1. Descriptive Names and the Real Issue behind the Contingent A Priori

Consider the following situation:

*Newman2*) Time flies like an arrow. Now is September 2099. We are preparing the celebration for the first baby born in the 22nd Century. The celebration organizing committee agrees to name the first baby born in the 22nd Century “Newman2”.¹

Suppose that Shandra is one of the committee members. Then, does Shandra as a stipulator know *a priori* the contingent proposition expressed by the following sentence (1)?

(1) If Newman2 exists, Newman2 is the first baby born in the 22nd Century.²

Let us consider the second famous example:

*Neptune*) Urbain Le Verrier discovers some unexpected changes in the orbit of Uranus. With some mathematical apparatus, he infers that an unknown planet causes gravitational perturbations in the orbit of Uranus. He decides to name this unknown planet “Neptune”.

¹ The example is from Kaplan 1968, 1978. I have slightly modified his example to avoid any ontological commitment to future objects if possible. Since now is September 2099 in my example, the unborn baby who will be the first baby born in the 22nd Century already exists in its mother’s womb.

² The if-clause “If Newman2 exists” in (1) is used to avoid the worry about whether the existence of a particular physical object is not knowable *a priori*. (See Carter 1976, Cowles 1994, and Ray 1994 for the debate about this issue.)
In this situation, does Le Verrier as a stipulator know *a priori* the contingent proposition expressed by the following sentence (2)?

(2) If Neptune exists, Neptune is the planet that causes perturbations in Uranus’s orbit.

Philosophers who are attracted by Kripke’s argument for the contingent *a priori* believe that the answers of both questions are “Yes”. However, in this paper, I shall argue that both answers must be “No”, but the reasons are different: Shandra does not know the proposition expressed by (1) at all, and Le Verrier knows *a posteriori* the proposition expressed by (2).

Let us first formulate the general form of the Kripkean argument for the contingent *a priori*. Suppose that a stipulator $S$ introduces a descriptively introduced name “$N$” by means of a reference-fixing description “the $F$”, then we can reconstruct the argument as follows:

**Argument for the Contingent *A Priori* (ACA):**

(ACA1) By performing the act of linguistic stipulation, $S$ has the linguistic knowledge that “If $N$ exists, $N$ is the $F$” is true.

(ACA2) If so, then $S$ is justified in believing that if $N$ exists, $N$ is the $F$.

(ACA3) If $S$ is justified in believing that if $N$ exists, $N$ is the $F$, then $S$ knows that if $N$ exists, $N$ is the $F$.

(ACA4) $S$’s linguistic knowledge that “If $N$ exists, $N$ is the $F$” is true is *a priori*.

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3 Here is a list of some who accept Kripke’s position more or less: Jeshion 2000; 2001; Sutton 2001; Korman 2010, and Tillman and Spencer 2012.

4 Thanks to *** for helping me to reformulate the argument.

5 This is for putting aside the Gettier problem for the sake of argument.
(ACA5) The singular proposition that if $N$ exists, $N$ is the $F$ is contingent.\textsuperscript{6}

(Conclusion) $S$ knows \textit{a priori} the contingent singular proposition that if $N$ exists, $N$ is the $F$.

Since we assume that $S$’s linguistic knowledge by her own linguistic stipulation is \textit{a priori} in (ACA4), on the assumption that knowledge whose justification is based on another \textit{a priori} knowledge (and \textit{a priori} reasoning) is also \textit{a priori}, the conclusion follows from these five premises.

Here I believe that the real issue is on (ACA2). Since it is important to understand precisely what is going on there, I reformulate the idea behind it at length as follows:

\textit{Justification from Stipulative Linguistic Knowledge:} $S$’s linguistic knowledge, which is based on $S$’s own linguistic stipulation, that “If $N$ exists, $N$ is the $F$” is true plays a justificatory role for $S$ in having the extra-linguistic knowledge expressed by the sentence in question.

The crucial part of \textit{Justification from Stipulative Linguistic Knowledge} (henceforth “JSLK”) is that JSLK is about a case where $S$’s linguistic knowledge is based on her own linguistic stipulation.\textsuperscript{7} Since we assume that $S$’s linguistic knowledge by her own linguistic stipulation is \textit{a priori} in (ACA4), if JSLK is true, then there is \textit{a priori} way for $S$ to get extra-linguistic knowledge by her own linguistic stipulation, and this extra-linguistic knowledge would be an instance of the contingent \textit{a priori}. The problem is that JSLK is implausible. Keith Donnellan

\textsuperscript{6} This premise presupposes the Millian theory about descriptive names, the view that the semantic content of a name is simply its reference. For convenience, the discussion will proceed on the assumption of the Millian theory throughout this paper.

\textsuperscript{7} Therefore, it is important to distinguish between JSLK and justification from testimony. The latter is not about $S$’s own linguistic stipulation: roughly speaking, if $S$ understands the proposition expressed by a sentence “$P$” and has a reliable source except herself to believe that “$P$” is true, then $S$ is justified to believe the proposition expressed by “$P$”. This principle seems plausible. However, our case is not about testimony from other sources, but about linguistic knowledge from $S$’s own stipulation.
(1977), Nathan Salmon (1986, 1988), and Scott Soames (2003: Chap. 16) are skeptical about this possibility.\(^8\) I believe that this worry is legitimate and shall argue why \textit{JSLK} is implausible in the next section.\(^9,10\)

2. The Argument from Arithmetical Knowledge

The strategy of my argument against \textit{JSLK} is to start from a relatively clear case where \textit{JSLK} does not work, and then to argue that our cases have exactly the same structure.

Let us first compare the following two situations:

\(^8\) For example, Donnellan says, “If a truth is a contingent one then it is made true, so to speak, by some actual state of affairs in the world that, at least in the sorts of examples we are interested in, exists independently of our language and our linguistic conventions. How can we become aware of such a truth, come to know the existence of such a state of affairs, merely by performing an act of linguistic stipulation?” (Donnellan 1977: 13).

\(^9\) At this point, it is worth noting that \textit{JSLK} is a more general claim about stipulative linguistic knowledge as a justificatory source. \textit{JSLK} itself does not mention the epistemological and the modal statuses of the singular proposition that if \(N\) exists, \(N\) is the \(F\). Namely, it implies that in principle, the same issue can arise from any kinds of singular propositions that have the same form regardless of their epistemological and modal statuses, when a stipulator introduces a descriptive name “\(N\)” by a reference-fixing description “the \(F\)” (Cf. Sutton 2001: 257-258; Jeshion 2000: 298-303, 2001: 113-114; Tillman and Spencer 2012: 121-122).

\(^10\) It would also be worthwhile to mention the role of (ACA4) in the argument. There are in fact two ways to criticize the argument for the contingent \textit{a priori}. The first way is to falsify (ACA4), and to argue that \(S\)’s linguistic knowledge by performing an act of stipulation is not \textit{a priori}. Then even if \textit{JSLK} is true, \(S\)’s extra-linguistic knowledge, whose justificatory source is from \(S\)’s linguistic knowledge, would not be \textit{a priori}. The second way, which I will take on in this paper, is to criticize \textit{JSLK}, and argue that \(S\)’s stipulative linguistic knowledge, even if it is \textit{a priori} (i.e., even if (ACA4) is true), does not play any justificatory role for \(S\) to have the extra-linguistic knowledge at all.

For the sake of argument, I will assume that (ACA4) is true through this paper. But it is not beyond doubt. For example, Soames (2003: 408-410) argues that stipulative linguistic knowledge is not \textit{a priori}, while Korman (2010) criticizes Soames’s argument. Although this is, of course, an important issue, I shall stay neutral about it in this paper. Whether or not (ACA4) is true, the point of \textit{JSLK} is that there is still a relatively easier way for a stipulator to have extra-linguistic knowledge simply by performing an act of linguistic stipulation. I shall argue against this.
**CorrectSum** Jennie should do her math homework, but she has a hard time to do addition problems about four-digit numbers. She comes up with an easy way to solve the homework problems. She introduces the name “CorrectSum” and fixes its reference by means of the description “the sum of 3,428 and 5,377”.

**Numbie** Doing her math homework, Jennie wants to name the numbers that she gets as the answers to the homework problems. She introduces the name “Numbie”, while correctly calculating the sum of 5 and 7.

In these situations, does Jennie know the propositions expressed by the following sentences (3) and (4)?

(3) CorrectSum is the sum of 3,428 and 5,377.

(4) Numbie is the sum of 5 and 7.

The right answer seems to be that she only knows the proposition expressed by (4), because she performs a correct calculation only in the **Numbie** case. This calculation plays a justificatory role for Jennie in knowing the singular proposition that 12 is the sum of 5 and 7, which is expressed by (4).

However, in the **CorrectSum** case, before performing any proper calculations, it seems that she does not have any arithmetical singular knowledge about the correct sum, i.e., 8,805 that it is the sum of 3,428 and 5,377. Our strong intuition says that introducing the new descriptive name “CorrectSum” is not sufficient for having substantial arithmetical knowledge. Although she has the stipulative linguistic knowledge that the sentence (3) is true, it seems that this knowledge cannot play any justificatory role in getting extra-linguistic arithmetical knowledge. In order to know substantial arithmetical facts by making cognitive contact with the so-called arithmetical world, what we need as a
justification is a substantial arithmetical reasoning, not linguistic manipulation.\footnote{However, consider the following sentence (T): “CorrectSum is the sum of 3,428 and 5,377” is true if and only if CorrectSum is the sum of 3,428 and 5,377. Since the truth of (T) seems trivial, does Jennie already know the proposition expressed by (T)? So, can’t she infer that CorrectSum is the sum of 3,428 and 5,377 from her linguistic knowledge that “CorrectSum is the sum of 3,428 and 5,377” is true and the trivial knowledge about (T)? I believe that knowing the proposition expressed by (T) is not trivial, and she does not have this knowledge. Or at least we should not simply assume that she has that knowledge. Donnellan (1977: 18-19) argues that we must distinguish knowing that “p” is true from knowing that p. For example, suppose that I am a foreigner who starts to learn English. I have learned its basic grammar. I have also learned what “is”, “true”, and “if and only if” mean (or how they work), but not yet what “snow” and “white” mean. Suppose further that I am from a tropical rain forest region, so I haven’t had any chance to get the least idea of what snow is; I haven’t seen it, and I haven’t even heard about it. Now suppose the English teacher says (or writes), “Snow is white” without any explanation about the meaning of the sentence. On the assumption that the teacher is a reliable person who does not tell a lie, now I know that “Snow is white” is true. Now consider the following (T'): “Snow is white” is true iff snow is white. Can I infer that snow is white from what the teacher says and my knowledge about (T')? It seems not. I still do not know that snow is white. I do not even know what snow is. What I know is that “snow is white” is true whatever that sentence means. To be sure, I know the proposition that (T') is true. But to know that snow is white, what I have to know is the proposition expressed by (T'), not the proposition that (T') is true. That is, we can use knowledge about the proposition expressed by (T') only if we appreciate all the meaning of the words in (T'). If I already know what “snow” and “white” mean, but wonder whether snow is white or black, then I can infer that snow is white from the teacher’s testimony and my knowledge about (T') (see n.7). Here it seems that Jennie does not grasp the reference of “CorrectSum” like in the above case. Or at the very least, we should not assume the controversial view that Jennie knows the proposition expressed by (T) without any argument, even if we can assume that she knows that (T) is true. I will discuss the conditions for grasping the reference in depth at another time (see n.14). (Thanks to *** for raising this issue.)}{12} We do not even need any systematic numeral system to know that 5 + 7 = 12. Imagine the situation where I calculate the sum of the total number of apples and oranges by arranging them suitably and seeing the number of them. I might say, “The sum of the number of these apples (while pointing to 5 apples) and the number of those oranges (while pointing to 7 oranges) is the number of these fruits (while placing 5 apples and 7 oranges together.)” By seeing and grasping the number of things in each group, I come to know that 5
point is that although there can be various ways of justifying our beliefs towards one and the same arithmetical knowledge, all of those justificatory processes, in any case, must at the very least consist of a substantial calculation, which is essentially different from linguistic manipulation.\footnote{13}

In fact, the Newmans$^2$ case seems to have exactly the same structure as the \textit{CorrectSum} case, so that the very same diagnosis can be applied. Just as we cannot have any knowledge about substantial arithmetical facts in the arithmetical world without calculations, we cannot have any knowledge \textit{directly about} a concrete physical object that it has a certain contingent property in the physical world without any empirical investigation. That is, Shandra cannot know the extra-linguistic contingent fact in the physical world about a particular physical object, Newman$^2$, that very baby, that if it exists, it is the first baby born in the 22\textsuperscript{nd} Century without any substantial empirical contact with and investigation about it.\footnote{14}

Of course, there might be various ways of contacting the same fact and of knowing one and the same singular proposition expressed by (1), which are related to various ways of taking that same proposition. One might directly participate in the new-era ceremony. Another might hear the news from Newman$^2$’s father. Others might watch the new-era ceremony on a television broadcast. However, all of those justificatory processes, in any

\begin{equation}
+ 7 = 12.
\end{equation}

\footnote{13}{Exceptions might be justifications from testimony and from memorization, but still they seem to ultimately depend on others’ or my previous mathematical calculation.}

\footnote{14}{In fact, I believe that Shandra cannot even think about Newman$^2$. However, since this claim is related to the conditions for singular thought that needs further discussion, which exceeds the limitations of this paper, we here stay focused on the more general fact that there is no way for me to know extra-linguistic contingent physical fact without empirical investigation.}
case, must at the very least consist of empirical investigation, not linguistic manipulation. This is exactly like the fact that in order to know the arithmetical singular proposition expressed by (3), a justificatory process for having this knowledge must consist of a substantial calculation, not linguistic manipulation. No substantial extra-linguistic knowledge, whether it is \textit{a priori} or \textit{a posteriori}, can ever be easily obtained simply by manipulating or inventing some words in one’s own idiolect, except the very knowledge that she herself performs this linguistic manipulation.

Then how about the \textit{Neptune} case? I suggest that it has the same structure as the Numbie case: Le Verrier knows the singular proposition expressed by (2), but it is justified, not by performing the linguistic stipulation, but by gathering empirical data in terms of observing some perturbations through a telescope, which were actually caused by Neptune, that very planet. There was substantial empirical contact with and investigation of Neptune, which plays justificatory role for Le Verrier to have this astronomical knowledge.

In fact, the famously alleged cases for the contingent \textit{a priori} regarding one meter and Jack the Ripper also have the same structure as the \textit{Numbie} case: a stipulator’s knowledge is not justified by her stipulative linguistic knowledge, but by her substantial empirical investigation. Consider the following two stipulative sentences:

(5) If the bar S exists, the length of S at t₀ is one meter.

(6) If Jack the Ripper exists, Jack the Ripper is the man who committed the serial murders involving female prostitutes around Whitechapel district.

In both cases, I agree that each stipulator knows the propositions expressed by (5) and (6),
respectively. However, this is because the stipulator justifies her belief by means of empirical investigation when (or before) she introduces the name, not by means of linguistic stipulation.¹⁵

At this point, as Salmon (1988: 201-202) indicated, we should bear in mind that in the above cases, the stipulator’s experience not only plays a peculiar role in grasping a proposition (by grasping the reference of a name in question in our cases), but also plays a justificatory role in knowing the same proposition. It is especially important to notice that experience’s playing one role does not exclude its playing the other role. The following example of introducing an ostensive name would be helpful to clearly understand our cases:

*Pinky Clone* I am a scientist who has created lots of clones. I would like to name each clone, but since they look like exactly the same, I think that I need some way to distinguish them qualitatively in order to appropriately use the names I give them. I decide to put a pink shirt on one clone and name him “Pinky”.

Now consider the following sentence:

(7) If Pinky exists, Pinky wears a pink shirt.

¹⁵ For example, Salmon persuasively argues that the stipulator’s justificatory process for knowing the proposition expressed by (5) can only be empirical: [I]t would seem that no matter what stipulations one makes, one cannot know without resorting to experience such things as that S, if it exists, has precisely such-and-such particular length at t₀. It would seem that one must at least *look at* S’s length, or be told that it is precisely that long, etc. Therefore, it would seem that the meter sentence is not *a priori* but *a posteriori*. (Salmon 1988: 198).

Likewise, the detectives knew the singular proposition expressed by (6), not by the linguistic stipulation, but by doing some empirical investigation such as inspecting the scenes of incidents and finding traces the murderer left, which were causally related to Jack the Ripper, that very murderer. This experience played a justificatory role in knowing the proposition expressed by (6).
In this case, my visual experience about the pink shirt the clone wears helps me to fix the reference of the ostensive name “Pinky”. However, it still seems obvious that knowing the singular proposition expressed by (7) is *a posteriori*, even if the proposition indicates the information I used when I introduced the name “Pinky”. The same visual experience plays a justificatory role in having this knowledge; I have to at least see the color of the shirt Pinky wears to know that it is pink. There is no other way to know it without recourse to any experience. This is similar to the above three cases in that the name-introducer’s experience helps him or her to fix the reference of a name, but at the same time it plays a justificatory role in knowing the proposition, which indicates the information she used when introducing the name.16

3. Frege’s Puzzle and the Contingent *A Priori*

In this section, I criticize one possible strategy for defending the contingent *a priori* raised by philosophers like Sutton (2001), Jeshion (2000), and Tillman and Spencer (2012). For convenience, I shall stay focus on Jeshion’s specific strategy. But my response can in principle apply to others’ similar strategies too.

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16 In fact, the cases of the same experience’s playing both roles are common when we first hear a particular person’s name and grasp its reference. Suppose you say, “Feynman is a famous physicist” and this is my first time hearing the name “Feynman”. Now consider the following sentence: ‘If Feynman exists, Feynman is called “Feynman” by you.’ In this situation, the same experience enables me to grasp the reference of the name “Feynman”, and also plays a justificatory role in knowing the proposition expressed by the sentence, which indicates the information I used when I grasped the name “Feynman”. It seems obvious that I cannot know *a priori* that he is called “Feynman” by you without proper empirical justification based on my experience.
Jeshion argues that the problem of the continent *a priori* has the same structure as Frege’s puzzle; it is just one variant of Frege’s puzzle. If you are a Millian, you can apply the same Millian strategy for solving Frege’s puzzle,\(^\text{17}\) whatever it is, to our issue about the contingent *a priori*.\(^\text{18}\) That is, once we understand that there are substantially different ways for justifying beliefs towards the same singular proposition, viz., one is *a priori* and the other is *a posteriori*, then we come to realize that there is nothing mysterious about the possibility that there is a relatively easier way for a stipulator than others to justify her belief state to know the same singular proposition. By performing a linguistic stipulation, the stipulator comes to be in a certain belief state towards the proposition which can be very easily justified, while a non-stipulator is normally not in that same belief state. Therefore, without any special worry, we can take at face value the result of the contingent *a priori*, say, the asymmetry of the epistemic efforts between a stipulator and a non-stipulator to know the same proposition.

To be sure, Jeshion’s intention is not to defend a particular Millian solution to Frege’s

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17 Jeshion’s explanation about a Millian solution to Frege’s puzzle is as follows: the Millians who want to explain how beliefs towards the same proposition can differ in their cognitive values must take belief states as the object of epistemic appraisal and the primary bearers of justification. The same singular proposition may be grasped in more than one way, and these ways of taking the proposition individuate distinct belief states towards the same proposition. Two belief states having the same content can have distinctive justifications, and nothing prevents them diverging in source: empirical evidence might be required for one belief state to be justified, while reflection might suffice for the other (Jeshion 2000: 305-312).

For example, Millians would accept that Pierre can have more than one belief state towards one and the same proposition that Paderewski is Paderewski. Let us suppose that Pierre is in Belief State MM when he takes this proposition in the way he does in thinking of Paderewski as the musician for both instances of Paderewski in the proposition, and he is in Belief State MS when he takes the same proposition in the way he does in thinking of Paderewski as the musician for one occurrence of Paderewski and as the statesman for the other. MM can be *a priori* justified: his ways of taking Paderewski are the same, and he can justifiably believe the proposition that Paderewski is Paderewski without any empirical investigation. But MS must be empirically justified: since he has two unconceptually connected ways of taking Paderewski, reflection is not sufficient to justifiably believe the same proposition (Jeshion 2000: 308-309).

18 Sutton (2001) adopts a similar strategy but his seems not thoroughly Millian. Tillman and Spencer (2012) provides a very similar argument to Jeshion’s, which is based on the concept of information isolation (see n.20).
puzzle, but to argue that the Millians who adopt a certain solution can also apply it to our issue. However, in order to apply the same Millian strategy, it must be given that there can be essentially different ways to justify two belief states towards one particular proposition in a specific situation. There is an independent reason to think that it is given in any identity claim cases such as the famous Paderewski example; the proposition in question is about Paderewski’s identity, i.e. the proposition about Paderewski that he is him, which seems obviously knowable by reflection independently of any experience, and there clearly exists a way in which knowing the truth of this identity claim is a piece of cake. However, our cases are not about knowledge of identity, but one instance of them is about knowledge of a particular physical object that it has a certain contingent property. It is at least not clear whether this is also knowable a priori, as is knowledge about identity. We need a substantial argument for this part.

In other words, the Millian solution in itself does not shed any light on our real issue before it is given that JLSK is true. To see effectively why, let us consider the following Shripkean argument for the contingent a priori: suppose that Cher is taking a science exam. One of the exam questions is “Which planet causes the perturbations of Uranus’s orbit?”, and the choices are “Mercury”, “Venus”, “Jupiter”, “Saturn”, and “Neptune”. At first, Cher does not have any idea of the answer, but suddenly she has a feeling that the name that starts with “N” must be the answer. She finally comes to believe the proposition expressed by (2).

Proponents of the Shripkean contingent a priori argue that Cher knows the proposition expressed by (2) a priori. Given that knowing our own gut feeling is a priori, then there is a priori way to know the proposition expressed by (2) based on knowledge of this feeling.

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19 The role of this part is parallel to (ACA4) in the original argument for the contingent a priori in Section 1.
But others who do not have the same gut feeling cannot know the same proposition \textit{a priori}. It might first seem mysterious how Cher knows the proposition expressed by (2) without any empirical justification. But once we understand that the situation has the same structure as Frege’s puzzle, then we can admit that Cher is simply in a belief state, which can be \textit{a priori} justified.

I believe that the above reasoning is clearly absurd; the real issue must be that a gut feeling cannot play any justificatory role in knowing the proposition expressed by (2).

Likewise, whether or not \textit{JLSK} is true is not touched by the Millian solution to Frege’s puzzle. Proponents of the contingent \textit{a priori} need an independent argument for \textit{JSLK}.

\footnote{Tillman and Spencer (2012: 130-137) provides a pragmatic explanation about why a stipulator does not seem to have any extra-linguistic knowledge (or at least justified true belief), even though she actually has it. Roughly speaking, this is because the stipulator’s belief state is informationally isolated for any other usual purposes. For example, in the \textit{CorrectSum} case, Jennie actually knows what number the sum of 3,428 and 5,377 is. But we are inclined to deny that she has that knowledge because her belief state is not proper for the usual purpose of providing a numeral in the decimal (or any other) system.

However, their explanation also presupposes that \textit{JLSK} is true without any substantial argument. Suppose that based on her gut feeling again, Cher comes to believe that Jack the Ripper was sleeping exactly 14.5 hours when he was a week old. Surprisingly, her belief turns out true completely by sheer luck. However, this is not knowledge at all simply because it is not justified. It is certainly implausible to say that even though she has this knowledge, we are inclined to deny this because her belief state is informationally isolated for our dominant purpose to catch Jack the Ripper. Like Jeshion’s, their strategy can be viable only if whether and how a stipulator has or doesn’t have extra-linguistic knowledge is already explained (see n.24).

\footnote{In fact, Jeshion provides a short explanation of how a stipulator can easily justify her own belief states: The content of the definite description \textit{D} that \textit{S} uses to fix the reference of the name \textit{N} provides \textit{S} with a way of taking \textit{a}, \textit{Wd}. \textit{S}’s belief state [when \textit{S} takes the proposition \textit{<a, \Phi> in the way \textit{Wd}}] is such that \textit{Wd} includes, or is identical to, the property \textit{\Phi} that \textit{S} ascribes to \textit{a}. It is \textit{a priori} justified because in taking [the proposition \textit{<a, \Phi>}] solely in way \textit{Wd}, \textit{S} can recognize [the proposition \textit{<a, \Phi>}] as true without reliance on sense experience (Jeshion 2000: 310).

However, this explanation in itself seems implausible. Consider an ordinary person who always associates Einstein with the property of being a famous physicist. Her belief state is such that the way of taking Einstein includes the property of being a famous physicist that she ascribes to Einstein. However, it does not follow that she is in a position to know \textit{a priori} that Einstein is a famous physicist due to her way of taking that proposition, unless we assume the description theory of names and maintain that ways of taking affect her belief content as well. It seems obvious that regardless of her ways of taking, she needs some empirical
Of course, I take for granted that there are various ways of taking the same singular proposition, as I have described in Section 2. Some belief states might be relatively easily justified, while others might not. For example, for ordinary people who use the decimal system, the belief state in regard to accepting the sentence “5 + 7 = 12” may be easily justified, while the belief state in regard to accepting the sentence “101_{(2)} + 111_{(2)} = 1100_{(2)}” may not, even if both are a priori justified. In addition, these two kinds of belief states might differ in their cognitive values. However, I have emphasized that both justifications must be through substantial calculation, regardless of whether or how one is easier than the other. Linguistic manipulation cannot play any justificatory role in either case.

Likewise, the belief states in regard to accepting the sentence, for example, “Jack the Ripper is the murderer” may be easily justified, while the belief states in regard to accepting the sentence “Richard Johnson is the murderer” may not be, even if both are empirically justified. Obviously, they have different cognitive values, especially regarding the arrest of the murderer. However, in both cases they are empirically justified by making substantial contacts with Jack the Ripper, that very person, in two different ways. Again, linguistic manipulation cannot play any justificatory role in knowing this extra-linguistic fact about Jack the Ripper in the physical world.

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22 The first belief state can be justified simply by inspecting the scenes of incidents and finding traces the murderer left, while justifying the second belief state might need lots of evidence which practically enable us to catch the murderer.

23 The canonical example of this case is about the different cognitive values conveyed by the sentences “Hesperus shines brightly tonight” and “Phosphorus shines brightly tonight”. Interestingly, Jeshion also seems to admit that both belief states can only be empirically justified (Jeshion 2000: 308).
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