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The Ambiguity Problem in Experimental Semantics

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RESUMEN

El estudio transcultural de Machery *et al.* (2004) sobre el caso Gödel ha sido criticado sobre la base de que la pregunta de sondeo que los autores plantearon a los encuestados no atina a distinguir la referencia semántica y la referencia del hablante. Argumento que las respuestas de Machery y otros al problema de la ambigüedad fracasan. Sugiero a partir de cierta literatura actual sobre psicología experimental y metodología de encuestas comparativa que el problema deriva de una variación transcultural en la operacionalización de la información contextual contenida en la viñeta, además de ciertas diferencias cognitivas culturalmente inducidas. Esto demanda un ajuste en el estudio de Machery *et al.*

PALABRAS CLAVE: *caso Gödel, referencia, semántica experimental, metodología de encuestas.*

ABSTRACT

Machery *et al.*'s (2004) cross-cultural study on the Gödel case has been criticized as the probe question the authors asked to respondents fails to distinguish between speaker's and semantic reference. I argue that the replies of Machery and others to the ambiguity problem fail. Based on current literature on experimental psychology and comparative survey methodology, I suggest that the problem derives from a cross-cultural variation in the operationalization of contextual information contained in the vignette, plus culture-induced cognitive differences. This calls for adjustment in Machery *et al.*'s study.

KEYWORDS: *Gödel's Case, Reference, Experimental Semantics, Survey Methodology.*

I. INTRODUCTION

Machery, Mallon, Nichols and Stich (hereafter, MMNS¹) claim to have gathered survey evidence of a cross-cultural variation in intuitions about Kripke's Gödel case [MMNS, (2004)]. Since, in deciding between competing views, philosophers use intuitions as evidence,² and the intuitions they use are assumed to be (almost) universally shared, MMNS' study poses a serious threat to the traditional way of theorizing about reference.

According to some critics, this variation is not that threatening because the probe question that MMNS posed to respondents is ambiguous between speaker's and semantic reference. In reply, Machery and others followed two strategies: (i) denying that the vignette presented in MMNS (2004) might elicit an intuition about speaker's reference; (ii) rephrasing the original vignette so as to ensure that respondents' answers are not about speaker's reference.

I argue in this paper that MMNS' replies fail (sections III and IV). Now, my focus is not on the ambiguity problem *per se*, but on its causes. That the original vignette, and its modified versions, can be misunderstood is something that other authors have argued for far better than I could hope to do here [Heck (2018)]. My aim is to *account for* the ambiguity problem, establish whether it can be solved and, in case it can, how.

I contend that there are reasons to expect East Asian (EA) respondents to interpret the Gödel vignette as involving speaker's reference; reasons that relate to culture-specific conversational and cognitive sensitivities that might bias the intuitions towards an intentional reading of the probe question (section V). Now, I don't think this instability justifies skepticism about MMNS' project; if anything, it calls for adjustment in the original vignette. I sketch what I take to be some of the adjustments needed (section VI). But first I briefly present the Gödel study (section II).

II. MMNS' GÖDEL STUDY

MMNS (2004) run survey research to find out whether non-specialists' intuitions about the reference of proper names are in line with philosophers' intuitions.³ Philosophers of reference have discussed two main views: the descriptivist view ("a proper name N refers to the object uniquely or best satisfying the description competent speakers associate to uses of N") and the causal-historical view ("N has the reference it has in virtue of a chain of communication leading from current uses to the introduction of the name in a community"). In deciding which of these approaches is correct, philosophers have traditionally appealed to their own intuitions about possible cases and assumed that they are representative of the intuitions of (almost) any competent speaker. Thus, if lay speakers' intuitions vary in the way MMNS suggest, the methodology that philosophers of language have traditionally relied on is in deep trouble.

One prominent case in the literature is Kripke's Gödel case. Influenced by Robert Nisbet's holistic vs. analytic cognitive style distinction, MMNS hypothesized that EA individuals would be more likely than Westerner (W) individuals to have a descriptivist intuition regarding the case [Machery *et al.* (2004), p. B5]. MMNS focus on the following version of the case:

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? [MMNS (2004), p. B6].

The vignette presents a description widely associated with a name ('Gödel') that is (uniquely) satisfied by somebody (Schmidt) other than its original bearer (Gödel).

MMNS (2004) presented this vignette to North-American and Chinese individuals. They found that Chinese participants were less likely than North-American participants to answer B (29% vs. 58%). This result was replicated in the Tsu Ch'ung Chih case (32% vs. 55%), a case that is similar to the Gödel case, except for the fact that it uses names of Chinese individuals and tells a story about an astronomical discovery [see MMNS (2004), Appendix and Machery (2017), cap. 2 for discussion].⁴ MMNS take this as evidence that, regarding the semantics of proper names, EAs tend to have a descriptivist intuition, whereas Ws tend to have a causal-historical intuition.

The fact that a statically relevant amount of competent speakers ponder that John's uses of 'Gödel' are about Schmidt challenges the alleged representativeness of the anti-descriptivist intuition underlying Kripke's error argument. More generally, it challenges "the way philosophers of language go about determining what the right theory of reference is" [MMNS (2013), p. 620].

III. THE AMBIGUITY PROBLEM

One of the main objections against MMNS' project is that the Gödel prompt fails to distinguish "whom John intends to be talking about (or speaker's reference) and who the name John uses refers to, taken literally in the language he intends to be speaking (semantic reference)" [Ludwig (2007), p. 150]. Since only semantic intuitions are relevant to locate the correct theory of reference, MMNS' (2004) Gödel study poses no real threat to the use of intuitions as evidence. "The apparent conflict (...) might be explained by consistent answers to different questions" [Deutsch (2009), p. 455].

Machery's and colleagues' direct replies to the ambiguity problem can be summarized as follows:

1. "Since subjects are asked what John is talking about when he uses the name "Gödel", the question clearly bears on the reference of "Gödel" *qua* type rather than on any occurrence of this proper name" [Machery (2011), p. 129].
2. Since the story provides no contextual information that allows respondents to determine the protagonist's communicative intentions, it is unlikely that respondents understand the probe question as bearing on the speaker's reference of 'Gödel' [Machery (2011), p. 129; Machery & Stich (2012), p. 506].
3. Ludwig and Deutsch seem to assume that EAs are more likely than Ws to understand the question as asking about the speaker's reference of 'Gödel'. But there is no independent evidence in support of this assumption [Machery (2011), p. 129].

In my view, these replies are unconvincing. Firstly, (i) asking whom somebody "talks about" when using a name invites to consider what the individual does in *uttering* sentences containing the name. Thus the probe

question could be interpreted as bearing on possible *occurrences* of ‘Gödel.’ Although the name is *mentioned*, participants are asked to tell how John would *use* it. Besides, (ii) it is debatable that untrained individuals can distinguish linguistic and metalinguistic facts in a way that is relevant to what MMNS are trying to do; but, even if they can, it is difficult to imagine them saying something like: “Oh, the relevant name is mentioned in the prompt, so let’s forget all about the protagonist’s intentions regarding its uses.” This move towards abstraction, I think, requires expertise.

Secondly, the story tells about a speaker and his circumstances. Although the name is mentioned, participants are asked to ponder how John *uses* it. How does he use it? Well, we may come to believe that, since he has some scholarship, John intends to refer to the individual whose work undermined Hilbert’s program. Or we may come to believe that, since he is attentive to the way the mathematical community reacted to the theorem, he intends to refer to the individual who was officially credited for it. The story *does* provide contextual information, although it leaves underdetermined *what* John’s intentions are. Since survey respondents might figure out whom John intends to talk about, they might understand the probe question in terms of the speaker’s reference of ‘Gödel’ and so their answers may not correspond with their semantic intuitions.

Thirdly, EAs are in fact more prone to rely on speaker’s reference in reacting to the Gödel prompt. I will argue for this claim in section V.

IV. DISAMBIGUATION ATTEMPTS

Machery *et al.* (2015) attempted to rephrase the original vignette so as to avoid ambiguity. The new vignettes begin with the original story and invite respondents to opt between A and B, but under clarified circumstances:

Clarified Gödel case 1 (C1): When John uses the name ‘Gödel,’ *regardless of who he intends to be talking about*, he is *actually* talking about (...).

Clarified Gödel case 2 (C2): One night, John is sitting in his room, reviewing for his mathematics exam by going over the proof of the incompleteness theorem. After a while, he says to his roommate, ‘Gödel probably got a huge number of awards from mathematical societies [for the proof of the incompleteness theorem]’²⁵ When John utters that sentence, he is talking about (...). [Machery *et al.* (2015), pp. 72–73].

The question in C1 invites participants to overlook John's communicative intentions. C2, by contrast, explicitly states that John *intends* to refer to the theorem stealer. Both surveys replicated MMNS' original finding.⁶

Let's start with C1. There is, first, the problem that, ordinarily, speaker's reference and semantic reference coincide. If Emily talks about Churchill, then, pretty likely, she will be intending to refer to Churchill and she will be referring to Churchill in uttering sentences containing the name 'Churchill.'

Second, wiping away an intuition about Schmidt being the speaker's reference of 'Gödel' is one thing; having the intuition that Gödel is the semantic reference of 'Gödel' is quite another. The speaker may pick the causal-historical response by process of elimination.

Third, since the speaker's referential *intention* manifests itself through identificatory information, the *description* she associates to 'Gödel' fixes the reference of her *use* of 'Gödel.' Thus, in case of mistaken identity, she would likely say: "Oh, I was talking *about the individual who made the discovery* in claiming that Gödel such and such." It is difficult to imagine her saying: "Oh, I was saying something wrong *about Gödel* when I assumed such and such."

Fourth, since the vignette leaves underdetermined whether John intends to be talking about either the discoverer or the stealer of the theorem, it is not clear how survey respondents are to react to the 'Regardless...' clause and how they would proceed in order to fix the speaker's reference of 'Gödel.'

C2 is supposed to collapse the speaker's/semantic reference distinction. We know that Schmidt didn't receive an award for the discovery (after all, he was dead before the theorem was even published). So, John likely intends to talk about the theorem stealer when he makes the comment to his roommate.

About a quarter of W participants and about half of EA participants still picked the descriptivist response. Since the intuition about the speaker's reference of 'Gödel' is supposed to be in line with the causal-historical intuition, Machery *et al.* (2015) conclude that EAs tend to have a descriptivist intuition about the semantics of 'Gödel.'

Now, the fact that Schmidt is dead by the moment John talks to his roommate is consistent with John's intending to refer to Schmidt. For all we know, he could be mistakenly assuming *about the discoverer of the theorem* (as opposed to its stealer) that he is the individual who (probably) won the awards. Thus, the descriptivist response may express an intuition about speaker's reference.

V. CONTEXTUAL INFORMATION AND INTERPRETATION

Survey respondents adapt to the research situation by drawing on ordinary conversation and the corresponding rules, namely, Grice's maxims. The conversational norms license the use of contextual information to determine the meaning of the question and the intentions of the questioner. They also lay out the sort of answer that is to be considered relevant and appropriate [Schwarz (1995)].

People's cultural orientation (*e.g.*, the collectivist, relational orientation of EAs vs. the individualist, analytic orientation of Ws) affects processes known to be involved in survey answering [Uskul & Oyserman (2006), Schwarz *et al.* (2010)]. Respondents from different cultures interpret the probe question and weight the answer choices differently.

EAs in particular are more sensitive to a number of potential biases, some of which are particularly relevant in connection with the Gödel study.

- *Cooperativeness.* EAs are more likely to observe Grice's Maxims of Cooperation, "to attend to the common ground, and to take the questioner's knowledge into consideration." [Haberstroh *et al.*'s (2002), p. 323].
- *Courtesy.* In their desire to be politeness and well-mannered, EAs might lean toward the answer choice they think the interviewer considers correct or preferable [Iarossi (2006), pp. 35-36], especially in the presence of non-Asian questioners [Wuelker (1993), p. 167; see Jones (1993) for a systematic study on the impact of courtesy bias in survey research performed on South-East Asians].
- *Social desirability.* "[C]ollectivism is associated with a greater emphasis on interpersonal harmony and with less emphasis on individual opinions." [Johnson *et al.* (2005), p. 267]. EAs are more likely to answer probe questions in a way that will be assessed favorably by others, for they are "more sensitive to the social pressures emanating from the questionnaire" [Hofstede (2001), p. 218]. In comparison, Ws "highlight an individual's right of choice with utilitarian consideration, rather than any enforced social demand of deontological concern" [Hwang (2001), p. 806].

- *Perspective.* There is evidence that culture influences perspective taking. EA individuals have been found to be more sensitive to a speaker's perspective than W individuals. [Luk et al., (2012), Wu et al. (2013)].
- *Event segmentation.* There exists evidence that Asians are far better at detecting relationships and find it much more difficult to separate objects from their surroundings [see Wang (2009), p. 127 for discussion and references]. Wang's studies show that these culture-specific processes permeate recalling, attention and reading. EAs perceive objects and events as interconnected, identify fewer significant units in an ongoing or recalled situation and divide fictional stories and diary recall into fewer significant parts.

We have two problems here: 1) items the questioner takes to be perfectly clear or otherwise irrelevant for the answering process (*e.g.*, the questioner's cultural affiliation and the respondent's social orientation) might affect the response; 2) it is not a simple task to fix conditions for reliably predicting how a cultural difference may influence the phenomenon under study.

This is not to deny the relevance of MMNS' work. Ok, surveys operationalize a number of stimuli that are totally alien to what researchers want to find out. And, for worst, the impact of this operationalization varies with culture. Nevertheless, I don't think we can balk here at the claim that the Gödel case uniformly elicits an intuition about meaning in general. The most we can reasonably balk at here is, I think, the claim that the prompt uniformly elicits an intuition about *semantic* meaning in particular (by 'uniformly' I mean among *all* participants or a critical majority of them). Asking about the level of satisfaction with health professionals conjures up a range of interpretations that may deviate from the one the questioner has in mind (would you count your yoga instructor as a health professional?). But this is not to deny that people understand what is meant by 'health' and 'professional' so as to figure out what they are asked about. Similarly, casting doubts on the ability of survey participants in MMNS' study to understand what they are asked about (*i.e.*, names and name-using practices) would be a bit of Monday morning quarterbacking. I mean, if things were *that* tough, then there would be no point in asking lay people what they think about this or that and the methodology of social sciences would be a fiasco.⁷

I contend that, while the question MMNS asked to respondents is not ambiguous at the lexical level, it is ambiguous at the pragmatic level.

The question may *conversationally* convey different things, depending on the recipient's social orientation and cognitive style.

I grant that the Gödel study successfully tests a comprehension of reference. *But* the way EA participants track facts about the reference of 'Gödel' and proceed to elaborate a response involves deference to factors that, in the minds of W people, are probably secondary or irrelevant.

Since surveys are conversations and EAs are known to be more sensitive to the maxims that govern conversation (except when their social orientation requires otherwise), MMNS should be wary of the following:

Quantity/Redundancy. EA respondents are "more likely to notice the potential redundancy of their answers even in the absence of a lead-in that draws their attention to it" [Schwarz *et al.* (2010), pp. 181–182].⁸ To EA participants the probe question might ring redundant, for, semantically speaking, answer (B) seems to boil down to the platitude that 'Gödel' refers to Gödel, in the sense of being the name Gödel has. Needless to say, this platitude is assumed by MMNS. MMNS use 'Gödel' in their home language (in "suppose that Gödel was not the author of this theorem" and elsewhere) to talk about Gödel. And they mention 'Schmidt' in "A man called 'Schmidt,' whose body etc." to talk about Schmidt.

Now, of course, this is precisely what MMNS are trying to test: if Kripke's intuition is universally shared. Since evidence suggests otherwise, it is not trivially true – if it is even true – that 'Gödel' refers to Gödel. I'm not sure that lay people can conjure this up, especially when the name whose reference is under discussion is used referentially in an otherwise pretty standard way by people suspected of being experts in the field (the questioners). If MMNS are not expected to provide or require information they and their hearers already have or take for granted, then *MMNS' uses* (and mentions) of 'Gödel' might pragmatically convey, in the minds of EA respondents at least, that the probe question asks something other than what it supposedly literally asks.

Courtesy. The evidential adverbs 'actually' and 'really' (*cf.* "A man called 'Schmidt,' (...) *actually* did the work in question"; "the person who *really* discovered the incompleteness of arithmetic") evoke an epistemically favorable perspective on the part of MMNS. Both adverbs modify a verb that expresses an action performed by

Schmidt. The pragmatic effect of this kind of evidential devices is that of strengthening in the eyes of the recipient the authorial commitment to the utterance [Alonso-Almeida (2012), p. 26]. Since EA participants are known to be more attentive to the common ground, they are more sensitive to this pragmatic effect. Thus it would be natural to expect that, in their eyes, the descriptivist answer choice scores higher than the Kripkean one.

Social desirability. The probe question could be perceived by EA participants as “socially normative.” They might be inclined to interpret the Gödel prompt as involving speaker’s reference on the grounds that endorsing the – otherwise apparently obvious – answer to what they are literally asked is tantamount to crediting a suspected murderer and trickster for an important discovery in mathematics and philosophy. W individuals, by contrast, won’t probably care about the moral implications of their response, for they tend to be much less sensitive to the social impact of their opinions. (In fact, they are known to have a tendency to provide strong, potentially polemical opinions, with no concerns for social harmony).⁹

Since EAs engage in holistic cognition, MMNS should be wary of the following:

Perspective. EA participants would be inclined to read the story as involving speaker’s reference on the grounds that John’s perspective and the corresponding intentions are taken to be highly relevant. Since John knows nothing about the theft, the natural candidate for being the referent of the name *just is* the man whom he intends to refer when using the name, namely, the man who discovered the incompleteness of arithmetic (Schmidt).¹⁰

Event segmentation and attention. Ws’ focus on the autonomy of the self is hypothesized to bias Ws’ attention to the point that perception is “chronically centered on a goal-relevant object” [Kitayama & Murata (2013), p. 759]. Since culture-induced patterns of perception permeate reading practices, W participants might likely focus their attention on Gödel alone. By contrary, since EAs’ outward orientation toward the environment is hypothesized to bias EAs’ attention towards relations between items, EA participants might find that

Gödel's status and actions are not meaningful per se and that the story lacks a general drift unless we refer Gödel's achievements back to Schmidt. This cross-cultural difference in the process of making sense of the Gödel story might bias the responses obtained in favor of the descriptivist answer choice or the Kripkean answer choice, as appropriate.

VI. IF THE PRAGMATIC MEANING OF THE ORIGINAL GÖDEL QUESTION VARIES, THEN WHAT?

I think that MMNS can increase the reliability of their study and grant that they are uniformly testing a comprehension of semantic reference across cultures. Taking some minimal precautions may help them decrease the risk of misunderstanding. Here is some advice:

1. *Do not use 'Gödel,' just mention it; and do it as little as possible.* 'Schmidt' is mentioned once but is never actually used in the original vignette. 'Gödel,' by contrary, is both used (eight times!) and mentioned (two times). This insistence may anchor the semantic intuitions of some participants to the point of making the probe question look trivial. If you are trying to test how people use names, don't *you* use them, for otherwise you may be priming participants to identify the reference of names by disquotation.
2. *Do not use adverbs or intensifiers of any sort.* These devices may unwittingly bolster or lower the standard of the answer choice they appear in. The risk that adverbs alter the intended interpretation of the vignette and question is common wisdom among specialists who study question wording effects in surveys. One typical advice to questionnaire designer is to "avoid using intensifiers in question stems" [Gaskell *et al.* (1993), p. 502].
3. *Include interviewers from the same ethnic group as the EA respondents.* The chance of "deference" or "politeness towards a stranger" bias will likely increase among EA participants if all or most interviewers are from another ethnic group. Exaggerating a little, Wuelker [(1993), p. 167] points out that "any attempt at sending out non-Asians to interview Asians would be a fiasco. Asians are far too polite to tell a foreigner anything he might not like."

4. *Pose a story that is devoid of deontological blemishes.* Otherwise the questioner might be unwittingly lowering the standard of some of the answer choices in the eyes of EA participants.
5. *Avoid introducing considerations about the individual perspective of an embedded speaker.* Otherwise you could bias EA participants' attention and epistemic perspective towards one of the characters at the expense of the other.
6. *Avoid centering the line of the plot in one of the characters at the expense of the other.* Otherwise you may be biasing the way participants make sense of the plot and recognize meaningful events.

In line with these remarks, I propose the following vignette:

(*) Suppose a man called 'K. Schmidt' proved an important mathematical theorem known as the incompleteness theorem. He and his best friend, a man called 'K. Gödel', made a trip to pass the manuscript on to the Editor of a journal. Both of them tragically died during the trip back home. The Editor of the journal made an involuntary mistake while preparing the paper for publication: he wrote 'Gödel' instead of 'Schmidt.' Nobody ever noticed the mistake. Thus, people came to believe that the individual who proved the incompleteness theorem is a man called 'Gödel' who tragically died in a crash. Nobody ever heard about a man called 'Schmidt' in connection with the theorem.

When the name 'Gödel' is used, people talk about:

- (A) The person who proved the incompleteness theorem? Or
- (B) The person who was credited for the proof?

The problem with this vignette is that 'Gödel' seems to be guided by a definite description, just like 'Ibn Kahn' in Evans' Ibn Kahn story. Most lay speakers and even some advocates of Kripke's picture would agree that when talking about Ibn Kahn we are talking about the constructor of the proofs, even if 'Ibn Kahn,' the name that appears in the documents, is the name of the scribe who transcribed the proofs.

Another option is to adapt the following proposal to a vignette written by Devitt and Porot (D&P).

Students in astronomy classes in Hong Kong are told that a man called "Tsu Ch'ung Chih" first determined the precise time of the summer and

winter solstices. This is the only thing that typical Hong Kongers ever hear about this man. Now suppose that that man did not make the discovery he is credited with. He stole it from an astronomer who died soon after making the discovery. But the theft remained entirely undetected, so the man that Hong Kongers have been told about became famous for the discovery of the precise times of the solstices. [Devitt & Porot (2018), p. 1562].

D&P introduced some changes in the original *Tsu Ch'ung Chih* vignette. For instance, they used anaphoric devices and removed the character from the vignette. These changes go in the right direction (see remarks 1 and 5 above). However, D&P manifest no concern for cross-cultural issues: the *Tsu Ch'ung Chih* study they conducted is one in a number of monocultural studies D&P performed “on Americans” [Devitt and Porot (2018), p. 1575].

D&P use anaphoric devices because they think that the original vignette is inconsistent with (classical) descriptivism: in their view, the uses of ‘*Tsu Ch'ung Chih*’ in the vignette could only refer to *Tsu Ch'ung Chih* [see Devitt & Porot (2018), p. 1562].

But the point is not whether MMNS’ uses of ‘*Tsu Ch'ung Chih*’ in the vignette refer to *Tsu Ch'ung Chih*, but whom the name does refer to. And in order to experimentally determine whom ‘*Tsu Ch'ung Chih*’ refers to, it is important to prevent that MMNS’ uses of the name inadvertently bias participants’ responses.

Since W individuals have a relatively low sensitivity to the Maxim of Quantity, it is quite unlikely that participants involved in D&P’s study find it obvious that Hong Kongers refer to the thief when using ‘*Tsu Ch'ung Chih*.’ Chinese participants, on the contrary, would be quite prone to detect a potential redundancy in the very use of ‘*Tsu Ch'ung Chih*.’

But the excessive use of anaphora can be damaging. It has the effect of centering the entire line of the plot in one of the characters (see remark 6 above): the name of the astronomer who made the discovery is not even mentioned in the new vignette. Thus participants’ attention is particularly directed towards the thief. This has culture-specific consequences (see the last paragraph of section 5 above and remark 6 above) that must be explored before extending the new *Tsu Ch'ung Chih* study to non-W people.

Evidently, there is a lot of work to do to solve the ambiguity problem. Exploring all the relevant precautions that should be implemented to secure the reliability of future studies in cross-cultural settings is a task that will surely demand brand-new efforts.

VII. CONCLUSIONS

MMNS claim to have revealed an important flaw in philosophers' reliance on intuitions as evidence. MMNS' studies seem to show that a philosophical intuition traditionally believed to be universally shared (the Kripkean intuition regarding the Gödel case) is culture-specific.

In reply, it has been argued that the probe question MMNS posed could be misunderstood on the grounds that the vignette might be interpreted as involving speaker's reference.

In this paper I addressed this worry and argued that the problem is not fatal to what MMNS are trying to do. I showed that, in comparison with Ws, EAs are more likely to interpret the Gödel vignette as involving speaker's reference, but I also sketched some course of action MMNS could take to prevent this misunderstanding.

While the cross-cultural study of lay people's intuitions about philosophical matters could be highly relevant, researchers in the field should be aware that the very process of surveying might trigger a number of culture-induced differences that could shape the way participants interpret and answer what is being asked.

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NOTES

¹ I will use 'MMNS' to refer to both Machery *et al.* (2004) and Machery *et al.* (2013).

² It is worth mentioning that many philosophers think that intuitions are not used as evidence [Cappelen (2012), Deutsch (2015), Machery (2017)].

³ It is not clear what intuitions are. I'll be assuming here that they are spontaneous and pre-theoretical judgements; by 'spontaneous' I mean, minimally, that they do not result from arguments.

⁴ Besides the two vignettes inspired by Kripke's Gödel case, MMNS (2004) presented participants with two vignettes inspired by Kripke's Jonah case. MMNS (2004) found no relevant cross-cultural differences in intuitions about Jonah cases; Beebe & Undercoffer (2016) did. [See MMNS (2004), p. B7 and Machery (2017), pp. 50–51 for discussion].

⁵ The bracketed emendation yields a “Clarified” version of the so called “Award Winner Gödel Case.”

⁶ 61.2 percent of East Asian participants picked the descriptivist answer in C1, whereas 59.5 percent of W participants picked the causal-historical answer choice. In C2 73.9 percent of W participants and 56.1 percent of EA participants picked the causal-historical answer choice [Machery *et al.* (2015), pp. 70, 73].

⁷ Cullen (2009) claims that lay people’s response to philosophical surveys could be grounded on philosophically irrelevant pragmatic cues. While I grant that experimental philosophers should take some precautions, I also think that there is something of an overreaction going on in Cullen’s remarks. I mean, it is hard to deny that, for example, people in MMNS’ study understand – albeit in a somewhat loose way – that they are asked about a name and how people use it. After all, some minimal competence in tracking facts about names and name-using practices is necessary for everyday life. This competence may not be as fine-grained as philosophers would want it to be, but it seems to be in place.

⁸ Haberstroh *et al.*’s (2002) studies show that chronically (Chinese) or temporarily (German) collectivistic-primed individuals are much more sensitive to redundancies than chronically or temporarily individualistic-primed individuals.

⁹ One of the referees pointed out that this remark is inconsistent with Li *et al.* (2018). Li *et al.* made a comparative research of the referential intuitions of children and adults in the U.S.A. and China and claim to have found that the cross-cultural difference is already in place at age 7 or so. Importantly, they replicated MMNS’ finding by posing to children Gödel-style vignettes that are devoid of any morally sensitive content. This, of course, goes against my idea that social orientation biases the responses provided by one of the target groups (EAs) in favor of the descriptivist answer choice. The story presented to children is about a race won by a dog (Max) but mistakenly believed to have been won by another dog (Pickles). One day, Tom and Emily are asked by their father if they know who won the race. Tom replied it was Blaze (Blaze actually ranged third). Emily replies that it was Pickles. Since Tom is obviously wrong, the critical question is whether Emily is right or wrong. Emily’s statement is true if ‘Pickles’ gets its reference descriptively. It is false if ‘Pickles’ picks out the original bearer of the name. If anything, this vignette elicits intuitions about knowledge. The participants are invited to track facts about what Emily knows to be the case. The point is how to interpret this request. Li *et al.* acknowledge that the difference in responses may be due to a difference in perspective. The participant may base her response in what Emily is said to have learnt in school to be the case, or in what, unbeknownst to Emily, is actually the case. What about the comparative study performed on adults? It involves moral blemishes, for the vignette tells a story about an individual who stole a computer and claimed credit for a discovery reported in the computer.

¹⁰ Sytma *et al.* (2015) showed that perspectival ambiguity does not have a major impact on the responses of EA participants. Still EA participants were considerably less likely than W participants to opt for (B).

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