constructive empiricist's attitude towards mathematical objects (Dicken 2006) and an appropriate constructive empiricist account of modality (Dicken 2007).[1]

Churchill College
University of Cambridge
Cambridge CB3 0DS
ped21@cam.ac.uk

References

Dicken, P. 2006. Can the constructive empiricist be a nominalist? Quasi-truth, commitment and consistency. *Studies in History and Philosophy of Science* 37: 191–209.

Dicken, P. 2007. Constructive empiricism and the metaphysics of modality. *The British Journal for the Philosophy of Science* 58: 605–12.

Dicken, P. and P. Lipton. 2006. What can Bas believe? Musgrave and van Fraassen on observability. *Analysis* 66: 226–33.

Muller, F.A. and B.C. van Fraassen. 2008. How to talk about unobservables. *Analysis* 68: 197–205.

Musgrave, A. 1985. Constructive empiricism and realism. In *Images of Science: Essays on Realism and Empiricism with a Reply by B. C. van Fraassen*, eds. P.M. Churchland and C.A. Hooker, 196–208. Chicago: Chicago University Press.

van Fraassen, B.C. 1980. *The Scientific Image*. Oxford: Clarendon Press.

van Fraassen, B.C. 1985. Empiricism and the philosophy of science. In *Images of Science: Essays on Realism and Empiricism with a Reply by B. C. van Fraassen*, eds. P.M. Churchland and C.A. Hooker, 245–308. Chicago: Chicago University Press.

Against semantic multi-culturalism

GENOVEVA MARTÍ

Kripkean anti-descriptivism about proper names has recently come under attack. The attack is not the result of theoretical considerations: a group of philosophers who practice what has come to be known as *experimental philosophy*, E. Machery, R. Mallon, S. Nichols and S. Stich [MMNS], contend that there is empirical evidence casting doubt on the claim that proper names are not descriptive. MMNS's conclusions and, specially, the

method by which they have been reached have, we are told, 'rudely challenged the way professional philosophers think of themselves' (Appiah 2007).

MMNS argue (2004 and forthcoming) that intuitions as regards how the reference of a proper name is determined vary from culture to culture. Their argument is based on an experiment that compares the intuitions about proper name use of a group of fluent English speakers in Hong Kong with those of a group of non-Chinese American students. On the basis of the result MMNS conclude that whereas Westerners are prone to rely on intuitions that match the causal-historical picture proposed originally by Donnellan and Kripke, East Asians appear to be driven by pure old-style descriptivism. It is tempting to conclude that MMNS's results suggest that in some cultures speakers use names according to what is predicted by descriptivist theories, the very same theories that we have been taking as refuted by Kripke. If so, the alleged intuitions that inspire Kripke's stand on proper names are circumscribed to a cultural group, and the theory of reference that emerges from them is not a general theory of reference for proper names. The causal-historical picture is but one way to explain how names connect to their referents and room needs to be made for classical descriptivism.

I do not think that such a conclusion is correct, for the experiment MMNS rely on does not prove what they purport it to prove.

The story that MMNS present to the East Asian and the Westerner groups is modelled on the Gödel case from *Naming and Necessity* (Kripke 1980: 83–92):

> 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.

Afterwards, the two groups are presented with the following question:
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 report that most Westerners choose (B) as an answer, whereas most East Asians choose (A). From this MMNS conclude that East Asians, unlike Westerners, are in fact guided by descriptivist intuitions since in their view, according to the story, when John uses the name 'Gödel' he refers to the individual that satisfies the description 'the person who proved the incompleteness of arithmetic', a description that he associates with the name 'Gödel'.

MMNS stress that the story used in their experiment is very close to Kripke's own description of the Gödel case. And indeed it is. I think that the problem with the experiment lies not in the story itself. It lies in the question MMNS ask the participants.

The question, I deem, is inadequate, for it does not test the right kind of intuitions. It does not test the intuitions that could allow us to tell whether or not the participants in the experiment use names descriptively; rather the question tests their opinions as regards which theory of reference determination they think is correct. Presenting the participants in the experiment with the Gödel/Schmidt scenario and asking them whether John talks about (i.e. *refers*) to one or another of two people, described under alternatives A and B, when he uses 'Gödel', invites the participants to reflect on how, in their opinion, reference is determined, and so the question MMNS pose tests opinions as regards which way of thinking, i.e. theorizing, about reference determination is the correct one.[1]

MMNS test people's intuitions about *theories* of reference, not about the *use* of names. But what we think the correct theory of reference determination is, and how we use names to talk about things are two very different issues.

In testing people's intuitions, I think it is important to distinguish carefully between observations that will reveal how people do things (in this case, use names) and observations designed to reveal how they think they do them. The latter will only provide grounds to determine how they are disposed to theorize about their practices, i.e. predict which theories about what they do they are disposed to favour. If we want to test, for instance, whether people use modus tollens when they reason, it may not be the best strategy to ask them, 'John knows that not B, and he knows that if A then B, should John conclude that not A?' That question prompts people to reflect on the

---

1 MMNS performed two different experiments, one using Kripke's Gödel case and another one using the Jonah story. The form of the question asked is the same in both experiments, and so I think they both suffer from the same methodological flaw. See their 2004 paper for a discussion of the Jonah experiment.

principles they regard as correct – their answers will tell us something about their theory of reasoning; but they won't tell us how they really reason. Similarly, MMNS's metalinguistic question prompts people to reflect on someone's name-using practices (John's) to answer how they think reference is determined; their answer tells us only what kind of theory of reference they are disposed to accept as the correct theory of reference determination for names.

The use of metalinguistic questions is in some cases right to the point. For instance, syntacticians ask participants in experiments to judge the grammaticality of certain sentences. But observe that syntacticians are testing precisely the theoretical intuitions of subjects; they want to elicit responses that provide evidence for what subjects regard as the correct grammars. Unlike anthropologists, syntacticians are not interested in how people in real life use language, sometimes bending the very rules they regard as correct. In the case that occupies us here I surmise that the point of the experiment – if its results are meant to change anyone's view as regards the general adequacy of the causal-historical picture of names – is to determine whether the East Asian participants *use* names descriptively. I do not think MMNS should be satisfied with an experiment that proves that two groups of people disagree as regards whether one or another *theory* of the reference of proper names is correct. The latter is not entirely surprising. Wide divergences of a theoretical nature as regards what the correct semantic theory for proper names is are common; and they show nothing at all about the way in which people do use proper names. It is safe to suppose, I presume, that John Stuart Mill and Bertrand Russell did not differ in the way in which they used (ordinary) proper names to talk about things. Yet, they differed, and dramatically so, when it came to giving a theoretical explanation of what an ordinary proper name refers to and how: Russell was a descriptivist and Mill was, well, a Millian.[2]

Moreover, such theoretical disagreement is not a product of culture. Frege, Russell and a host of philosophers of language endorsed a descriptivist theory of the reference of proper names. Even in the post-Kripke era some Westerner semanticists have endorsed variants of descriptivism and claimed that they do not fall prey to the standard anti-descriptivist objections. To find people whose theoretical intuitions diverge from Kripke's we do not need to set up an experiment in Hong Kong. Asking some of our colleagues will suffice.[3]

2 MMNS are not alone in misplacing the intuitions that should be tested. The confusion between considerations that, if correct, would provide evidence for a given theory and data that are theoretically tainted is rampant in semantics.

3 Anthony Appiah (2007), hails the new brand of *experimental philosophy* practiced by MMNS, but he voices also a related concern: '... here's the thing about the theory of reference: Versions of both views – Kripke's and the one he was challenging – have plentiful adherents among philosophers ... the right answer, if there is one, isn't necessarily to be determined by a head count.' I think Appiah's concern is justified. But the reason

Just an aside: at this point, it is tempting to argue that the experiment provides, ironically, evidence that East Asians use names as predicted by Kripke. If East Asian participants use names descriptively, one might argue, they couldn't possibly understand the story. For they would think that, by asking them to suppose that Gödel was not the author of the theorem, the experimenter was in effect asking them to suppose that the author of the theorem was not the author of the theorem.

However, I think it's not completely clear that the objection applies. It is possible that the story MMNS present, even if told in the indicative, was known to be a contrary to fact tale by the East Asian participants. MMNS do not tell us much about the background knowledge of the participants, but on the assumption the participants know the story to be just a counterfactual tale, the fact that they are not puzzled by the sentence 'suppose Gödel didn't prove the theorem' is consistent with the supposition that East Asians use the description, not as a synonym, but as a reference fixer for the name.[4]

MMNS do not tell us enough about the set up of the experiment nor about the background knowledge of the participants about Gödel (factors that may affect how they interpret the experimenter's use of 'Gödel') to be able to assess the impact of the fact that the participants understand the sentence 'Suppose that Gödel was not the author of this theorem', or to determine whether the alleged descriptivist intuitions elicited by the experiment are supposed to show that East Asians use names as synonyms of definite descriptions or rather that they use names as having their reference fixed by description. But all this is beside the point, for the experiment does not provide any evidence at all about name use.

If the experiment doesn't indicate that East Asians use names descriptively, what does it show? I think that the results of the experiment, nevertheless, do show something: they suggest that East Asians appear to be in principle better disposed towards a descriptivist *theory* of proper names. This result seems to be indeed in line with the Nisbett et al. (2001) work mentioned by MMNS, and their conclusion that East Asians are in general less prone to favour causal explanations of phenomena. But, as I have argued, this certainly does not provide any support for the conclusion that one has to make room for the fact that in some cultures the mechanism of reference may well be descriptive.

If the disposition revealed by a significant amount of East Asian participants in the MMNS experiment is towards a kind of theoretical explanation,

---

it is justified is that MMNS are only testing who gives support to a descriptivist theory of the reference of names and who gives support to a causal-historical approach. If the test really produced results about how the different groups *use* proper names, a simple head count would be extremely significant. It would indeed show that the reference-fixing mechanism, for some groups, is descriptive. But MMNS do not show that.

4   I'm grateful to John Norton and Robert Stalnaker for comments on this issue.

not towards a form of use, it may well be that the participants in the experiment are wrong in thinking that descriptivism provides the correct explanation of their own name using practices; perhaps if they are given a test that does test their intuitions about the use of proper names, they will in the end endorse Kripke's approach. How can we tell? Here is a proposal for a test which, although not decisive, is, I contend, a step in the right direction: in order to determine whether users of names in the two experimental groups use or don't use 'Gödel' according to what is predicted by the causal-historical picture, it would be best if the end of the story, and the question asked, went along the following lines:

> One day, the fraud is exposed, and John exclaims: 'Today is a sad day: we have found out that Gödel was a thief and a liar'.

> What do you think about John's reaction?

Now, people who use names descriptively should balk at John's exclamation. If the story brings about the intuition that 'Gödel' refers to the person who proved the theorem, John's reaction should be simply incomprehensible. Alas, after so many years of being robbed of his due credit, John is now adding insult to injury by declaring the poor man a liar and a thief! But if, wrapped in the story, the participants can understand John's outrage, even if they disapprove of the strong terms in which he expresses himself, then we should conclude that their intuitions incline them to think that John's uses 'Gödel' according to what Kripke's view predicts, i.e. they understand the use John makes of 'Gödel' to refer to Gödel.

It is not my aim to argue here against the brand of experimental philosophy practiced by MMNS. I agree that philosophers' use of armchair intuition testing makes it often difficult to distinguish raw intuitive from theoretically biased data. So we probably need more real life observation to get at the core of the intuitions that constitute the input for the philosopher's critical reflection. But our observations should collect the right data. In the case at hand, I contend that a test along the lines I propose here brings us closer to the kind of test that should have been performed in order to determine whether people use names descriptively or according to the causal-historical picture. My proposed test-question, by itself, still falls short from providing a decisive test, so it may not be exactly what should be presented in a well-designed experiment.[5] But, in any case, whatever final form the question has, it should

---

5 Among other things, the test needs to be fleshed out. Whether the participants have background knowledge about the supposed referent of the name, and whether the story is to be interpreted as a counterfactual or as a pretend actual world are two crucial issues that should be very clear in a well designed experiment.

be a question that tests how people use proper names, not how they theorize about them.[6]

ICREA & Universitat de Barcelona
Montalegre 6-8, 4th floor
Barcelona 08001, Spain
gmarti@ub.edu

References

Appiah, A. 2007. The new new philosophy. *The New York Times Magazine*, December 9, 2007. http://www.nytimes.com/2007/12/09/magazine/09wwln-idealab-t.html?_r= 2&oref=slogin&oref=slogin

Donnellan, K. 1970. Proper names and identifying descriptions. *Synthese* 21: 335–58.

Kripke, S. 1970/1981. *Naming and Necessity*. Cambridge, Mass.: Harvard University Press.

Machery, E., R. Mallon, S. Nichols and S. Stich. 2004. Semantics cross-cultural style. *Cognition* 92: B1–B12.

Mallon, R., E. Machery, S. Nichols and S. Stich. (forthcoming). Against arguments from reference. *Philosophy and Phenomenological Research*.

Nisbett, R.E., K. Peng, I. Choi and A. Norenzayan. 2001. Culture and systems of thought: holistic vs analytic cognition. *Psychological Review* 108: 291–310.

Truly blue: an adverbial aspect of perceptual representation

MOHAN MATTHEN

It commonly occurs that one person sees a particular colour chip B as saturated blue with no admixture of red or green (i.e. as 'uniquely blue'), while another sees it as a somewhat greenish blue. Such a difference is often accompanied by agreement with respect to colour matching – the two persons may mostly agree when asked whether two chips are of the *same* colour, and this may be so across the whole range of colours. Asked whether B is the same or different from other chips, they mostly agree – though they continue to disagree about whether B is uniquely blue. I shall argue that in such cases neither individual misperceives what colour B is. They differ, rather, in *how* they perceive the colour of B.