

ON INTUITIONS ABOUT PROPER NAMES*

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Abstract

Machery et al. (2004) carried out an experiment which tests the intuition of US and Chinese students about the use of proper names. They arrived at the conclusion that the way most respondents used proper names is not compatible with the causal-historical theory of proper names as advocated by Kripke. The author argues that Machery et al. are wrong in their conclusions. The problem is not just that the interpretation of the findings of their experiments does not take into account some variables that should have been considered, but rather that the experiment is faulty in several respects: their empirical hypothesis is arguably inconsistent, and the setup of the experiment is flawed.

Introduction

Machery et al. (2004) report an experiment to test certain semantic intuitions that are employed by philosophers of language to decide between two (at least *prima facie*) incompatible theories of the semantics of proper names. Among philosophers, it is widely accepted that these intuitions clearly argue against the so-called descriptivist theory of names and in favor of what Machery et al. call the causal-historical theory of names.

Although Machery and his co-authors do not explain this at length, it is clear that one aim of this experiment is to contribute to the case for a relativist view of human cognition: Those philosophers who assume the causal-historical theory of names to be more adequate than the descriptivist position base their opinion on intuitions that seem rather clear and

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unquestionable to themselves. However, according to Machery and his co-authors, a problem arises because such philosophers (like Kripke) do not only claim that the causal-historical theory captures their own way of using proper names, but assume this claim to be universally valid, not just for all speakers of English, but for all humans in general.

However, one could assume that Kripke is wrong to extend the validity of his claim in this way: his relevant intuitions might not agree with the intuitions of other Westerners who are native speakers of English, and there could be even greater disparities with regard to the intuitions of representatives of other cultures. Machery et al. set out to demonstrate that this is actually the case and not just a theoretical possibility. They conduct an experiment in which a statistically significant difference is found between answers (which are assumed to reflect relevant semantic intuitions) of US and Chinese university students. This difference is supposed to show that although some subjects in both groups report intuitions which accord with the descriptivist theory of names, Chinese students even more often report such intuitions. And thus the assumed universal validity of the causal-historical theory is disproved.

I will argue that the authors are wrong in their conclusions. The problem is not just that the interpretation of the findings of their experiments does not take into account some variables that should have been considered, but rather that the experiment is faulty in several respects: their empirical hypothesis is arguably inconsistent, and the setup of the experiment is flawed.

The structure of my paper is as follows: In section **1**, I will summarize the exact empirical hypothesis which Machery et al. examine in their experiment and present some details of the experiment itself which will be of relevance, as well as their findings. In section **2**, I point out three technical problems in the experiment setup. In section **3**, conceptual problems regarding the hypothesis underlying the experiment are discussed. In section **4**, I speculate on possible reasons for the statistically significant difference between the two groups, assuming that the authors' explanation is invalid. Finally, section **5** contains my conclusions.

1. Summary of Machery et al. (2004)

In philosophical circles, it is widely accepted (though not without exception) that the so-called causal-historical theory of names¹ captures the way people use proper names more adequately than the so-called descriptivist theory.

Essentially, the descriptivist theory (which is most prominently represented by Frege) claims that proper names like 'Aristotle' and 'London' are synonymous with definite descriptions like 'the teacher of Alexander the Great' and 'the capital of Great Britain', respectively.² This means that whenever we use the name 'Aristotle' (to refer to a specific person), we always have in mind the description that, for us individually, is synonymous with this name. This could be 'the teacher of Alexander the Great', 'the greatest philosopher of antiquity', a conjunction of these, or anything else, as long as it is fixed which description is synonymous with a given proper name for us. The reference of a proper name is determined by this description: whatever is denoted by the description will be the referent of the name.

The causal-historical theory, by contrast, claims that the relationship between the entity a proper name refers to and the name itself is direct, i.e., not mediated by a description. Names refer simply by virtue of an act of naming, where the reference of the name was fixed. All further uses of the name following the naming act are connected to the naming act by a historical chain: all those who know what the name 'London' refers to know this because they have heard this name being used to refer to a particular city and therefore established a connection between the name and the referent.

The reason why the causal-historical theory is regarded as more adequate and the descriptivist theory practically as refuted is that Kripke (1972/1980) presented some very convincing arguments which demon-

¹ I will stick to the terminology used by Machery et al. (2004). Two alternative designations frequently chosen instead of 'causal-historical theory of names' are the 'Millian' theory and the 'direct reference' theory. The more or less subtle connotative and denotative differences between these designations need not concern us here, since they should be irrelevant to the issue at hand. For two recent overviews discussing such differences, cf. Marti (2003) and Jackson (1998).

² This is, of course a gross simplification, but finer qualifications of the exact relationship between the description and the proper name or of the exact nature of the description, for example, would be irrelevant with respect to what Machery et al. (2004) try to achieve in their experiment.

strated that the latter theory does not work. Some of these arguments were thought experiments whose outcomes were consistent with the causal-historical but not with the descriptivist theory. As mentioned above, Machery et al. (2004) scrutinize this opinion by basically transforming Kripke's thought experiments into real experiments.

One of Kripke's thought experiments, cited as well as adapted by Machery et al., is the following:

"Suppose that Gödel was not in fact the author of [Gödel's] theorem. A man called 'Schmidt' [...] actually did the work in question. His friend Gödel somehow got hold of the manuscript and it was thereafter attributed to Gödel. On the descriptivist view in question, then, when our ordinary man uses the name Gödel, he really means to refer to Schmidt, because Schmidt is the unique person satisfying the description 'the man who discovered the incompleteness of arithmetic'. [...] But it seems we are not."

(Kripke 1972/1980, 83–4, as cited by Machery et al. 2004)

The same story, reformulated by Machery et al. and used in their experiment, reads as follows:

"Suppose that John has learned in college that Gödel is the man who proved an important mathematical theorem, called the incompleteness of arithmetic. John is quite good at mathematics and he can give an accurate statement of the incompleteness theorem, which he attributes to Gödel as the discoverer. But this is the only thing that he has heard about Gödel. Now suppose that Gödel was not the author of this theorem. A man called 'Schmidt' whose body was found in Vienna under mysterious circumstances many years ago, actually did the work in question. His friend Gödel somehow got hold of the manuscript and claimed credit for the work, which was thereafter attributed to Gödel. Thus he has been known as the man who proved the incompleteness of arithmetic. Most people who have heard the name 'Gödel' are like John; the claim that Gödel discovered the incompleteness theorem is the only thing they have ever heard about Gödel. When John uses the name 'Gödel', is he talking about:

(A) the person who really discovered the incompleteness of arithmetic?

or

(B) the person who got hold of the manuscript and claimed credit for the work?"

This text and three further ones (one of which is another version of the same Gödel story, and two are versions of Kripke's Jonah story) were presented to two groups of subjects: US and Hong Kong undergraduate students (the latter were all Chinese). For each text, they had to choose one of the two possible answers given. In the case of the text cited,

Machery et al. regarded answer (A) as a corroboration of the descriptivist view and answer (B) as one of the causal-historical view.

The empirical hypothesis that the authors wanted to verify by the experiment is the following: Nisbett and his co-workers claim (see e.g., Nisbett et al. 2001; Nisbett–Norenzayan 2002; Nisbett 2003) that there are significant cognitive differences between people living in different cultures; they concentrate on comparing East Asians and Westerners. One such difference is that whereas “East Asians are more inclined than Westerners to make categorical judgments on the basis of similarity, Westerners [...] are more disposed to focus on causation in describing the world and classifying things.” According to Machery et al., we should therefore expect East Asians to choose the answer that corresponds to the descriptivist theory more often than Westerners, because of the following:

“on a description theory, the referent has to satisfy the description, but it need not be causally related to the use of the term. In contrast, on Kripke’s causal-historical theory, the referent need not satisfy the associated description. Rather, it need only figure in the causal history (and in the causal explanation of) the speaker’s current use of the word.” (Machery et al. 2004, B5)

The outcome of the experiment, as reported by Machery et al. (2004), seemed to confirm this hypothesis. There was a statistically significant difference between the two groups. On average, the Chinese participants chose an answer favoring the descriptivist view almost twice as often as the US participants. However, as the authors point out, the standard deviation even within these two groups was surprisingly high.

2. Technical problems

In this section, I would like to draw attention to three problems concerning the setup of the experiments conducted by Machery and his co-workers. They all involve the phrasing of the texts presented to the participants of the experiments, and the questions asked. I hope I will be able to argue convincingly that these problems are serious enough if considered individually, and jointly render the published results thoroughly invalid.

The problems are: 1. the appearance of the expression ‘use the name’ and 2. ‘talk about’ in the texts, and 3. the fact that only a choice between two ready-made answers is given to the participants. I will concentrate all of my remarks on the version of the Gödel text cited above. However,

they do in fact apply just as well to all the other texts that Machery et al. employed in their experiment.

2.1. Using a name

The notion of using a name in the sense as it is intended to be understood in the context of this text should be familiar to professional linguists and philosophers of language. However, it might be the case that the average person on the street does not quite know what is meant by this. The common use of the expression ‘use a name’ conveys something like ‘to call yourself by a name that is not yours in order to keep your name secret’ (this definition appears in the *Longman Dictionary of Contemporary English*), like in ‘Grant had checked into a Miami hotel using a false name.’ Another, somewhat different context where it appears would be something like ‘She usually uses her maiden name.’ The way this expression appears in the familiar contexts is obviously different from the way it is to be understood in the Gödel text above. When Kripke writes that someone ‘uses the name Gödel’, he is employing a quasi-technical term. The concept of using a name, for example, may or may not involve in such a context a contrast to just mentioning a name. These are philosophical issues the participants of the experiment will never even have heard about.

The way ‘use the name’ is to be understood in the text is not only unclear, but the way the utterance in question is described might be far too abstract to be of any use in an experiment like this.³ What should

³ Kripke’s original text does include a further complication that is not necessarily carried over to the experiment, since the authors do not mention Gödel’s theorem. The expression ‘Gödel’s theorem’ is for several speakers, including myself, a proper name itself. To see this, suppose we learned that Peano had already proven the incompleteness of arithmetic a decade before Gödel, but had published it in some obscure place, so it had been forgotten about. In such a case, the name ‘Gödel’s theorem’ would lose some of its motivation, but it would not necessarily have to be changed to ‘Peano’s theorem’ or whatever. So, for speakers whose lexicon contains this proper name, the appearance of ‘Gödel’ in ‘Gödel’s theorem’ does not constitute a use of the name ‘Gödel’. ‘Gödel’ is only part of this expression etymologically speaking, but not semantically speaking, because in the latter sense, ‘Gödel’s theorem’ is, like any other proper name, not transparent. The problem with this is that when one’s only information about Gödel is that he proved this theorem, a rather frequent “use” of the name ‘Gödel’ would likely be as part of the expression ‘Gödel’s theorem’. One has to read Kripke very carefully in order to be able to spot that this is a “use” of this name that has

appear in the text is a concrete situation where John is actually using the name.⁴

2.2. Talking about

The expression ‘talking about’ in the question at the end of the text poses a significantly greater problem. This expression is ambiguous in a way that is relevant to the question that is being examined by the authors. To see this, picture the following situation: There is a party at which Norah is a guest. There are two important people at the party in addition to her: Jonathan and Sebastian. Norah didn’t know them before but was introduced to them at the party. However, Norah confuses their names: she thinks Jonathan is called Sebastian and Sebastian Jonathan. Later in the evening, Norah spots the person actually called Jonathan stealing her wallet from her handbag. She screams appropriately: “Sebastian is a thief. He has stolen my wallet.” Now who is Norah talking about? Well, that depends on whose position you identify yourself with. If you consider Norah’s position, she is talking about the man (i.e., trying to refer to the man) she saw stealing her wallet, who she thinks is called Sebastian. (This man is actually called Jonathan.) If you consider the position of all the others present who do get the names right, she is falsely accusing Sebastian of theft, who has actually been drinking beer peacefully in the company of their host all along.

It is plain to see that essentially the same consideration applies to the Gödel text cited above. Suppose John (the person in Machery et al.’s text) said (cf. 2.1.), “Gödel must be a very bright person. I sure would like to meet him.” or asked someone “How old was Gödel when he discovered the incompleteness of arithmetic?”.

to be excluded for his thought experiment to work. For the subjects of the experiment who know the expression ‘Gödel’s theorem’ but are not aware of these philosophical problems, this issue could be a further source of confusion, even though this expression does not appear in the text explicitly.

⁴ Several readers have indicated that they do not agree with my claim that the appearance of ‘use a name’ in this context constitutes a problem. I do not have any more convincing arguments for this than the above. But the really important point in my opinion is that it is much clearer to present an actual utterance where a name is being used (in the sense we would like ‘use a name’ to be understood). In this way, the problem simply does not arise, and since this does not cost anything, I think it would be just stubborn and pointless to insist on the original formulation.

If you identify yourself with **John's** position, he is stating or asking something about (i.e., means to refer to) the person who, as far as he knows, really did discover the incompleteness of arithmetic and was called Gödel. He could not even consider referring to any other relevant person (especially not Schmidt). So the position of John comes rather close to answer (A) to the question, although that is not quite right. I will come back to this in section 2.3.

On the other hand, if you take the position of an **external omniscient observer** and do not care about what John does or does not know about Gödel, then he is talking about (i.e., mentioning the name of) Kurt Gödel the fraud. This comes rather close to answer (B), but that is not quite right in this case either. Again, this point will be discussed in section 2.3.

There may, of course, be other notions connected to the expression 'talk about' as used in the relevant context for other speakers. Some may be simply the logical conjunction or alternation of the two (whether a speaker only has a more restricted or a "holistic" notion of 'talking about', respectively). Some may have a third notion I did not think about. For all we know about human cognition, some such notion may even be inconsistent.

Anyway, if you could make sense of the Norah situation above (which, I assume, is the case for most competent speakers of English), you must be aware, whether consciously or unconsciously, that these two notions of 'talking about' are available normally to any speaker of English.⁵ This is true, of course, of the participants of the experiment as well, when they try to interpret the questions they are supposed to answer. The question is: How do they go about this? I can see only two possible answers:

1. Assuming there is such a thing as an absolute (i.e., context-insensitive) concept of prominence of word meanings,⁶ the reader could choose the strategy of favoring an interpretation of the ambiguous question where the expression causing the ambiguity is interpreted in terms of its most prominent (i.e., first, basic, primary) meaning. Or the most prominent meaning may be the only one that comes to the reader's mind in such a situation.⁷ The problem is that meaning prominence, even if we assume that it exists on an individual level, is not like word order or

⁵ I gloss over some qualifications of this claim, e.g., you should have an innate human theory of mind (or some equivalent of this), you should not be autistic etc.

⁶ For an exposition of this concept, cf. Csátár et al. (2002).

⁷ Or at least the only one she is able to consciously consider, disregarding the possible unconscious activation and immediate deactivation of unneeded word

declension: although there is significant agreement between speakers as to what they qualify as more and less prominent, there is also a patent variation to be observed. Also, in some cases, speakers can consciously order word meanings according to prominence, whereas in other cases they cannot.⁸ We do not know as yet why this should be so. In any event, if speakers decide on this basis how to interpret the question, the outcome might tell us something about which interpretation of ‘talk about’ is more prominent for those individual speakers, but nothing whatsoever about the theories of the semantics of proper names. But normally, our interpretation is of course not driven by meaning prominence, but rather by the following.

2. It is much more likely that readers try to make sense of an ambiguous utterance or a discourse that seems incoherent at first sight by guessing the intentions of the writer. Suppose that you as the reader have no idea what the person in charge of the experiment would like to learn, but assume that they have something particular in mind. You have at your disposal the two above-mentioned possible interpretations of ‘talk about’ which both make sense in the discourse. If you interpret the question in one way, answer (A) seems somewhat more appropriate; if you do it the other way, answer (B) seems better. If you take the conjunction of the two notions, neither is right. In case you take the logical alternation, both are. Trying to guess which answer you ought to give in such a situation is equivalent to throwing a dime.

To correct this problem, the question to be asked should be modified. You can either ask “Who is John thinking of?” or “Whose name does John mention/pronounce?”, depending on what you would like to learn. Both should be much clearer than the original question.

2.3. Only two choices

As mentioned above, if you carefully consider the two possible answers to the question asked in the Gödel text, neither of them seems quite right.

For if you take the position of John and choose answer (A), you feel rather uneasy since this answer contains the word ‘really’, which is hard

meanings, which is widely assumed in the psycholinguistics literature on the basis of Swinney (1979) and later experiments.

⁸ At least I do not have the slightest idea which of the two interpretations of ‘talk about’ I should judge as more prominent than the other out of context.

to interpret relative to a given context (in this case, John's thoughts). In other words, answer (A) would be a rather awkward way of expressing the idea that Gödel is 'the person who, according to the information John has access to, really discovered the incompleteness of arithmetic' (which would be the correct answer in my opinion). In philosophical terms, 'really' is an indexical that wants to refer to the actual world. To interpret it context-dependently, as suggested above, would be to create a case of Kaplan's monster.⁹

On the other hand, answer (B) is not perfect either, if you interpret 'talk about' from the point of view of the external omniscient observer. Here, one finds oneself at odds with the fact that one knows that John mistakenly attributes some property to the referent of the name Gödel. Furthermore, one should assume that if John knew exactly what the omniscient observer of the story knows about Gödel, he would have no reason to utter something like "Gödel must be a very bright person." or "How old was Gödel when he discovered the incompleteness of arithmetic?"

If one were to answer that when John says such things, he is talking about (in the sense of pronouncing the actual name of) the person who did not actually discover the theorem, but "got hold of the manuscript and claimed credit for the work", one would definitely not be lying (from the omniscient observer's perspective). However, the answer seems to be pragmatically inappropriate, since one would withhold relevant¹⁰ information and thereby violate Grice's maxim of quantity; namely, the information that John does not actually know this. So the correct answer should be something along the lines of "the person who got hold of the manuscript and claimed credit for the work, although John does not know this."

If this is right, both possible answers provided by Machery et al. are more or less inappropriate. Even if I am wrong about my own suggested answers being the right ones, they seem to be surely appropriate

⁹ Cf. Kaplan (1989).

¹⁰ Why should this information be relevant? I think Blutner (1998)'s theory of lexical pragmatics or its reformulation in terms of bi-directional optimality theory in Blutner (2002) could help us formulate an acceptable explanation. 'Talk about' is ambiguous as described above, and the speaker knows this. If the speaker provides the information that John does not know about the information mentioned, the hearer will be considerably more likely to correctly infer that 'talk about' is to be understood in its 'pronounce the name of' sense than without this information. Although this is hard to quantify, the gain of being unequivocal will outweigh the cost associated with being more verbose.

to me, and obviously different from the ones the authors provide. Consequently the two alternatives are without doubt insufficient. At least a third alternative should be provided, namely, “(C) none of the above, but rather:”.¹¹ It seems to me that this would even be much more in line with the ideology behind the experiment: after all, as a Westerner who conducts the experiment, how should one be able to tell how a person from another culture, who might think in a way markedly different from yourself, would answer a question like this?

2.4. Interim conclusions

From the three points made in the previous sections, it should have become clear that although the text for the experiment was exactly modeled on Kripke’s Gödel thought experiment, for someone who does not know what Kripke tried to prove with this story, the text makes hardly any sense at all. The essential difference between Machery et al.’s experiment and Kripke’s original story is that the former is presented to the reader completely out of context, whereas the latter appears as a paragraph in Naming and necessity. On top of this, the audiences of the two texts, so to speak, are completely different. Kripke (1972/1980) is supposed to be read by philosophers. The participants in the experiment were undergraduate students. One can assume (e.g., on the basis of personal experience) that some of these students would not have understood the point of the paragraph in question even if they had read the whole Naming and necessity, since they lacked the training, the conceptual foundations and possibly the appropriate mindset to comprehend the idea.

For these technical reasons, the outcome of the experiment is impossible to interpret.¹² However, I contend that the experiment was doomed to failure right from the start for conceptual reasons which I will present in section 3. Before I get to this, let me present another story that could

¹¹ There is a further serious problem in connection with the two choices: Elementary experimental methodology would require the order of the (A) and (B) answers be mixed, since some participants of the experiment would be reluctant to choose (A) or (B) consistently all the time, even if they thought that was the right answer. Machery et al. apparently neglected to do this. I am grateful to Janina Radó for this observation.

¹² Carson Schütze (2004) discusses some interesting problems pertaining to experimental methodology in linguistics (syntax, semantics and morphology) which are somewhat similar to those mentioned above.

be used in an experiment, which avoids the problems pointed out above with respect to the Gödel story of Machery et al.:

“Gerhard is a German person who sees the film ‘Bram Stoker’s Dracula’ in the cinema. In Germany, if a film is shown that was directed by a very famous director, the director’s name is often mentioned in the title of the film. Gerhard knows this and is therefore convinced that Bram Stoker was the director of this movie. He does not know anything else about Bram Stoker.

But in fact, Bram Stoker was not the director. He was a British writer who wrote the novel about Dracula which the movie was based upon. He died in 1912. The film was actually directed by Francis Ford Coppola.

After having seen the film, Gerhard says to his friend Doris, ‘This was a great movie. Bram Stoker is a terrific director.’

Question version 1: ‘When he says this, who is Gerhard thinking of?’

- (A) the person who wrote the novel
- (B) the person who directed the movie
- (C) none of the above, but rather:’

Question version 2: ‘When he says this, whose name does Gerhard pronounce?’

- (A) the name of the person who wrote the novel
- (B) the name of the person who directed the movie
- (C) none of the above, but rather:’”

The difference compared to the original text should be clear. Be that as it may, the answer to either of these questions tells us nothing interesting about the semantics of proper names, as I will argue in the next section.

3. Conceptual problems

In this section, I would like to point out two conceptual problems in connection with the experiment. Both concern the empirical hypothesis that underlies the experiment, and are completely independent of each other. The first problem is what I think is an inconsistency between the empirical hypothesis on the one hand and the very empirical generalizations Machery et al. base this hypothesis upon on the other hand. The second problem is that Kripke’s Gödel story, as it stands, arguably does not help us at all to empirically decide between the two competing theories of proper names.

3.1. Does the causal-historical view involve causation? Is the descriptivist view holistic?

I have cited above, in section 1, the reason why Machery et al. assume that Westerners should choose the answer that corresponds to the causal-historical theory. The most relevant part of the explanation is the following: “Westerners [...] are more disposed to focus on causation in describing the world and classifying things.”

I think it is a rather dubious claim that there should be any causal reasoning involved in our actual use of proper names. At least it could be argued that the assumption of a causal relationship is only necessary as a meta-semantic assumption (i.e., for explanations of semantic facts), but not as part of the semantics of individual proper names, even if we assume that the causal-historical theory and particularly its direct reference claim is basically right. In other words, the statement that Gödel is called ‘Gödel’ **because** he got this name, however informative it may be, might only be needed when we try to explain how Gödel got to be called ‘Gödel’. For us to be able to use this name to refer to Gödel, no notion of causation may be required at all, but a simple, primitive associative link between the mental representations of the name and the person may be sufficient.¹³

Whereas I assume Machery et al. could defend their position to include the concept of causation in their account of the semantics of proper names, it is extremely puzzling why another claim that also appears in Nisbett and his co-workers’ psychological theory of cognitive relativism and seems to be highly relevant to the issue under discussion is simply ignored. As Machery et al. (2004) themselves cite, the most significant difference between East Asian and Western thinking seems to be that East Asian thinking is holistic, whereas Western thinking is analytic.

¹³ Regarding the historical part of the causal-historical theory, Almog 1984 quite convincingly argues that the historical chain proposed by Kripke as part of the explanation definitely does not figure as a part of a proper name’s semantics, but only of its meta-semantics in the above sense. Furthermore, the idea of a historical chain is not specific to proper names, and therefore this part of Kripke’s theory is not particularly informative. To all intents and purposes, a historical chain plays exactly the same part in passing on the usage rules of other content words from one generation of speakers of a language to the next as it plays in the fixing of the reference of a proper name. The latter idea is, of course, not just a philosophical claim, but a fact of sociolinguistics and historical linguistics.

Western thinking involves “detachment of the object from its context, [and] a tendency to **focus on attributes of the object in order to assign it to categories** [...]” (Nisbett et al. 2001, 293; cited by Machery et al. 2004, B5; emphasis added). It is not clear to me whether the causal-historical theory enters into a holistic-analytic dichotomy with the descriptivist theory in this respect, but the emboldened part of this citation surely is a par excellence characterization of the descriptivist view. Now if we approach the issue from this direction, the descriptivist view should be the perfect way to capture the use of proper names in Western societies. And we could take this idea even further. Consider that Frege, one of the most prominent representatives of the descriptivist view, was one of the fathers of Western logicism. Surely, this should be taken as strong evidence that there is an intimate connection between Western thinking and descriptivism. Or should it?

I think, in view of this dilemma, it would be grossly irresponsible to continue to construct empirical hypotheses for experiments on the basis of these ideas, as long as Nisbett and his co-workers’ generalizations are formulated in such a general and elusive way (witness the hedge “a tendency to” in the above citation). This is not to say that these generalizations are not interesting; but they do not seem to constitute an empirically testable theory in their current state.

To sum up the point of this section: Machery et al.’s empirical hypothesis is arguably inconsistent with the very same theory of cognition that it is based upon: Whereas it can be deduced from that theory that Western reasoning should favor a descriptivist account of proper names, they assume that it favors a causal-historical one.¹⁴

3.2. What does follow from the causal-historical theory?

A puzzling aspect of Machery et al.’s paper is that their attitude about the role the semantic intuitions play in the proper names debate is rather peculiar. It is as if they thought that the debate revolves around the correctness of the intuitions themselves. Of course, this would be absurd: the puzzle that should be solved by the debate is not which answers to

¹⁴ It could of course be argued (bearing in mind the qualification above) that if anything, Nisbett et al.’s theory may allow us to formulate inconsistent empirical hypotheses regarding the semantics of proper names (i.e., Western thinking favors causal-historical and descriptivist theories at the same time). Obviously, this would not help to rescue the plausibility of Machery et al.’s empirical hypothesis.

which questions are right, but instead, what is a correct model of the mental representation of the semantics of proper names. We would like to learn something about the mental representation that enables us to use a proper name, and, on a metalinguistic level, construct a model that explains why we use a proper name in the way we do. The thought experiments are just a way of testing the adequacy of the models by probing their predictions.

However, some parts of Machery et al.'s paper certainly suggest an interpretation that they regard the role of intuitions in a different way than is usual, and, at least in the case of Kripke, obviously intended. Particularly, I cannot find any other reasonable explanation for the fact that they obviously regard the outcome of their experiment as the most natural thing on earth. For most philosophers of language, the fact that approximately half of the Western participants gave answers that corresponded with the causal-historical view, whereas the other half gave answers of the other kind would probably have rung the alarm bells that there is something wrong with the results. For it seems rather miraculous how a linguistic community could function if there were such huge differences even in as substantial issues as how to use a proper name to refer.¹⁵ The only obvious interpretation of the results of the experiment that is not contrary to common sense seems to me to take the answers to be no more than largely appropriate reactions to strange questions, and not evidence of differences in the actual mental representations of the meanings of proper names in general (which is what such answers ought to be).¹⁶ Incidentally, as I argued in section 2, they would have been right to assume this with regard to the experiment reported.

¹⁵ Of course, the claim that such differences would cause problems in a linguistic community is an essentially empirical claim itself, and could well be wrong. I do not really see a way how we could test its validity (save using thought experiments), but it seems to me very plausible.

¹⁶ The authors' discussion about the role and reliability of semantic intuitions is similarly puzzling. They seem to have two philosophical views on intuitions in mind: One view would be interested in the intuitions themselves. And only the second view would be "a proto-scientific project modeled on the Chomskyan tradition in linguistics. Such a project would employ intuitions about reference to develop an empirically adequate account of the implicit theory that underlies ordinary uses of names." (Machery et al. 2004, B9). Of course, the second view is the way in which the thought experiments and the intuitions on them should be understood. In fact, I cannot imagine any other sensible way to construe these theories of proper names, and the authors unfortunately do not explain what the other alternative exactly is that they have in mind.

Nevertheless, the relevant question is if one can construct real experiments that can be employed as empirical evidence to argue for one or the other theory of proper names, or for or against the universality of such a semantic theory, for that matter. The answer is, of course, yes. However, Kripke's Gödel thought experiment is unfortunately not suited for this purpose. It could be argued that Kripke got the result of this thought experiment wrong. The ordinary man he mentions would, in fact, really mean to refer to the person who really formulated the theorem. This is much more apparent in the Bram Stoker story than in Kripke's: Gerhard obviously does not mean to refer to (i.e., "is thinking of") the real Bram Stoker, the writer, but to the director of the movie, whatever his name is. On the other hand, it takes no genius to spot that Gerhard "pronounces" (i.e., mentions) the name of the writer, and not the director. It is just a simple reading comprehension exercise. In particular, it does not have anything to do with either theory of names whatsoever. I do not have the room to discuss this here, but I elaborate on this proposition in Pethő (2004).

In fact, standard Fregean descriptivist theories, which Machery et al. have in mind, could be tested experimentally by constructing very simple scenarios that involve a change in the only known (or at least "defining") property of a certain individual.¹⁷ For example, imagine a situation where Frank's boss is called Paul and the only thing that Frank's wife Catherine knows about Paul is that he is Frank's boss. One could ask participants in an experiment whether Frank's boss would still be called Paul if he moved on to some other position, and whether Frank's new boss would be called Paul as well. Or one could ask them to judge whether it would be reasonable for Catherine to keep referring to Frank's new boss as Paul or not referring to his old boss as Paul anymore. This would be after all essentially what we would expect to happen if a speaker identifies the meaning of a proper name with a description. Furthermore, if one takes for granted the conclusions of Machery et al.'s experiment, it should be fairly normal if Frank and Catherine disagreed about whether it is correct to call Frank's new boss Paul (since, according to these conclusions, there are lots of speakers in our society according to whom proper names work in the descriptivist way and equally lots who think it's the other way round).

¹⁷ This does not hold for non-standard theories, like e.g., quotational theories of proper names or ones involving temporal relativization of the defining property. I discuss this point in Pethő (2004).

There is yet another minor conceptual issue worth noting that obviously escaped Machery et al.'s attention. Suppose the Chinese, the Bantu, the Hungarians or whoever gave answers in this latter experiment that pointed consistently toward the conclusion that members of this speech community were using their proper names according to the descriptivist theory of names. Suppose further that speakers of English and German gave answers of the inverse kind. Would it be a legitimate conclusion that proper names in those other languages functioned differently from proper names in English? Hardly. The only thing we could reasonably conclude is that the languages in question seemed to lack proper names in the sense English and German have them, but only had descriptions. If there were such a language, this would arguably be major news, but definitely not for the theory of proper names.

3.3. Interim conclusions

The aim of this section was to demonstrate that the experiment had no chance to achieve what it was supposed to, because the hypothesis it tried to verify was not consistent with the theory it should have produced evidence for. Furthermore, it was suggested that Kripke's Gödel thought experiment was not the ideal way to test the validity of the descriptivist versus the causal-historical theory of names. Instead, another possible test was outlined.

4. How to interpret the outcome of the experiment

Whatever problems there were with the experiment, a statistically significant difference was observed for the Gödel text between Western and East Asian participants: the East Asians tended to reply that John is talking about the person who really discovered the incompleteness of arithmetic.

Since the groups tested were not particularly large, it would be interesting if another control experiment could confirm these differences.¹⁸ But assuming that this effect was not just due to a coincidence, I would

¹⁸ László Nemes actually did carry out basically the same experiments that Machery et al. report. Two groups of college students participated in these experiments: nurses-in-training and physiotherapists-in-training, all Hungarians. Much to his surprise, he found that there were similarly significant differences between the replies of the nurses vs the physiotherapists as between the Western and East

like to make an educated guess as to what might have caused the difference.

If one accepts the characterization of East Asian vs. Western thinking by Nisbett which was apparently corroborated by Weinberg et al. (2001), the relevant difference in the results could possibly be attributed to a difference in the strategies of comprehending texts employed by East Asians and Westerners: since Westerners detach objects from their contexts, as mentioned above, this may lead them to see the Gödel story just as a simple comprehension task, in which they are to find in the text who the name mentioned really applies to, independent of context. This would be Gödel the fraud, i.e., answer (B). Westerners gave this answer about 55% of the time, which is slightly above chance.

On the other hand, East Asians characteristically seem to regard themselves as parts of a community. This could involve empathy and willingness to identify oneself with the position of community members, in contrast to the individualism of the Westerners. And it would definitely involve a blind acceptance of widely held beliefs as truths, as emphasized by Weinberg et al. (2001). Empathy would lead them to identify their position with that of John, which would compel them to accept answer (A) as more appropriate (since, as I argued, answer A is the better one from the perspective of John). In addition to this, as the text explicitly states, most other people are like John, i.e., would use the name in the same way as John, which would in effect make it the right way in the eye of a Chinese person. This could be a reason why the Chinese selected answer (A) about 68% of the time for the Gödel story.

There is, however, no significant difference in the case of the Jonah stories between East Asians and Westerners, and in both groups, answer (B) occurs more often (ca. 60% of the time). If one continues the above line of thought, one notices that on the one hand, in the Jonah stories the fact that the beliefs of the community would suggest answer (A) is made just as clear as in the case of the Gödel stories. On the other hand, there is no actual person (just an anonymous average German high school student) to identify oneself with in one story, whereas in the other text, although there is such a person, her appearances at the beginning and the end of the text seem to be less salient subjectively, since the story is much longer and more complicated. So the fact that the previous effect is not observable in the Jonah cases may be attributed to the fact that a person

Asian groups of Machery et al. Let us not examine in detail what this probably means. I would like to thank László Nemes for sharing the results with me.

the reader could identify herself with is missing or less salient. If we compare the results of the Jonah cases with the Gödel cases, this would also mean that the presence of a person who one could identify oneself with would play a significantly more important role in East Asians' choice of answers than the presence of a community opinion.

However, as I mentioned in section 3, this is all just irresponsible speculation and should not be taken seriously.

5. Conclusions

The main aim of this paper was to point out how important considerations of experimental design turn out to be in connection with testing the universality claim of the causal-historical theory of names. I hope to have shown that a much more straightforward experimental task could have produced far more plausible results. Although Stich and colleagues' idea, that classic thought experiments should be subjected to empirical testing in order to ascertain that they do not reflect the views of only a tiny minority of scholars but in fact of humans in general, does seem reasonable at first sight, this experiment demonstrates the dangers of tearing individual thought experiments out of their context. Texts which may be fairly straightforward in their original context can turn out to be misunderstandable or even seemingly incoherent if this happens. Whether the results of an experiment confirm or contradict the accepted view(s) concerning a thought experiment, the uncertainty remains that they might arise from the misinterpretation or simply lack of understanding of the problem at hand, rather than reflect what the participants really think about the thought experiment (if it makes sense to say this at all; cf. Weatherston 2003 for a deeper investigation of the philosophical consequences of similar problems).

The last thing I wanted to achieve was to create the impression that empirical investigations of semantic intuitions were useless or uninteresting. I believe that exactly the opposite is the case, not just for epistemology (cf. Weinberg et al. 2001) and questions concerning the philosophy of language (as in Machery et al. 2004), but just as importantly in linguistic semantics (cf. Csátár et al. 2002 and Pafel 2001). However, the problems encountered by Machery et al. (2004) show that one has to be extremely careful when trying to adapt a philosophical thought experiment and transform it into a real experiment. It seems that taking an actual situation that may even be quite likely to occur, and asking

subjects about how they would behave in such a situation (or how they would expect others to behave) seems the best way to choose. The less abstract the situation is and the less linguistic behavior is involved the better. Another conclusion that seems to suggest itself is that one has to be extremely careful about the lexical semantic properties of words that appear in such an experiment. A lexical ambiguity, even if it is too fine to be explicitly mentioned in a dictionary, could ruin the results.¹⁹ It seems that although the distance between linguistic semantics and the philosophy of language has continuously increased in the past 25 years (cf. Nunberg 2002), they may still have something interesting to say to each other, and face similar problems.

A final point is that the relative and absolute weight of factors such as social expectations needs to be carefully established if one has reason to believe that they affect the answers given (even if as extrinsic factors), as also pointed out e.g., by Weinberg et al. (2001).

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¹⁹ Weinberg et al. (2001), for example, do mention that the way the word ‘know’ is ambiguous in English may affect the results of their experiment concerning the universality of epistemological theories. However, what should also be considered in such experiments is the lexical properties of the appropriate words in the first language of the foreign participants of the experiments. For example, if the rules of usage of the verb *know* should turn out to be less restricted in the participants’ mother tongue than in English (e.g., in Hungarian, one can say that someone knows something wrongly of a person who is firmly committed to the truth of a proposition, but that proposition is actually false), these patterns could and should indeed be expected to interfere with the interpretation of the English expression.

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