in the world. Also aesthetic beauty exists in a similar way. We could also try to apply the theory of collective mental entities to moral goodness and beauty but that would go beyond the scope of this essay. That aside, there seems to be no object in the mind-independent

world to which our ethical or aesthetical statements can correspond. Of course, different sort of justifications can be provided for why something is good or for why something is beautiful, but at some point we just have to say that "it just is", as there is no physical, observable object to which our knowledge corresponds. If we were to assume the correspondence theory of truth, ethical and aesthetic knowledge would be meaningless. It seems to me, that ethics and aesthetics fall into the category of knowledge which we know intuitively and cannot be proven. It is just known. Stripping the world away of things such as ethics and aesthetics would strip the world away of humanity. Like Georg Henrik von Wright said in his book *Explanation and Understanding*, we cannot really *explain* beauty and ethics, we can only *understand* it.

To conclude, forming some simple definition for knowledge seems nearly impossible. Plato's justified true belief applies in the simplest cases of knowledge where knowledge is a based on a belief that is composed of a relation of the mind to some object outside of itself, and the correspondence of the belief and the subject-independent object can be checked. However, qualia, *a priori* knowledge and what I have called intuitive knowledge are quite different. They do not have a correspondence to some object wholly independent of the subject of the belief. A priori knowledge can be explained if we accept the existence of what I have called collective mental entities. However, if we are to accept that *a priori* knowledge is largely base on collective mental entities, we have to accept that logic and mathematics are mind-dependent and not necessarily true. However, it seems that we are still able know things that depend on minds to some extent.

Therefore perhaps a belief does not have to be necessarily true for it to count as knowledge but it has to be true in virtue of many minds being acquainted with it (at least in most cases). That is why collective mental entities solve the problem at least partially since they do not cease to exist if one person dies. However, qualia remain to be a mystery as it is private to only one person and yet we do seem to have knowledge concerning qualia. Also ethics and aesthetics remain mysterious. However, perhaps it is not even possible to provide an exhaustive theory of knowledge. After all, human beings' understanding of the world is restricted to our limited comprehension and perception and we can most likely never break those boundaries.