

## ‘Descriptive’ Indexicals

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[5] and [2] have argued forcefully that so-called ‘descriptive’ uses of indexicals motivate a revision of standard indexical theories; [2] even uses these data to claim that demonstrative indexicals contribute definite descriptions to logical form. I contend, however, that these data are perfectly compatible with Kaplan-style theories of indexicals and in fact exhibit compositional, rather than character-level, phenomena. In this talk, I present an account of these compositional phenomena, which I call *intensional reconstruction* (IR) and *quantificational coercion* (QC).<sup>1</sup>

**The Data:** IR can arise when an indexical interacts with an intensional operator and results in a descriptive reading of the indexical. Imagine (1) uttered by the current Speaker of the U.S. House.

(1) If more Republicans had won the last election, *I* might have been conservative.

The relevant reading of (1) can be roughly captured by replacing *I* with the definite description *the Speaker of the House*. QC can arise when an indexical interacts with a quantificational adverb and also results in a descriptive reading. Imagine (2) uttered on the Tuesday before Thanksgiving:

(2) *Tomorrow* is always the busiest day to travel.

It doesn’t make sense to make a habitual claim like (2) about a particular day; *tomorrow* in (2), like *I* in (1), is understood descriptively as *the day before Thanksgiving*. Correct analyses of (1) and (2) are not forthcoming from theories of indexicals, like [4], that hold that utterances of *I* and *tomorrow* must rigidly pick out the agent and day of the utterance, respectively.<sup>2</sup>

**My Proposal:** While [4] and similar theories of indexicals cannot explain IR and QC data, [5] and [2] stray too far from these theories by underplaying the contributions of the indexicals in IR and QC data and mistakenly packing explanations of these phenomena into the semantics of indexicals. I argue that IR and QC are repair mechanisms triggered during the compositional process. Indexicals have the same sort of interpretations in IR and QC that they have in classical examples, contra [5] and [2], but in IR and QC, extra material is added *around* these interpretations at the level of logical form to repair clashes of type (QC) or semantic content (IR). (It is thus not surprising, or problematic, that theories like [4] fail to give an explanation of these phenomena.) Viewing IR and QC as compositional phenomena not only provides a better explanation of the data and more accurate predictions, it also highlights interesting distinctions between proper names and indexicals as well as plural and singular indexicals, which I will mention below.

In QC, a clash between the requirement of the quantificational adverb to have an argument of type  $(e \rightarrow t)$  and the type of its (singular) indexical argument—type  $e$ —triggers a coercion in which an equivalence relation is introduced in order to construct a property. I understand coercion here not as shifting the meaning or type of the predicate or argument but as adding content around the argument in order to construct a term of a different type that allows the predication to work (cf. [1]). In (2), *always* wants a non-singleton set of times in its restrictor, yet it is offered only a single day  $t_2$ , the value of *tomorrow*. This clash, shown in (a), licenses the construction of a property, shown in (b), so that *always* has a variable to bind, as in (c).

(a)  $\forall?(t_2 \text{ is the busiest day to travel})$  — ‘?’ signifies that  $\forall$  has nothing to bind

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<sup>1</sup>I ignore here discussions of ‘deferred ostension’ in [5] and [2]. Deferred ostension is unlike IR or QC, does not motivate a descriptive theory of indexicals and works only for demonstratives, so it is not important here.

<sup>2</sup>(2) appears not to translate into French, though I have been told that similar examples with demonstratives work. For example, one can point at the Pope and say ‘C’est généralement un italien’ to say that the Pope is usually Italian. (1) seem less problematic for French speakers. As will hopefully become clear, these findings are consistent with my proposal that IR and QC are not character level phenomena and that IR happens at a more pragmatic level than QC. That true coercion of the form I argue takes place in QC is lexically specific has been argued in [1]

- (b)  $\lambda P(P(t_2)) \Rightarrow \lambda P \lambda t \forall x((x, t) \sim_p (t_2, t_c)) \rightarrow P(x)$   
(c)  $\forall t \forall x((x, t) \sim_p (t_2, t_c) \rightarrow x \text{ is the busiest day to travel at } t)$

The property  $p$  in  $\sim_p$  is filled in by context. Due to the coercion in (b), *always* is able to quantify over a set of day-time pairs such that the day  $x$  has relative to  $t$  the property  $p$  that  $t_2$  has relative to the time of utterance  $t_c$ . Note that  $t_2$  is present in logical form after the shift. Neither the meaning nor the type of *tomorrow* has changed—a property has been constructed *around* its interpretation.

An equivalence relation like  $\sim_p$  is already at work in standard uses of plural indexicals. Obama, for example, can say, ‘There have been 44 of *us*’ to mean that there have been 44 U.S. Presidents, even without an adverb of quantification. An utterance of *we* is constrained to pick out a group that includes its agent, but the other members of the group are determined by factors such as speaker intentions and conversational topic. In my talk, I argue that the interpretation of *we* is the group of individuals with the property  $\lambda x((x, t) \sim_r (a, t_c))$  where  $a$  is the agent,  $r$  is a property variable filled in by context and  $t_c$  is the time of the context. Group membership may vary over time, hence the inclusion of the time variable  $t$ , which can either be bound by an operator or given a value by context. When an adverb of quantification takes a plural indexical interpretation into its restrictor, there will be no type clash because the quantifier can exploit the  $\lambda$ -term of type  $e \rightarrow t$  above. The adverb quantifies over  $x$  in the logical form for *we*, so coercion is not required.<sup>3</sup> If this theory of plural indexicals is correct, we see that singular indexicals in QC cases mimic plural indexicals; they require coercion to do so, however, because they do not offer sets to logical form.

IR data arise not from type clashes in predications, but from clashes in the broader discourse context. Note that an IR reading may not be preferred if we change the antecedent of (1): *If my parents had raised me differently, I might have been conservative*. The input context for an IR example provides a modal background for the evaluation of the example. The antecedent in (1) asks us to consider possible worlds that are just like the actual world save that more Republicans won the last House election. If *might* operates as a test on the modal background as in [6], the modal claim in the consequent should fail: the outcome of congressional elections should have no effect on the political tendencies of the actual House Speaker, so given that the Speaker is actually liberal, she should be liberal in each of the possible worlds under consideration. The discourse is predicted to be infelicitous, unless some sort of coercion is undertaken. By adding the equivalence relation  $\sim_c$  (for *counterpart*) to logical form, we can capture the intuitive reading of the example without meddling with the semantics of indexicals.

- (1')  $\dots \rightarrow \diamond(\text{liberal}(a))$  (Kaplanian interpretation, where  $a$  is the agent)  
(1'')  $\dots \rightarrow \diamond \forall x(x \sim_c a \rightarrow \text{liberal}(x))$

(1'') is the reconstructed logical form for the consequent of (1). It will be true just in case for some world  $w$ , all individuals  $x$  that have the property  $c$  in  $w$  that  $a$  has in the actual world are liberal in  $w$ . IR is licensed only when the Kaplanian indexical interpretation yields a logical form that clashes with what the conversational participants know, and take each other to know, about the world.

There are many reasons to think that IR and QC are not character-level phenomena. *Tomorrow* in (2) is context sensitive in the way Kaplan-style theories predict: it must be uttered two days before Thanksgiving in order to pick out the day before Thanksgiving, just as it must be uttered on Tuesday in order to pick out Wednesday. Similar remarks hold for *I* in (1). Further, indexicals in IR and QC cases can enter into co-predication and co-reference data in which they have both a standard and an IR or QC reading. Preserving the Kaplanian interpretation at the level of logical form as I do respects both of these points, which are lost in a descriptive theory like [5] or [2].

- (3) *I am liberal, but might have been conservative if the last election had gone differently.*

<sup>3</sup>Perhaps we should not include times in the logical form for *we* and leave  $t$  to be introduced through coercion. I am more concerned here with the claim that *we* has  $\sim_r$  built into its semantics while singular indexicals do not.

(4) *Tomorrow* is the day my sister arrives and, unfortunately, always the busiest day to travel. In (3)-(4), the first predication holds of the Kaplanian interpretation of the indexical. The second predication in (3), uttered by the House Speaker, concerns a different individual who is the Speaker in a non-actual possible world, and the second predication in (4) concerns a set of days—not only the day after the day of utterance—that share a salient property. Furthermore, character-level accounts of IR and QC overgeneralize; they predict descriptive readings to be possible in any context, whereas the data show that they are brought about only in special environments, such as those involved in IR and QC. Such accounts must also analyze referential uses as descriptive. My account, by contrast, allows for a unified treatment of indexicals without positing descriptive interpretations.

**Further Remarks:** IR and QC do not occur every time an indexical meets a modal operator or an adverb of quantification.

(5) *About my 3rd court appearance for a speeding ticket: ?Tomorrow* is always a stressful day. Many factors affect whether QC or IR are licensed, and it may not be possible to state them all. One factor that appears universal, however, is that both IR and QC exploit *roles* played by the individual picked out by the Kaplanian interpretation. In QC, the role must be one played by different individuals—different days, people, etc.—at different times and there must be an expectation that the role will be filled at fairly regular intervals. (The intervals need not be perfectly spaced in time; expected recurrence is what is important.) Thus, I can use *tomorrow* to talk about the day before Thanksgiving, but it is less felicitous when used to talk about the day that I have to go to court to defend my 3rd speeding ticket, even if tomorrow’s being a day on which I go to court is salient. (An example like this might be more felicitous if it was known by my addressees that I was a fast driver and they expected me to get tickets at regular intervals, however.) In IR, we do not need individuals to fill the role through time, but rather across the space of possible worlds. Another thing that is important for IR is for there to be a connection between the incoming context—the modal background—and the role that is to be exploited in IR. In (1), for example, the context created by the antecedent makes salient those worlds in which the election that led to Pelosi’s appointment turned out differently. This allows the move from Nancy Pelosi to her role as Speaker of the House and onto other individuals who might have filled this role.

Proper names are often felicitous in IR-style examples: *If the Taliban were in charge, Nancy would be a man*. They are less felicitous in QC-style examples: *Nancy* (i.e. the Speaker of the House) *is usually a man*. *Prima facie*, this looks like a problem for my view as names and indexicals likely contribute interpretations of the same type to logical form. Interestingly, names are felicitous in their plural form: *Einsteins usually stand out at a young age*, and they can have property readings outside of special contexts: *True Einsteins are rare*. Indexicals that have plural forms—notably, 1<sup>st</sup> and 2<sup>nd</sup> person indexicals—work the same way. But not all indexicals can have the appropriate plural forms in English. The interpretations of *we* and plural *you* are built directly out of elements of the context of utterance using a mechanism like  $\sim_r$ . The desired plural forms of *now*, *here*, *tomorrow* and others, however, cannot be constructed directly from contextual elements—they require an extra step to determine their interpretations. *Now* and *here* require a move from a contextual element to an interval or region; *tomorrow* requires a move from the time of utterance to the day after. These steps cannot be bypassed to build a plural form of the right type. [1] Asher, N. [forth.] *Lexical Meaning in Context: A Web of Words*, Cambridge U.P. [2] Elbourne, P. [2008] ‘Demonstratives as Individual Concepts’, *Linguistics and Philosophy* 31. [3] Hunter, J. & Asher, N. [2005] ‘A Presuppositional Account of Indexicals’ in *Proc. of the 15th Amsterdam Colloquium*, ILLC. [4] Kaplan, D. [1989] ‘Demonstratives’ Almog, J., Perry, J., and Wettstein, H. (eds) *Themes from Kaplan*, Oxford University Press. [5] Nunberg, G. [1993] ‘Indexicality and Deixis’, *Linguistics and Philosophy* 16. [6] Veltman, F. [1990] ‘Defaults in Update Semantics’, H. Kamp (ed.), *Conditionals, Defaults, and Belief Revision*, CCS, Edinburgh.