

Curiosity and Ignorance

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Though ignorance is rarely a bliss, awareness of ignorance almost always is. Had we not been able to develop this powerful skill, there would have been no philosophy or science, nor advanced forms of religion, art, and technology. Awareness of ignorance, however, is not a motivator; but when it arouses curiosity that is strong enough, it causes what may be called an “epistemic” desire; a desire to know, to understand, to learn or to gain new experiences, which is a basic motivator for inquiry. This makes the relationship between curiosity and awareness of ignorance all the more important. One can however find very little on this relationship within the philosophical literature. In this essay this is what I wish to explore. After a brief discussion of the question of whether awareness of ignorance is a precondition for curiosity, based on my earlier work (The Philosophy of Curiosity, Routledge, 2012) I attempt to show that corresponding to the two forms of curiosity that I call “objectual” and “propositional”, there are also two forms of ignorance. This will refute the prejudice that awareness of ignorance must always have propositional content and therefore must always be about truth. I further argue that awareness of ignorance that does have propositional content can be of two different varieties: truth-ignorance versus fact-ignorance. One may simply be ignorant of whether a proposition is true or false (truth-ignorance); one may, on the other hand, know that a proposition is true but still be ignorant of the fact that makes it true (fact-ignorance). I then show that awareness of ignorance, whether it is objectual or propositional, can always be translated into what I shall call awareness of inostensibility. An important moral to be drawn from this discussion is that reaching truth, even when it is coupled with certainty, does not always eliminate one’s ignorance and therefore cannot be the ultimate goal of inquiry.

Keywords: Curiosity, truth, knowledge, philosophy of curiosity, ignorance, sentence reference, facts, objectual knowledge.

I.

Ignorance is itself a lack, awareness of ignorance is not, rather it is the awareness of that very lack, and is therefore an achievement. If *being aware*, at least in this context, simply means *to know*, then awareness of ignorance must be taken to be a form of second-order knowledge. Knowledge of what though? This may appear to have a straight forward answer: a proposition. Being aware of your ignorance, on this received view, simply is the state of knowing that you do not know a particular proposition. Such an oversimplified account would imply that awareness of ignorance is always about truth. I wish to present two separate arguments that show that this received view is mistaken. Since both of them appeal to certain considerations concerning human curiosity, they may be called arguments-from-curiosity. Philosophers in general do take the concept of ignorance as being worthy of philosophical inquiry, but the same is unfortunately not the case for the concept of curiosity. Therefore I do hope that these arguments will convince some of my readers that curiosity is a notion which has philosophical significance. The first argument is based on the observation that curiosity does not always have propositional content, and the second one, which is perhaps the more controversial of the two, appeals to the premise that even when the content of one's curiosity is a proposition, it still may not be about truth.¹ If awareness of ignorance is a precondition for being curious, then we should expect to have different forms of ignorance as well, corresponding to these different forms of curiosity, neither of which are about truth.

As a preliminary let me first give a brief summary of the intentional-intensional model of curiosity that I developed recently, emphasizing the role of inostensible conceptualization. The term "curiosity" is used in different ways, and it is only one of these uses that this model tries to capture. This is the use we give to the term when we make utterances such as "Holmes is curious about who the murderer is", or "scientists are curious whether there is liquid water on Mars" etc. Such curiosity attributions can always be formulated in language in the form of a question: Holmes wishes to answer the question "who is the murderer?", scientists seek the answer to the question "is there liquid water on Mars?". Being curious, in this sense, does not refer to a character trait, or a drive, nor does it refer to a form of behavior. Rather it is a peculiar kind of mental state that all normal human beings enjoy, some more and some less, but regardless of their social and educational background no person is deprived of it.

Curiosity as a mental state is always about something, and in that sense it is an intentional state: Holmes is curious *about* who the murderer is, scientists are curious *about* whether there is liquid water on

¹ Though this paper is the first time I deal with the notion of ignorance in detail, some of the ideas I will appeal to have been discussed in my earlier published works, especially in Inan (2009, 2012 and 2014).

Mars. Such an intentional mental state has representational content, that is the curious mind represents the entity which he or she is curious about. This form of representation, at least for normal adults who have mastered a language, can be expressed in language, and thus has conceptual content. Let us put aside the issue of whether there can be another form of representation that is not conceptual and does not require the mastering of any language, or whether there can be conceptual curiosity that is ineffable. Being curious, when it can be put into words, may then be said to be intensional. After observing the dead body of Smith, if Holmes finds sufficient evidence that Smith must have been murdered singlehandedly, he would be in a position to construct a concept which can be expressed in terms of a definite description such as “the murderer of Smith” and come to realize that its referent is unknown to him. Such a term is inostensible for Holmes.² For every instance of curiosity that can be expressed in terms of a wh-question there will always be a singular term, mostly in the form of a definite description, that is inostensible for the curious agent. When one is curious about who someone is, then there will be a description that purports to refer to an unknown person; when one is curious about where something is there will be a description that refers to an unknown location; when one is curious about why something happened, there will be a description that refers to an unknown cause etc. This is objectual curiosity. There is then curiosity whose content is given by a full sentence which expresses a specific proposition in the appropriate context. This is what I call propositional curiosity. The typical form of it is captured by a whether-question. For scientists to be curious about whether there is liquid water on Mars, they must be in a position to construct a full proposition which can be expressed by a sentence such as “there is liquid water on Mars” and seek to know whether it expresses a truth or a falsity. Such a sentence would then be inostensible in their idiolects. Following Frege, if we take declarative sentences to be referring expressions whose referents are one of the two truth values, then we could conclude in this case that scientists do not know to which of these values the sentence refers. We may, on the other hand, countenance a different kind of referent for a declarative sentence, for instance a proposition, or a state of affairs, or a fact. We may also completely deny that sentences are referring expressions. For every such position we will have to give a different account of curiosity whose content is expressible by a full declarative sentence and therefore has propositional content. Regardless of what kind of semantic and

² The notion of “inostensible” is a made-up term. Though I usually refrain from giving a strict definition it, loosely we may say that a term is inostensible in the idiolect of a speaker just in case the subject does not know its referent; if the subject does know the referent then the term is ostensible. The distinction is one that admits of degrees: the more experience you have with the referent of a term, the more ostensible or the less inostensible that term will become, though if it still has the potential to arouse your curiosity, it would still be on the inostensible side of the scale.

syntactic account we adopt for sentences, the intentional-intensional model will work, though not in the same way. Suffice it to say for now that curiosity that has propositional content would involve a full declarative sentence which is inostensible for the curious agent, and that their curiosity is about something—making it intentional— and it has propositional content—making it intensional.

II.

How curiosity and ignorance relate to one another is a question that is not as easy as it may first appear. Perhaps the most basic question that can be raised concerning this is whether awareness of ignorance is a precondition for curiosity. If I were to ask you to give me an example of something that you are curious about now, it would be quite difficult, perhaps even impossible, for you to provide me with such an example while denying that your curiosity is caused by your awareness of ignorance. If Holmes is curious about who the murderer is, he must be aware of his ignorance about who the murderer is, and if scientists are curious about whether there is liquid water on Mars, then they must be aware that they do not know whether there is liquid water on Mars. Even if one denies that awareness of ignorance is always required to become curious, it seems that we can easily agree that in an overwhelming number of cases our curiosity is caused by our awareness of ignorance.

Now it should be obvious that awareness of ignorance does not always arouse curiosity. In other words, the simple entertainment of an inostensible concept or a full proposition in one's mind does not by itself arouse curiosity. As you read the daily newspaper for instance, there may be many inostensible terms that you come across. Suppose you notice that in the headlines on the front page it says "the head of UEFA under investigation"; now it may very well be the case that you do not know who the head of UEFA is, and you may at that instant become aware of your ignorance of this, that is you may come to realize that the term "the head of UEFA" is inostensible for you. You may further come to realize that you do not know what the head of UEFA is being charged of, what evidence there is for the charge, whether he is being framed, etc. There will be various inostensible terms whose inostensibility you can come to realize with little effort. If, however, you are not interested in sports politics, you may not be bothered to read the relevant article to find out who is being charged of what. For others who have more interest in such issues, that simple phrase in the headlines may arouse curiosity.

Awareness of inostensibility only when it is coupled with interest is what arouses curiosity. Curiosity, in this sense, is interest-relative. Curiosity in effect predominantly causes an epistemic desire. Now that epistemic desire, for objectual curiosity, may be expressed as a desire to know the referent of one's inostensible term, and it can never be ex-

pressed as a desire to know the truth value of a proposition. If you are curious as to who the head of UEFA is, then it should normally follow that you do not know the referent of the term “the head of UEFA”; it is your awareness of your ignorance of this plus your interest in the topic that arouses your curiosity. And if your curiosity is strong enough, then that may motivate you to develop a desire to turn the page to read the article. Here the epistemic desire caused by curiosity would always be expressible as a desire to find the referent of a definite description: the head of UEFA, the charge against the head of UEFA, the cause of the charge against the head of UEFA etc.

This of course does not imply that curiosity is always caused by awareness of ignorance. Whether there can be curiosity without awareness of ignorance is a question that is philosophically interesting since it relates to the more general question of whether a second-order epistemic attitude, such as awareness of ignorance, is a necessary condition for being curious. If it is, then it could turn out that we have been mistaken in attributing curiosity to animals and pre-language children. Despite the fact that they exhibit what appears to be inquisitive and exploratory behavior from the outside, on this view, it would not be correct to claim that animals and young children enjoy the mental state of being curious assuming that they do not have the capacity to form second-order epistemic attitudes. One reason for this may be that they do not possess higher-order concepts such as *knowledge* or *truth*.³

Perhaps an argument can be given on the other side. Consider a primitive caveman who has not mastered a language yet. Suppose he has produced a tool that we might today call an “axe”. One day he loses his axe. Can he become curious where his axe is? Though he has no higher-order concepts such as *knowledge* or *truth*, he may have ways of representing his axe, perhaps not under a general artefactual kind concept, but simply as a particular, and he may also have the skills to represent locations. With some minimal syntax he may have acquired the means to combine them to form a representation such as *the location of Axe*. Given his interests within the particular context that he is in, the simple entertainment of such an inostensible notion may cause sufficient *mental irritation* for him to become curious and in effect to develop the motivation to find his axe. Such mental irritation need not

³ Kvanvig (2003: 145–146) raises a similar question: if curiosity is a desire to know, then how can a being who does not have the concept of *knowledge* or *truth* be curious? Here the emphasis is on whether children and animals can have these concepts rather than whether they can become aware of their ignorance by forming second-order attitudes. Now it seems Kvanvig does not wish to give up the idea that children and animals are in fact curious beings, so he concludes that a curious being need not have the concept of *knowledge* or *truth*; all that is needed is to have the ability to desire to “ascertain that *p* or not-*p*”. As I shall argue this cannot be the case for objectual curiosity, and can only be correct for only one form of propositional curiosity.

require him to reflect on his ignorance and to become aware of it.⁴ If so, it would be wrong to attribute an epistemic desire to our primitive man. He is neither aware of his ignorance, nor does he seek knowledge. All that can be said is that he desires to find his axe. Some may prefer to call this “proto-curiosity”. Animals and infants may have it too. As long as there is inostensible representation there can be curiosity at this primitive level without any awareness of ignorance. There is no doubt a lot more to be said on this issue but let us now concentrate solely on curiosity that is caused by our awareness of ignorance.

III.

To my knowledge within the scarce philosophical literature on curiosity the distinction between objectual and propositional curiosity has been explicitly formulated only recently.⁵ The fact that contemporary epistemology concentrates so much on propositional knowledge while sparing so little attention to objectual knowledge, or other such objectual epistemic verbs, is one good indicator that most philosophers tend to deplore the use of such objectual-talk. This strong trend appears to have dominated not just epistemology but other sub-disciplines within contemporary philosophy as well. In order to understand the nature of curiosity, I believe, we have to overcome our propositional-bias.

As I stressed being curious about whether such-and-such is the case, is different from being curious about who someone is, or where something is, or what something is etc. Only in the former type of curiosity can we isolate a full proposition whose truth value is being sought. Now one reason why it may appear as if curiosity as well as ignorance must always have propositional content is because it appears that what satisfies curiosity and eliminates ignorance can always result from the acquisition of some piece of propositional knowledge. If Jones is the murderer, and Holmes comes to know this, then Holmes’ curiosity about who the murderer could be satisfied. Just because the acquisition of the knowledge of a proposition satisfies one’s curiosity and eliminates one’s ignorance, it does not follow that the curiosity and the ignorance

⁴ Depending on what we take concepts to be, we may even wish to conclude that such a primitive form of representation is not conceptual.

⁵ I discuss the distinction between propositional and objectual curiosity in Inan (2012). In earlier work Kvanvig (2003) addresses philosophical issues on curiosity (see footnote 3), but fails to make this distinction despite the fact that he distinguishes between objectual and propositional knowledge as well as understanding. In later work Kvanvig (2012) appears to endorse the view that the goal of curiosity is objectual understanding. One of the early contributors to the literature on curiosity is Mišćević (2007), who has just recently published an excellent article (Mišćević 2016) in which he makes a taxonomy of the different forms of curiosity which include the propositional and objectual distinction. Though Russell never philosophized on curiosity, given the emphasis he gave on the distinction between *knowledge of things* and *knowledge of truths* (see Russell 1910) he had all the resources to distinguish between two corresponding forms of curiosity.

in question were also propositional. The acquisition of propositional knowledge, if it is rich enough, may satisfy various curiosities and ignorances. Had Holmes initially been curious about whether Jones is the murderer, then this curiosity of his would also have been satisfied, but quite obviously being curious about who the murderer is, is not the same thing as being curious about whether Jones is the murderer.

Now it should be expected that the content of one's curiosity and the content of one's ignorance are identical. This is a very commonsensical view, so much so that it may not even require any argument for it. Nonetheless it is important to have it on paper so that we can draw certain conclusions from it that may not be obvious at all. Now a further thesis that intuitively connects curiosity with ignorance is that they must be directed toward the same thing, that is if one is curious *about* something, then their ignorance of which they are aware that causes their curiosity must also be *about* the very same thing. From these innocent-looking truisms what follows is that if one's curiosity has propositional content then so does their ignorance, and if one's curiosity does not have propositional content then neither does their ignorance, and perhaps more importantly, if one's curiosity is not about truth then neither is their ignorance.

Going back to the Mars-example, if scientists are curious whether there is water on Mars, then they do not know whether there is water on Mars, and it is the awareness of their ignorance of this that (partially) causes them to be curious. Now one may think that when the content of curiosity is a proposition there is not much more interesting philosophy left. In fact there is. But before we get to that let us concentrate on the awareness of ignorance involved in objectual curiosity.

If Holmes is curious about who murdered Smith, and if his curiosity is (partially) caused by his awareness of ignorance, then it seems quite clear that he must have been aware of his ignorance about who murdered Smith. Now what appears to be a truism has an implication which is, by no means, a truism—based on the Russellian principle that what follows from what is obvious is not always obvious. The content of Holmes' curiosity in this case is not a proposition, and if not, neither is the content of his ignorance. Holmes' awareness of ignorance in this case simply translates into a second-order knowledge attribution: Holmes knows that he does not know who the murderer is. It is clear that there is no proposition here that can be singled out whose truth value Holmes is unaware of. This is why it is important to recognize that the inostensible term involved in such cases is always a definite description—rather than a full sentence—that refers to some unknown entity relative to the curious subject. This is the case for all instances of curiosity that can be posed by *wh*-questions. If I am curious about where my house keys are, what is unknown to me is captured by the definite description *the location of my house keys* which is exactly what makes this term inostensible. What I do not know is the referent of this term; it is not the truth value of a proposition. If we do not know why di-

nosaurus became extinct, then what is inostensible for us is the definite description *the cause of dinosaur's becoming extinct*; what is unknown is to what series of events to which this term refers, it is again not whether a proposition is true or false. Of course in each and every case in which there is awareness of objectual ignorance we will also come across instances of awareness of propositional ignorance. If you know that you do not know why dinosaurs became extinct, perhaps you also know that you do not know whether it was a meteorite that caused it, given that this is a popular hypothesis which you may have heard of. If you have a skeptical bent, you may even say that you do not know whether dinosaurs have in fact become extinct, or whether there have in fact ever lived a species as such. These will be examples of propositional ignorance, but none of them will be identical with the curiosity and your ignorance concerning why dinosaurs became extinct. Objectual ignorance can only be expressed in terms of an epistemic verb which is also objectual. In general, we report such ignorance—as I have been doing all along—by using the verb *to know* in its objectual form, usually followed by a question word: not *knowing who* someone is; not *knowing where* something is; not *knowing why* something happened; not *knowing when* something took place; not *knowing how* something happened; not *knowing what* something is. Now some may feel concerned about the fact that the ordinary use of such locutions such as *knowing-who* is context-sensitive. The fact that our common linguistic practice of using question-words is highly context-dependent should not be a worry for anything I say here. First as I have argued in length that what has led philosophers to claim that such notions are context-sensitive is because of the fact that it is common linguistic practice to use these notions elliptically for longer descriptions.

As Quine famously noted when you ask who someone is, sometimes you have the face and you want the name, and sometimes you have the name you want the face etc.⁶ Granted that this is correct, the notion of *knowing-who* should have some *strict use* in which it is not elliptical for anything longer.⁷ In any case even if *knowing-who* is always elliptical for something longer, in most of those cases when you spell it out you shall see that you do not get a full proposition. When you ask “who is that man?” and all that you wish to know is the guy’s name, then what you are curious about is what the name of the man is, and what you are ignorant of is the name of the man. In fact, once we paraphrase the question so that it captures your intent, the question word “who” drops, and we are left only with “what”—which really is the queen of all question words. If, as the host of a party you see an uninvited guest, and ask “who is that man?”, you may simply be expressing your curios-

⁶ Quine in his classic piece (1956) emphasized the philosophical distinction between *de re* and *de dicto* attitudes, but later rejected it in his (1979) because of his conviction that notions such as *knowing who* are utterly context-dependent and interest-relative.

⁷ For a more detailed discussion of this see Inan (2012: 45–46).

ity as to why he is at the party, or who invited him etc. For each and every such case, assuming that the speaker knows what he wants to ask, then we can always find a definite description whose referent he or she is seeking.

Perhaps a stronger reason why the context-sensitivity of the use of question words should not worry us is because they are in fact dispensable luxuries that can be eliminated from language without significant loss. Every *wh*-question can be translated into a definite description with a question mark at the end. “Who murdered Smith?” translates as “the murderer of Smith?”, “where are my keys?” translates as “the location of my keys?” This is also the case even for *what*-questions. “What is the 98th prime number?” translates as “the 98th prime number?”. For philosophical question such as “what is virtue?” the translation will depend on what it is we wish to ask. It could simply be “virtue?” if we take this term to be leaned towards the inostensible, otherwise it will be elliptical for something longer, such as “the necessary and sufficient condition for being virtuous?”, or “the nature of virtue?”, “the essence of virtue”.⁸ The same is true of reports of objectual ignorance. Rather than saying “I do not know where my keys are”, I can say “I do not know the location of my keys”. Similarly, “I do not know who the president of Rwanda is” translates as “I do not know the president of Rwanda”; “I do not know why dinosaurs became extinct” as “I do not know the cause of dinosaurs having become extinct”; “I do not know what virtue is” as “I do not know virtue” or “I do not know the nature of virtue” etc. In all these cases there is a definite description that is inostensible for the subject who is aware of his or her ignorance. If I do not know where my keys are, then “the location of my keys” is inostensible for me, given that I do not know its referent. As far as my ignorance goes it is irrelevant whether I have a hypothesis concerning what the referent of the term is. If, for instance, I entertain the idea that I may have left my keys in my office, then there is a full proposition whose truth value is unknown to me: my house keys are in my office. This proposition is also inostensible for me given that I do not know whether it is true or false, and thus I may be aware of my ignorance of it. This however is not the same ignorance as in the initial case. Being aware of my ignorance about where my keys are, is not the same thing as being aware of my ignorance about whether my keys are in my office. If I were to find out that my keys are not in my office, I would no longer be ignorant whether they are there, but that would not eliminate my ignorance about where the keys are. The proposition that my keys are in my office would then be ostensible, given that I would then know that it is false, but the description “the location of my keys” would still be inostensible. If, on the other hand, I were to find out that my keys are in fact in my office, then not only the proposition, but also the definite description

⁸ See Inan (2012), Chapter 1: Meno’s Paradox and Inostensible Conceptualization, especially p. 27–28

will become ostensible. The fact that by eliminating my propositional ignorance I thereby eliminate my objectual ignorance by no means implies that the two are identical.

Now another philosophical worry concerning epistemic verbs that are objectual is that they are in general fuzzy notions that do not have sharp boundaries. There is no strict criterion to determine what it takes to know someone, or to know a city, or to know the cause of something. This is exactly what makes such notions gradable, allowing for degrees. We may both know the same person, though you may know her better than I do. This is perhaps one reason why epistemologists have the propositional bias, since propositional knowledge does not appear to be gradable, and that may be taken to be an advantage. If this is the main reason why they think that, then we ought to refrain from using objectual epistemic verbs in doing philosophy as much as possible: we should ban not only the use of *knowledge* in its objectual sense, but also other epistemic notions such as *acquaintance*, *experience*, *understanding*, *familiarity*, which all have objectual uses. This will simply result in the impoverishment of language.

Furthermore, as I shall argue in the next section, the distinction between ostensible and inostensible propositional knowledge reveals that it could also come in degrees. Just like objectual curiosity we may now give an account of awareness of objectual ignorance by appealing to the notion of *inostensible reference*. Being aware your ignorance of *the F* is to be aware that you do not know *the F*, and in linguistic terms that simply implies that you are aware that you do not know the referent of “the F”, in other words, “the F” is a term that is inostensible in your idiolect.

IV.

On the surface it may appear as if the awareness of ignorance, and the curiosity which it leads to, is a lot easier to deal with when they have propositional content. One may say that in such instances there is a full proposition in question, and the agent is aware of their ignorance of whether that proposition is true or false, and this causes them to become curious, and once they find out whether the proposition is true or false, then their curiosity is sated. In order to see that this is not the whole story, we need to deal with how our sentences, when they express truths, relate to reality. Given that *truth* is notoriously a difficult and controversial notion, it is not easy here to give an account of propositional ignorance and curiosity on neutral grounds. I will first, in very brief terms, sketch the theory of truth that I find to be most appealing. This will allow me to formulate a distinction between two forms of propositional curiosity and ignorance that will be central to my main thesis. The distinction however can be made on the basis of an alternative theory of truth, and so I am hoping that even if you find

my theory of truth to be problematic, you may nonetheless appreciate the distinction.⁹

Let us assume that Frege was right in his conviction that declarative sentences are referring expressions, but let us further suppose that Frege was wrong in his conviction that sentences refer to one of the two peculiar objects which he called *the True* and *the False*. A far more intuitive alternative is to take a sentence that expresses a truth to refer to a fact. For a simple sentence in the subject/predicate form *a is F*, when it expresses a truth, we may simply take it to refer to the fact of *a's being F* which may be said to be specifically the fact that makes the sentence true. When a sentence expresses a falsity, let us then assume that the sentence fails to refer to a fact. The sentence "the earth is round" expresses a truth in virtue of referring to the fact of the earth's being round. The sentence "the earth is flat" on the other hand, purports to refer to the fact of the earth's being flat, but given that there is no such fact, it fails to refer. Suppose that, contra Frege, we endorse such a theory which reduces truth to a form of reference and falsity to a form of failure of reference for sentences. If we were to further give an account of propositional truth and falsity, we could then say that a proposition in the form *a is F* is true just in case its referent is the fact of *a's being F*, and is false if there is no such fact. Now under this theory we can distinguish between two different ways in which a full sentence can be inostensible in the idiolect of a speaker.

To do this we should first raise the question what it means for a subject to know a proposition under this theory. The received view tells us that if a subject grasps a proposition and knows that it is true, then the subject knows the proposition. Now under the theory of truth that we are considering to know that a proposition is true is to have a sentence in one's idiolect that expresses that proposition, to be in position to grasp that proposition, and then to know that the sentence that expresses the proposition refers to a fact. Briefly knowing that a sentence expresses a truth, is to know that it refers. This by itself does not say what epistemic connection the subject has to the referent of the sentence. In particular knowing that a sentence expresses a truth does not necessarily imply that the subject knows the fact to which it refers. So there appears to be a distinction between *knowing that a sentence refers to a fact* versus *knowing the fact to which a sentence refers*. This is a distinction that applies not just to sentences, but to all

⁹ I discuss this theory in detail in my *Truth As Reference and Falsity As Failure* (unpublished manuscript under consideration). In the text I have given an extremely rough sketch of it, which may make it sound as if I am ignoring certain well-known problems concerning fact-ontology. Let me just note briefly that I deny that there are negative-facts, conditional-facts, disjunctive-facts, even existential-facts. Sentences involving such logical operators, when they express truths, refer to what I call content-states (which are not empirical facts.) I also do not presuppose that there are facts that are language and mind independent. For brevity's sake I do not go into any of this in the text.

referring expressions, which forms the basis of the distinction between ostensible versus inostensible reference. The philosophical significance of this distinction can perhaps best be appreciated when we consider how it applies to definite descriptions. There is a distinction between knowing that a definite description refers to an object versus knowing the object to which that definite description refers. You may for instance know that the definite description “the maternal grandfather of Socrates” refers to a person without knowing anything about that person except for whatever follows from the description. The point is that even when you know that a term refers, the term may still be inostensible for you. Now the question is whether the same can also happen in the case of full declarative sentences.

Sentential reference has its own peculiarities. There is an important difference between how a sentence relates to its referent, as opposed to how a definite description relates to its referent. The difference has to do with compositionality. The referent of a definite description is normally not an entity that is composed of the referents of the parts of the definite description. For instance, the description “the capital of Rwanda” refers to a city; the referents of the parts of the description includes a country (Rwanda) and a descriptive function (*the capital of x*), neither of which is a part of the city referred by the description. Under the theory of truth we are considering compositionality literally does apply to sentences. The sentence “the earth is round” refers to a fact that is composed of the earth—which is the referent of the subject term of the sentence—and the property of being round—which is the referent of the predicate term of the sentence. Only for some very special cases of definite descriptions can we get compositionality. The most obvious examples would be the nominalizations of sentences: “the earth’s being round”, for instance, refers to a fact whose constituents include the referents of the parts of that description. But normally definite descriptions do not abide with compositionality for reference. That is why we can easily make the distinction between a definite description being ostensible or inostensible in the idiolect of a speaker. When you grasp a definite description, and you know the referents of the parts of that description, this does not automatically put you in epistemic contact with the referent of that description. That is because the referent of the description is not an entity that is composed of the referents of its parts. Even if you are familiar with the referents of its parts, you may not be familiar with the referent of the whole description. Consider the description “the largest lake in Brussels”; now it may very well be the case that you do not know its referent, but that does not imply that there is a part of the description whose referent is unknown to you. Similarly, you may not know what the 98th prime number is, even if you know the referents of the parts of the description to refer to that unknown number. Given that compositionality holds for sentences, how could it be possible to grasp a sentence, know that it is

true, but still be ignorant of its referent? Now the typical way in which this could happen is when such a sentence contains a term that is inostensible for the subject. For instance, it would take little effort for you to know that Socrates' mother gave birth to Socrates. What do you know about Socrates' mother? If all that you know about her is whatever follows from the description you use to refer to her, together with what you can deduce from your background knowledge about mothers etc., then it should be very little. Now we have no problem grasping the proposition expressed by the sentence "Socrates' mother gave birth to Socrates", and we could easily come to know that it is true, however we may have very little knowledge of the fact to which it refers. That fact concerns a certain individual's having a certain property, it is the fact of *Socrates' mother having given birth to Socrates*. Such a fact may also be taken to be an event; the event of a certain female delivering a baby. If you have little knowledge of this female, then you have a very low degree of acquaintance with this event. On the epistemic scale your contact with this fact is on the far side of inostensibility, this however, does not prevent you from knowing that the fact exists. I call such knowledge inostensible; to gain ostensible knowledge of the same proposition you would need to become more acquainted with the fact that makes it true.

There are many truths we claim to know though we rarely find the motivation to reflect on our ignorance concerning the facts to which they correspond. Recently I read on the NASA website that they discovered a new earth-like planet. They named it "Kepler-186f". If NASA website is a reliable source of information, and if what they say is true, then I could now be said to know that Kepler-186f is a planet. This is a typical case of knowledge by testimony. But then I ask myself: what do I know about Kepler-186f? From the naming system NASA employs I can deduce that it is a planet that revolves around a star called "Kepler-186", and that it is the 6th object discovered so far that revolves around it (hence the subscript "f"). I also know now that Kepler-186f is close in size to earth, and that is why its discovery made it into the headlines. Other than that I know close to nothing about this distant planet. I do not know where in our galaxy it is, what its sun is like, what kind of atmosphere it has, what the color of sky would look like on a sunny day, whether there are oceans on it, etc. My epistemic connection to this planet is remote enough to make the name inostensible in my idiolect. When I further consider my knowledge of the proposition that Kepler-186f is a planet, with little reflection I could come to realize how little I know the fact that makes it true; namely the fact of *Kepler-186f's being a planet*. Given that a part of the sentence that expresses the proposition leans towards the inostensible, then the same is also the case for the full sentence. I know that the sentence refers to a fact, but I have little acquaintance with that fact. I am not ignorant of the truth of the proposition, but I am

quite ignorant of the fact that makes it true. This is why my knowledge of the proposition in question is leaned towards the inostensible, allowing me to be curious about it.

At times not just the subject term, but also the predicate term in a sentence may be inostensible for one, even if they know the proposition expressed by it is true. Consider the following case, which is perhaps a bit artificial, but it makes the point. Suppose you meet a friend you haven't seen for a long time. At one point in the conversation you ask him "so are you seeing anyone?". He responds: "yes, and her eyes are so beautiful". You ask "what color are they?", to which he replies: "my favorite color". Now if you take his word for it, then you know a certain proposition: my friend's lover's eyes are is favorite color. But suppose you have no idea who his new lover is, nor his favorite color. Under this scenario though you would know that the sentence "my friend's lover's eyes are his favorite color" expresses a truth, you would not know the fact that makes it true. The sentence refers to a fact which involves a certain woman's eyes being a certain color. If Sue is the lover in question, and your friend's favorite color is brown, then the fact in question would be *Sue's eyes being brown*. You know that the sentence expresses a truth, but you do not know the fact to which it refers.

When you know a truth but you are ignorant about the fact that makes it true, this could at times arouse your curiosity. In the previous case for instance you may be curious about who your friend's lover is, or you may be curious about what your friend's favorite color is, but you could also be curious about the fact in question. Interestingly there is no standard way to pose your curiosity of a fact in the form of a question. Perhaps we may use something like the Spanish model to convert the full declarative sentence into an interrogative with a high pitch at the end (or by putting a question mark in written form): "your lover's eyes are your favorite color?" Here your intention is not to ask a whether-question given that you already know that the sentence expresses a truth. Though this way of asking a question sounds highly artificial, there are contexts in which we do raise such questions. Suppose your conversation with your friend continues like this:

You: Who is your lover?

Him: In fact, you know her.

You: I know her?

Here your final utterance does not have to be an exclamation that expresses your surprise. It also does not have to be expressing doubt about whether what he says is true. It may be taken purely as a question expressing curiosity. Note that the sentence "I know her" contains a pronoun that is inostensible for you in this context given that you do not know the person referred to by it. The full sentence then expresses a truth, but what you are curious about is not whether it is true, but rather the fact that makes it true. Once again this would be a case in which

you have merely inostensible knowledge of a proposition; you would know that the sentence refers to a fact, but you would not know the fact.

So now we are in a position to distinguish between two kinds of propositional ignorance depending on which kind of propositional knowledge one lacks. If one lacks inostensible knowledge of a proposition, then one lacks knowledge period, and that is the typical kind of ignorance. Given that this is ignorance concerning the truth of a proposition let us call it “truth-ignorance”. When one acquires knowledge of a proposition, then truth-ignorance is eliminated, (or at least reduced). One may however still be ignorant about the fact that makes the proposition true. Let us call this “fact-ignorance.” When one acquires merely inostensible knowledge of a proposition, one is not truth-ignorant anymore, but one is still fact-ignorant.

The philosophical significance of distinguishing between these two types of ignorance becomes more evident when we come to realize that finding a correct answer to a wh-question does not always fully eliminate our ignorance. If you ask “who won the race?”, and you get the reply “the fastest man on earth”, you would not be satisfied if you do not know who the fastest man on earth is.¹⁰ Though the answer may be a correct answer to the question, it will not eliminate your ignorance concerning the fact in question. Tough you would know a certain truth you would not know the fact that makes it true, if you do not know who the fastest man one earth is—which makes the description inostensible in your idiolect. When a part of a sentence is inostensible then the whole sentence will also be inostensible. Even if you know that the sentence expresses a truth, you would not know the fact to which it refers. You would know that the man who won the race is the fastest man on earth, though you would not know the fact which makes it true. If unbeknownst to you Bolt is the fastest man, then you would still be ignorant of the fact that he won the race. This does not imply that once you come to know the proposition that Bolt won the race your ignorance will be eliminated. If you know nothing about Bolt and have never even heard of his name before, then merely acquiring the knowledge that Bolt won the race does not put you in close epistemic contact with that fact. Consider the famous Unabomber-case. After several instances of explosions of bombs mailed to certain university and airline offices, the FBI gave the name “the Unabomber” (shorthand for *the university and airline bomber*) for the suspect. Before he was caught the Unabomber kept sending new bombs, and after each case the FBI was able to conclude from the peculiar ways in which the bombs were manufactured that it was the Unabomber who was responsible. In those cases, though the police knew that the Unabomber had sent the bomb, they did not know the fact that makes it true, given that they did not know who

¹⁰ The example is due to Hand (1988). By appealing to Hintikka’s notion of *epistemically relativized-rigidity* Hand argues that “the fastest man on earth” does not answer the question when it is not epistemically rigid for the asker. See my (2012: 114–116) for a discussion of why such an account fails.

the Unabomber was. When the name “the Unabomber” is inostensible, then every sentence in which it appears would be inostensible, even for ones who know that the sentence in questions expresses a truth. The police were not ignorant about the truth of the proposition in question, though they were ignorant of the fact that makes that proposition true.

You may know that the 98th prime is not divisible by 3, but that does not imply that you know what the 98th prime number is, and if you are ignorant of this, then you are ignorant of a certain mathematical fact.¹¹ If you introduced a name for this number, say “P98”, you could claim to know that P98 is not divisible by 3, but that would not put you in epistemic contact with this fact. One reason why our ignorance of facts goes unnoticed is because at times when we learn the standard name of a person or a city, or some object as such, we get a false sense of acquaintance. If you ask “what is the capital of Rwanda?” and get the answer “it is Kigali”, you could thereby eliminate your truth-ignorance, but if you still know nothing else about this city, you could still be ignorant of the fact of Kigali’s being the capital of Rwanda. A Kigali native would certainly know this fact much better than you do given their acquaintance with this city. If Mary spends all her life in a black and white room, and learns many truths about the color blue, she may come to know that the sky on a clear sunny day is blue, though she would not know the fact that makes it true.¹² All her propositional knowledge about the color blue would be inostensible, that is why when she is released from her room and observes the sky for the first time she learns something new and eliminates her ignorance of this fact.

V.

The distinction between ostensible and inostensible knowledge is one that allows for degrees making propositional knowledge gradable, an idea that has not been welcomed by philosophers in general. For every case in which an agent knows a proposition we may talk about the degree of the agent’s epistemic connection to the fact that makes the proposition true. Just like one’s knowledge of an object may come in degrees, their knowledge of a fact concerning an object’s having a certain property, or an object’s having a certain relation to another object may also come in degrees.¹³ At one end of the scale we may have complete

¹¹ The example is due to Keith Donnellan (1979) though he makes use of it for a different—though not completely unrelated—purpose. For a detailed critical discussion of Donnellan on the *de re/de dicto* distinction and his arguments against Kripke’s (1972) contingent a priori argument see Inan (2012) especially Chapter 12: *Limits of Curiosity and Its Satisfaction*.

¹² As most readers would know this example is from a famous thought experiment due to Frank Jackson (1982), which he makes use of to argue against physicalism. Though I am inclined to believe that Jackson’s argument is fallacious, his thought experiment is nonetheless philosophically interesting which could be used for purposes other than his own.

¹³ For every term in our idiolect, including full sentences, we may talk about

ostensibility, which would be the case when an agent has infallible justification for the truth of the proposition and is therefore certain that the fact in question exists, and also has complete acquaintance with all of its constituents. This is something we rarely achieve, first because our justification for the truth of a proposition seldom gives us the right to be certain about it, and secondly, it is almost never the case that we have full acquaintance with the constituents of the fact that makes a proposition true, even when we know with complete certainty that the proposition is true. The closer we are to the inostensible end of the scale, the more room there will be for curiosity. So it follows that knowing that you do not know whether a proposition is true is not the only form of awareness of ignorance, for your degree of acquaintance of the fact that makes that proposition true may be low enough for you to become aware that you are, to some extent, ignorant of that fact. *Awareness of ignorance* then is also a gradable notion. All along just to ease the discussion I have taken the liberty to talk about *the elimination of ignorance* as if it is an all or nothing affair. When we consider the facts about the world that we claim to know we shall soon realize that our knowledge of the constituent objects and properties of those facts is far from being complete. A complete elimination of our ignorance concerning a substantial fact rarely takes place, if at all. We should then admit that the more experience we gain about the facts of the world, our ignorance is reduced, but almost never completely eliminated. The best we can do is to attempt to make our propositions and the concepts within them to become more ostensible. Awareness of ignorance, whether it is objectual or propositional, can then always be translated into an *awareness of inostensibility*. For every instance of objectual ignorance there will always be a singular term, which is not a full sentence, whose referent is unknown to the agent making that singular term inostensible in the idiolect of the agent. Propositional ignorance comes in two different varieties, truth-ignorance and fact-ignorance. In the former case there is a full sentence *s* whose truth value is unknown to the agent, making it inostensible; awareness of this form ignorance then can always be translated into an awareness of the inostensibility of a definite description: “the truth-value of *s*”. When an agent knows that a sentence expresses a truth but does not know the fact that makes it true, the sentence in question is again inostensible given that the agent does not know the fact to which the sentence refers. All in all, for every kind of awareness of ignorance there will always be a linguistic term whose inostensibility the agent is aware of. This goes to show that the acquisition of the knowledge of truths, even when it is accompanied with complete certainty, cannot be the ultimate goal of inquiry.

its “degree of ostensibility”. See Inan (2014) for a more elaborate discussion of this notion.

Acknowledgments

I presented some of the ideas in this paper at Koç University and Şehir University both in April 2016. I thank Ipek A. Celik Rappas and Eylem Ozaltun for their invitation to Koç University, and to Sinem Elkatip and Manuel Knoll for their invitation to Şehir University, as well as Ishak Arslan, the Chair of the Philosophy Department, for his support. At Koç University I was honored to have the Dean of Social Sciences and Humanities Ahmet İçduygu and his Associate Fuat Balcı at my talk; I am grateful for their enthusiastic support and the stimulating discussion we later had in the Dean's office. I would like to thank the audiences at both venues for valuable discussion; unfortunately, I cannot remember all who have made a contribution, but among the ones I can, I owe my gratitude to Harry Platanakis, Erhan Demircioglu, Zeynep Direk, Aran Arslan, Patrick Roney, Ipek A. Celik Rappas, Sinem Elkatip and Manuel Knoll. I am also indebted to my students Irem Günhan, and especially Safiye Yiğit for their feedback. Last but not least I am grateful to Nenad Miscevic for all his support of my work on curiosity, and for always sharing my enthusiasm of the topic. This work has been funded by *Scientific Research Fund* of Boğaziçi University; Title: *The Epistemic, Semantic, and Ethical Dimensions of Curiosity*; Code Number: BAP 12B02P3.

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