The non-Italian pope¹

Bjørn Jespersen

Czech Academy of Sciences, Prague VŠB-Technical University of Ostrava

Die stillschweigenden Abmachungen zum Verständnis der Umgangssprache sind enorm kompliziert. Tractatus §4.002

A Vatican watcher utters assertorically the molecular sentence

(*) "He is usually an Italian, but this time he is not."

The reporter does so on 16 October 1979. On that day Karol Wojtyła was sworn in as John Paul II. He was the first Pole ever to become pope. He was also the first non-Italian pope since 1523. This explains the reporter's 'but' to highlight a surprising exception to a long-standing practice.

(*) is inspired by, rather than a mere rephrasing of, an example launched by Kijania-Placek in (2011). Her example is "He is usually an Italian, but *he* isn't", with emphasis on the second occurrence of 'he' for deictic demonstration. Kijania-Placek's own acknowledged source of inspiration is Recanati's "He is usually an Italian, but this time they thought it wise to elect a Pole". All three sentences are uttered in the context sketched at the outset.

The question I wish to address here is whether (*) constitutes a counterexample to the template for analyzing Nunberg-style, descriptively used indexicals I presented in (2011).² The verdict is that the template

¹ The paper was supported by Grant Agency of the Czech Republic Project 401/10/0792 *Temporal Aspects of Knowledge and Information*. I am indebted to Marián Zouhar, Marie Duží, and Katarzyna Kijania-Placek for valuable comments on earlier drafts that improved the quality of this paper. Kijania-Placek informed me that the version of "He...he..." that appeared in her (2011) lacks the emphasis on the second 'he'. "He...he..." and "He...he..." obviously have different meanings (though it is less clear exactly what their respective meanings may be).

² The original source on descriptively used indexicals is Nunberg (2003).

as it stands would fail as an analysis of (*), but that a reformed variant is able to offer an adequate analysis.

If we apply the unreformed template to (*), we end up with this invalid inference, as desired:

- (1) Usually, if somebody is the pope then they are an Italian
- (2) He is the pope
- (3) Usually, he is an Italian

The inference is structurally like the modal fallacy of necessitating the consequent, embodying an invalid switch from modality *de dicto* to modality *de re*.³ On a logical reconstruction, a hearer setting out to interpret the first conjunct of (*) performs a bit of reverse engineering by factoring (3) out into the two sentences figuring as premises. The hearer figures out that the speaker has performed an invalid substitution of 'he' for 'somebody' inside the scope of 'Usually' to generate the warped sentence "Usually, he is an Italian".

Here is why the solution I applied to "Traditionally, I am entitled to a last meal" in (2011) does not extend to (*) without alteration. If we substitute 'John Paul II' for 'he' in (2) then (1) and (2'), "John Paul II is the pope", yield (3'), "Usually, John Paul II is an Italian", when we apply the above template. But, of course, (*) is not to the effect that John Paul II is an Italian, whether usually, occasionally, rarely or never. In the case of "Traditionally, I am entitled to a last meal" it is uncontroversial that the indexical in question ('I' as it happens) picks out an *individual* (namely the speaker facing the firing squad). The condemned prisoner speaking invokes the tradition that condemned prisoners are entitled to a last meal to strengthen his request for one last meal. In (*) it is obvious that in "Usually, he is an Italian" the indexical does not pick out an individual. So the analogy is lost.

Since the first occurrence of 'he' does not pick out an individual, so nor should the second occurrence of 'he', as soon as we wish the two occurrences of 'he' to share the same semantic value on account of their occurring within the same context. Yet there appears to be a ten-

³ Kijania-Placek allows "He is an Italian" as an alternative conclusion (Kijania-Placek 2011, 229), which misses the point about a singular term, like 'he', occurring inside the scope of an adverb that expresses generality (though not universality), like 'usually' or 'traditionally'. This alternative conclusion fits instead the template of standard examples of non-monotonic reasoning: Typically, if *x* is a bird then *x* can fly; *a* is a bird; therefore, *a* can fly.

sion built into (*). The apparent tension is exactly that the two instances of 'he' seem not to share the same semantic value. One would expect, naïvely, that when confronted with (*) one must interpret the first 'he' deictically as harpooning a particular male individual in one's vicinity and afterwards interpret the second 'he' anaphorically as picking out whoever was picked out by the first 'he'.

But this strategy is not an option, for the first 'he' obviously does not harpoon a particular male individual. In particular, we do not want our analysis to predict that some particular male individual is in the eccentric habit of flitting between being an Italian and being a non-Italian, currently being the latter. This is, I suppose, the core of the rationale for turning to a Nunberg-style analysis. This sort of analysis has the virtue of staying close to actual natural language, but arguably the vice of introducing an additional pragmatic category (the descriptive use of indexicals) that may blur the underlying logical structure.

Where do we go from here? I suggest that 'he', as it occurs in the first conjunct of (*), does not pick out an individual, but an intensional entity.⁴ Kijania-Placek maintains that it picks out a property; I will argue below that both its instances pick out an *individual role* (an individual-in-intension). An individual role will be modeled as a function from possible worlds to a partial function from times to individuals, such that at a given world/time pair of evaluation the role returns at most one individual. I will develop the suggestion within my background theory of Transparent Intensional Logic (TIL), keeping jargon and formalism to a minimum.⁵

⁴ I follow Kijania-Placek in matching 'but' with '^', which amounts to 'reducing' an intensional connective to an extensional connective. Hence I refer to the two sentences connected by 'but' as 'conjuncts'. 'But' denotes a binary function inputting two propositions and outputting a third, while '^' denotes a function inputting two truth-values and outputting a third. Nothing about (*) hinges on 'but' as opposed to '^', though, as far as 'he' is concerned. In TIL *but* would be a function (*in casu* a relation-in-intension) that, relative to a possible world as index, takes a possible-world proposition is true whenever the first proposition is true. See Materna (2004, 118-119) concerning *whenever* ("Whenever there is lightning thunder can be heard"; Materna's example) and progressive conjunction ("In the morning I put on my trousers and I put on my shoes"; my example).

⁵ The central references are Duží *et al.* (2010, §2.5.1, esp. p. 212) for the modifier *Frequently*, (ibid., §2.5.2) for tenses, (ibid., §2.5.2.3) for the temporal *de*

The sentence I am going to analyze is not (*) as it stands, for the correct scope of *Usually* needs to be made explicit. The revised analysandum becomes, in the first instance:

"(Usually, he is an Italian) \land (he is not)"

Furthermore, the contrast between what is usually and what is currently the case is not made syntactically explicit, for 'this time' lacks a counterpart in the new analysandum. In TIL temporal adverbs like 'this time', 'currently', 'now' or temporal modifiers like 'present' and 'incumbent' (as in 'the present King of France') denote the identity function from times to times, taking whatever moment is current to itself. Instead, for a deeper and more detailed analysis we should insert a present-tense operator in the second conjunct. We would then have to also insert a tense operator in the first conjunct. These details would be important for a full analysis, but here I am merely concerned with the semantics of 'he', and so I will employ an atemporal copula.

In both conjuncts a property (the property of being Italian) is predicated of somebody. But in one conjunct the role of pope occurs *de dicto* and in the other conjunct it occurs *de re.*⁶ In the first conjunct the property is predicated of a string of individuals, namely all of those individuals who at some point occupied the role of pope. The truth-condition associated with the first proposition is that the proposition that the pope is an Italian be usually true. This is tantamount to almost all popes in the past having been Italians. The truth-condition associated with the second proposition is that the incumbent pope – i.e. whatever individual, if any, occupying the role of pope at the time of uttering (*) – be an Italian.

dicto vs. the temporal *de re*, and (ibid., §2.6) for occurring with supposition *de dicto* and *de re*.

⁶ I am pretending, for ease of exposition, that it is intensions, and not TIL constructions, that occur with supposition *de dicto* or *de re*. I am also pretending that I am not analyzing propositional constructions, but propositions directly. This is fairly innocuous here, since what is important is the propositions that are constructed, and not how they are constructed. A final simplification is that I do not Trivialize the constructional constituents. E.g. instead of '⁰*Pope*_{wt}' I simply write '*Pope*_{wt}'. Again, this is innocuous, because we are within the simple type theory and have not ascended into the ramified type hierarchy where constructions are themselves objects of study. See Duží *et al.* (2010, p. 52, def. 1.7).

The analysis of the second proposition is straightforward. "The pope is not an Italian" is canonically formalized thus:

 $\lambda w \lambda t \neg [Italian_{wt} Pope_{wt}]$

The extensionalized property $Italian_{wt}$ is the set of Italians at the world/ time pair chosen as index of evaluation, and the extensionalized role $Pope_{wt}$ is the individual (if any) occupying that role at that same world/ time pair. The functional application (symbolized by square brackets) of that set (a characteristic function) to that individual (if any) yields a truth-value, which ¬ converts into the opposite truth-value, and that truth-value is functionally abstracted over to yield a possible-world proposition. In TIL such a proposition is a function from worlds to a partial function from times to truth-values. That proposition cannot figure as functional argument of the truth-function \land , but its extension can. So we extensionalize the proposition to obtain a truth-value:

 $[\lambda w \lambda t \neg [Italian_{wt} Pope_{wt}]]_{wt}$

The analysis of the first proposition is the tricky bit. However, it maps entirely onto the analysis of "Frequently, Henry VIII's wife is sick" offered in Duží *et al.* (2010, p. 212). The truth-condition expressed by that sentence is that the proposition that Henry VIII's wife is sick be frequently true. Where an interval is typed as a set of times, *Frequently* is a temporal modifier that inputs time *t* as index of evaluation and returns the set of intervals that are frequent with respect to *t*.

Stipulation will fix how often an event type needs to occur to qualify as frequently occurring. Without such a stipulation we cannot lay down exact truth-conditions for "Frequently, …", "Usually, …", "Almost all…", etc. *Usually* is exactly similar to *Frequently*. It takes *t* to the set of intervals that qualify as usually occurring with respect to *t*.

To break it down,

 $\lambda t'$ [Italian_{wt'} Pope_{wt'}]

is the interval during which the proposition that the pope is an Italian is true. Then apply *Usually* at *t* to that interval to obtain a truth-value:

```
Usually, [\lambda t' [Italian_{wt'} Pope_{wt'}]]
```

The truth-value is 1 if it is true at t that usually the role of pope has an Italian occupant, and 0 if not. We abstract over w, t to obtain the proposition that it is usually the case that the pope is an Italian:

The non-Italian pope

 $\lambda w \lambda t [Usually_t [\lambda t' [Italian_{wt'} Pope_{wt'}]]]$

Again we extensionalize the proposition to obtain a truth-value:

 $[\lambda w \lambda t [Usually_t [\lambda t' [Italian_{wt'} Pope_{wt'}]]]]_{wt}$

To complete our analysis, we run the two extensionalized propositions together and λ -reduce to obtain the final analysis of "(Usually, the pope is an Italian) and (the pope is not an Italian)":

 $\lambda w \lambda t [[Usually_t [\lambda t' [Italian_{wt'} Pope_{wt'}]]] \land \neg [Italian_{wt} Pope_{wt}]]$

This proposition is the set of world/time pairs at which it holds that ((usually, the pope is an Italian) and (the pope is not an Italian)). If October 16, 1979 is your time of evaluation you check whether almost all popes prior to that day were Italians and whether the pope on that day is not an Italian.

Both truth-conditions, as a matter of historical fact, happen to be satisfied. So the proposition above happens to be true. The Vatican watcher spoke the truth when he uttered (*), although he did so in a convoluted manner that takes a bit of unfolding. My take on (*) is that it is basically a snippet of sloppy speech, just like "Traditionally, I am entitled to a last meal". Both phrases are catchy, for sure, and we do manage to tease out the meaning, provided we are prepared to meet the speaker at least halfway. So there is room, I suppose, for (*) in actual colloquial speech.

The Vatican watcher's carelessly phrased statement is careless because it rides roughshod over the *de dicto/re* distinction. "He is usually an Italian", in the context of (*), is intended to express what Kijania-Placek calls a general proposition and what I would call here an instance of predication *de dicto*: in almost all the historical cases so far the office of pope had an Italian occupant. The Vatican watcher uses 'he' instead of 'the pope', deploying (*) as a snappy shorthand for the more pedestrian-sounding

"Usually, the pope is an Italian, but this time the pope is not an Italian."

The Vatican watcher discharges a fair amount of hermeneutic work onto his audience by uttering (*), even when it is understood from the pragmatic context both by speaker and hearer that there is some reference or other to popes going on. On my logical reconstruction, the speaker requires his audience to figure out that *he* is a variable ranging over individual roles, that its value in the context of (*) is *Pope*, and that the first occurrence is *de dicto* while the second is *de re*. This is the gist of my answer to Kijania-Placek's question: "what is the mechanism by which the hearer goes from the conclusion to the intended meaning?" (Kijania-Placek 2011, 229.) Different theories will offer different accounts of how the hearer successfully coaxes out the meaning conveyed by (*) in that particular context of utterance. Basically, it is up to each of us to find our own way from (*) to the intended meaning. Above I have attempted to spell out how I found my way from

"He is usually an Italian, but this time he is not"

to

$\lambda w \lambda t [[Usually, [\lambda t' [Italian_{mt'} Pope_{mt'}]]] \land \neg [Italian_{mt} Pope_{mt'}]]$

To summarize, neither in "Usually, he is an Italian" nor in "He is not an Italian" does 'he' denote an individual. In both cases 'he' denotes the role of pope, denoted as '*Pope*'. In both cases *he* occurs extensionalized, to yield an individual of whom to predicate *Italian*_{wt}. But in "Usually, he is an Italian" *he*_{wt} occurs *de dicto* with respect to the temporal parameter *t*', and in "He is not an Italian" *he*_{wt} occurs *de re*. My final analysis is of "Usually, the pope...and the pope..." instead of "Usually, he... and he...", because the meaning of the former sentence is what the Vatican watcher seeks to draw his audience's attention to.

Department of Logic Institute of Philosophy Czech Academy of Sciences Jilská 1 110 00 Prague 1 Czech Republic

Department of Computer Science FEI VŠB-Technical University of Ostrava 17. listopadu 15 708 33 Ostrava Czech Republic bjornjespersen@gmail.com

References

- Duží, M. JESPERSEN, B. MATERNA, P. (2010): Procedural Semantics for Hyperintensional Logic. Foundations and Applications of Transparent Intensional Logic. Berlin: Springer.
- JESPERSEN, B. (2011): Traditionally, I am entitled to a last meal. *Organon F* 18, 5-13.
- KIJANIA-PLACEK, K. (2011): He is usually an Italian, but he isn't. *Organon F* 18, 226-34.

MATERNA, P. (2004): Conceptual Systems. Berlin: Logos.

NUNBERG, G. (1993): Indexicality and deixis. Linguistics and Philosophy 16, 1-43.