Descriptive Indexicals, Propositional Attitudes and the Double Role of Context

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Abstract. This paper offers an account of some uses of indexicals in the context of propositional attitude ascriptions, i.e. reports that concern the cognitive relations people bring to bear on propositions. While the contribution of indexicals to the truth conditions of an utterance is usually singular, their interpretation is general in the case of so called descriptive uses. I will propose an interpretation of the descriptive uses of indexicals via a mechanism of descriptive anaphora and apply this mechanism to the case of attitude ascriptions. I will emphasize the role of context both in the suppression of the default referential reading of the indexical, as well as in the reconstruction of the relevant interpretation of the whole utterance.

Keywords: Descriptive indexicals · Propositional attitudes · Descriptive anaphora · Linguistic context · Extralinguistic context · Suppressive role of context · Constructive role of context

1 Introduction

Indexicals are typically considered as vehicles of direct reference. Some contexts of propositional attitude ascriptions make it clear, however, that the singular mode of presentation deployed by an ascriber cannot be attributed to the ascribee. An example has been given by Nunberg in [42]:

(1) The Founders invested me with the sole responsibility for appointing Supreme Court justices.
uttered by George H.W. Bush in 1992

Existing accounts of propositional attitudes (deploying the transparent/ opaque, *de re*/*de dicto* or similar distinctions; see for example [1,5,18,30,50,51, 54,56,57]) seem to imply that by uttering such a sentence George H. W. Bush might be committed to the absurd claim that the Founders had *de re* thoughts about himself.[1] My aim in this paper is to offer an account of the reconstruction

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[1] In treating (1) as a proposition attitude ascription I assume the propositional analysis of intensional verbs (see [31,36,50] and the references therein. Moltmann does not subscribe to the propositional analysis of intensional verbs). My arguments, however, are independent of this analysis and could be reformulated as arguments against an obligatory referential interpretation of indexicals in the scope of intentional verbs in general.

of the proposition expressed by the original utterance, reported in (1), in terms of a descriptive interpretation of indexicals that would not have such unintuitive consequences. I will characterize the double role that context plays in this reconstruction.

2   Descriptive Indexicals

Descriptive uses of indexicals are uses where indexical utterances express general propositions (see [6, 8, 9, 14, 15, 17, 19–26, 41–43, 46, 47, 53, 55, 60]), like in the following example ([41, 55]):

(2) He is usually an Italian, but this time they thought it wise to elect a Pole.
     uttered by someone gesturing towards John Paul II, as he delivers a speech
     with a Polish accent shortly after his election

One expresses here not a singular proposition about John Paul II, but a general one concerning all popes. Because 'usually' is a quantifier that requires a range of values to quantify over, and because 'he' in its standard interpretation provides just one object, there is a tension in this sentence which triggers the search for an alternative interpretation. The tension is not caused by the fact that John Paul II himself is the possible referent but it is a tension between the generality of the quantifier and the singularity of the indexical in its default interpretation. The tension would be present regardless of who the referent was. As a result, the pronoun's basic referential function is suppressed.

2.1   The Mechanism of Descriptive Anaphora

I postulate that the alternative – general – interpretation is obtained by a process I call descriptive anaphora. Via the descriptive anaphoric mechanism, an indexical expression inherits its semantic value from its antecedent. However, in contrast to classic anaphora, that antecedent stems from an extra-linguistic context: it is an object identified through the linguistic meaning of the pronoun (in the case of pure indexicals) or by demonstration (for demonstratives). In a communication context, those objects serve as a means of expressing content and, as such, they acquire semantic properties.[2] The object is used as a pointer to a property corresponding to it in a contextually salient manner. That property contributes to the general proposition. What is important is that the property is not a referent for the pronoun. The structure of the general proposition is determined by a binary quantifier and the property which is retrieved from the context serves as a context set that limits the domain of quantification of the

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[2] Compare Frege's treatment of objects as means of expressing content (e.g. [11–13, 22, 25, 29, 45]). Also, Nunberg wrote about indexicals that "this is the characteristic and most remarkable feature of these expressions. They enable us to turn the context itself into an auxiliary means of expression, so that contextual features are made to serve as pointers to the content of the utterance." [42, pp. 19–20].

quantifier. Typically, as in the case of (2), it is that quantifier which triggered the mechanism of descriptive anaphora in the first place but the quantifier does not have to be overt (compare [22, 24, 26]).

In the case of (2), the mechanism of descriptive anaphora is triggered by the inconsistency between the indexical and the quantifier and John Paul II is the demonstrated antecedent. His salient property of 'being a pope' serves as the context set for the binary quantifier 'usually' – $\text{USUALLY}_x(\phi(x), \psi(x))$ – interpreted in accordance with the generalized quantifiers theory (see [3, 38]).[3] In this case, the general proposition becomes:

$$\text{USUALLY}_x(\text{POPE}(x), \text{ITALIAN}(x))$$

with the usual truth conditions for the (generalized) majority quantifier (see [3]):

$$\mathfrak{M}^{gi} \models \text{USUALLY}_x(\phi(x), \psi(x)) \quad \text{iff} \quad |\phi^{\mathfrak{M}gi} \cap \psi^{\mathfrak{M}gi}| > |\phi^{\mathfrak{M}gi} \backslash \psi^{\mathfrak{M}gi}|,$$

where g is an assignment and i is a context.[4]

The descriptive use of an indexical is not its basic use. The process of descriptive anaphora is triggered by the inadequacy of its basic uses - (classically) anaphoric, deictic or deferred.

2.2   Three Types of Descriptive Uses of Indexicals

Not all cases of descriptive uses of indexicals are triggered by an inconsistency between an indexical and a quantifier (i.e. Type I).[5] I distinguish two other types of descriptive uses of indexicals, introduced below. They differ only in what triggers the search for an alternative interpretation, but the mechanism of the interpretation is the same: we are looking for a salient property that is in correspondence with the object demonstrated and the property serves as a context set that limits the domain of quantification for the quantifier that provides the structure to the general proposition expressed. Those quantifiers need not be overt.

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[3] I use SMALLCAPS font style for formal counterparts of natural language quantifiers and predicates.

[4] In what follows $\mathfrak{M}$ is a model, g is an assignment of objects from the domain of the model to individual variables, i is a context, $\models$ is a satisfaction relation obtaining between a sentence (or an open formula) and a model and context, under an assignment; ϕ and ψ are open formulas, $|A|$ signifies the cardinality of the set A, and $\phi^{\mathfrak{M}gi}$ is the interpretation of formula ϕ in model $\mathfrak{M}$ and context i under assignment g.

[5] Other examples of descriptive uses of indexicals of Type I were given by Nunberg [41–43] Recanati [53, 55], Bezuidenhout [4], Stokke [60], Hunter [16, 17], Elbourne [9], Galery [15] and Kijania-Placek [22]. The present author is responsible for the typology.

Type II – Unavailability of Basic Interpretations. The unavailability of a referent may be a result of a physical absence in the context of the utterance of anybody/anything that fits the constraints of the linguistic meaning of the expression deployed. Consider Schiffer's example [58]. On seeing a giant footprint in the sand someone exclaims:

(3) He must be a giant.

Here the potential deictic referent is not present in the context of the utterance, and, since (3) is a conversation starter, there is no linguistic antecedent for the pronoun. Because the speaker has no particular male individual in mind, the deferred interpretation is not an option either (compare [22,42]).[6] The descriptive interpretation is thus considered due to the failure of other interpretations.[7]

Yet, the mechanism of descriptive anaphora works in the same way as in the cases discussed in the previous section (in cases of Type I): we search the context for a salient property that is in correspondence with the object demonstrated (in this case – the footprint). The property may have (and in the case of (3) does have) the structure of a relation, whose one relatum is fixed by the demonstrated object. While this (possibly many argument) relation is salient in the context, it is the resulting property (relation with one open argument) that contributes to the general proposition. In the case of (3), the property is 'being somebody who left this (demonstrated) footprint'. The sentence does not contain an overt quantifier which constrains the structure of the proposition expressed, but a

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[6] In the case of deferred reference, the resulting proposition is singular, involving the rigid attribution of a property to the actual (deferred) referent, while in (3) the expressed proposition is rather a general one, such as 'The man who left this footprint, whoever he is, must be a giant' (see [58] and footnote 7 below). If somebody else had left this footprint, the speculation would have concerned the other person and not the original one. Arguably, there is some confusion regarding the concept of deferred reference, and sometimes it is used inclusively for both cases when a contribution of the indexical is singular and when it is general. For my arguments to go through, it suffices that the referential reading of deferred reference is excluded in the case of (3). On such an inclusive interpretation of deferred reference, descriptive anaphora may be considered an elucidation of the general reading of deferred reference. I have supported the need for drawing the distinction between deferred reference and descriptive interpretation more extensively in [22,25]. My thanks to the referee who pointed out the need to clarify this point.

[7] The point that it is the lack of the referent in the context that triggers the descriptive reading was made by Bezuidenhout [4, p. 401]: "[I]t is precisely because the listener is unable to think of the referent in an identifying way in the context (i.e. because the listener is unable to track an individual in the context) that the listener understands the speaker to have used the indexical attributively". Bezuidenhout is using the term 'attributively' for what I here call 'descriptively'. Other examples were given by Loar [34], Nunberg [40–42], Recanati [53], Galery [15] and Kijania-Placek [22].

covert binary quantifier 'the' is reconstructed from the context[8] and the structure of the proposition expressed is the following:[9]

$$\text{THE}_x(\text{MALE-WHO-LEFT-THIS-FOOTPRINT}(x), \text{GIANT}(x))$$

– 'The man who left this footprint (whoever he is) is (must be) a giant', where 'the', interpreted as a generalized quantifier, has the following truth conditions:

$$\mathfrak{M}^{gi} \models \text{THE}_x(\phi(x), \psi(x)) \quad \text{iff} \quad |\phi^{\mathfrak{M}gi}| = 1 \text{ and } \phi^{\mathfrak{M}gi} \subset \psi^{\mathfrak{M}gi}|$$

But in the case of propositional attitude ascriptions containing indexicals in their that-clauses, there are additionally situations when the conventional referent of the indexical is present in the context of the ascription but, for reasons obvious from the context, could not have been present during the reported utterance. In such cases it seems to be obvious that there is a discrepancy between the mode of presentation used by the ascribee (singular) and the mode of presentation of the ascriber (general). I will return to these kinds of cases in Sect. 4.

Type III – Irrelevance. Sometimes, however, descriptive anaphora is triggered by the blatant irrelevance of the referential interpretation, because of the incompatibility of that interpretation with the goal of the utterance or due to its obvious triviality or falsity. An interesting example was again given by Nunberg in [42]: A doctor during a lecture points to his own chest and states:

(4) When a person is shot here, we can usually conclude that it was not suicide.

Here 'usually' does not quantify over persons being shot – one person may be shot several times during his or her life – but over events of shooting at a chest.[10] Yet, because it is not excluded that somebody might be shot several times during one event, there is no semantic inconsistency between the referential reading

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[8] For the role of context in the selection of the covert quantifier see Sect. 3.2 below.

[9] I have ignored 'must' in this analysis. An anonymous referee suggested, however, that assuming the descriptive anaphora interpretation of 'he' we would expect that it could interfere scopally with 'must' giving a possible reading in which 'must' takes wide scope, so that the sentence reads 'It must be the case that there is a unique person who left this footprint and is a giant'. According to the referee such a reading does not seem to be available. I agree with this opinion as long as we interpret 'must' as a metaphysical modality. But that would amount to attributing metaphysical necessity, which on both narrow and wide scope readings is counterintuitive. Rather, 'must' in (3) is either evidential (Nunberg, p.c.) or should be interpreted as an epistemic necessity, which on the wide scope reading of the modal gives 'For all I know, there is a unique person who left this footprint and is a giant'. I find this reading highly accessible.

[10] In this example, the quantifier 'usually' scopes out of the consequent, which is legitimate due to its binary character (see footnote 12 below), the conservativity of generalized quantifiers (i.e. QAB iff $QA(A \cap B)$, see [61]) and the anaphoricity of 'it' in the consequent. Thanks to an anonymous referee for making me clarify this point.

of 'here' and the quantifier 'usually'. It is thus not a case of a descriptive use of an indexical of type I. But, anyhow, we are not concerned with the particular place demonstrated, because it is obvious for the addressee that the speaker is demonstrating a chest which has not been shot at in the relevant way pertaining to murder. After all, for something to be considered suicide, there must be a case of death. The referential interpretation – with 'here' referring to the chest of this particular speaker – would therefore give a blatantly false, if at all comprehensible, and thus irrelevant proposition.[11] In typical cases of this type such as (5) [42], and unlike in (4), the indexical is embedded under modal operators (see [17]):

(5) If the Democrats had won the last few presidential elections, we might have been liberals.
    said by Supreme Court Justice O'Connor

I will not be concerned with descriptive uses of indexicals of type III in this paper.

3   The Double Role of Context

In the case of descriptive uses of indexicals, context plays a role both in suppressing the default referential reading of the indexical, as well as in constructing the relevant interpretation of an utterance.

3.1   The Suppressive Role of Context

In typical cases, descriptive anaphora is triggered by the use of quantifying words such as traditionally, always, or usually in contexts in which they quantify over the same kind of entities that the indexicals refer to. In such contexts the generality of the quantifiers clashes with the singularity of the default referential reading of indexicals. Whether there is a clash is, however, a pragmatic matter, as it depends on the domain of quantification of the quantifier, which for most adverbs of quantification is not given as part of the semantics of the word. If 'usually' quantified over periods of time or events – like in 'He usually spends his holidays in Rome' – there would be no conflict between 'usually' and 'he'.[12] Since in the case of descriptive uses of indexicals of type I it is the conflict between the generality of the quantifier and the singularity of the indexical which results in suppressing the referential reading of the indexical, both linguistic and extralinguistic context play a role here. The domain of quantification is dependent mainly

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[11] For the analysis of this and the following example via the mechanism of descriptive anaphora see [22]. Other examples were given by Nunberg [40–42], Recanati [53], Bezuidenhout [4], Powell [46], Borg [6], Elbourne [9], Galery [14,15], Hunter [17], and Kijania-Placek [22–25].

[12] Compare [33]. A binary structure is standardly postulated for adverbial quantification, regardless of its explicit structure. Thus 'He usually goes on holiday to Rome' would be analyzed as 'Usually, if he goes on holiday, he goes to Rome' (see [32,49]).

on what is predicated of the objects quantified over (linguistic context) but in some cases relies as well on such extra-linguistic features of context as world knowledge.[13] For example in (2) – in contrast to 'He usually spends his holidays in Rome' – a relatively static property is attributed to the subject, a property which typically does not change with time, but changes from person to person. And it is the attribution of this property that is one of the factors that determines the domain of people as the domain of quantification in (2), leading to the suppression of the referential interpretation of 'he' and thus to the descriptive interpretation of the pronoun.

In the case of descriptive uses of indexicals of type II, linguistic context only plays a negative role in excluding classically anaphoric interpretation when no linguistic antecedent is present and most of the suppressing work is dependent on extra-linguistic context. We know from the extralinguistic context if a suitable (i.e. complying with the linguistic meaning of an indexical) referent is available and if other requirements of potential basic interpretations (such as having a particular object in mind, for deferred interpretation) are fulfilled. Their non-fulfillment suppresses the referential interpretation. The triggering factors of the descriptive uses of indexicals of type III are solely dependent on the extra-linguistic context, as, by definition, a general interpretation is caused there by the pragmatic irrelevance of the (available) referential one.

3.2   The Constructive Role of Context

The extra-linguistic context figures prominently in the construction of the general interpretation of the indexical. In all cases it is the property salient in the context that is the propositional contribution of the indexical term.

But the relevance of the context does not end there. The structure of the general proposition expressed is provided by a binary quantifier and the quantifier is not always overt. Both linguistic and extra-linguistic context play a role in reconstructing covert quantifiers. In example (3), repeated from above,

(3) He must be a giant.

the sentence does not contain an overt quantifier which constrains the structure of the proposition expressed, but as with the use of bare plurals for the expression of a quantified sentence, we reconstruct a covert binary quantifier. It will usually be a universal quantifier or the definite description – but which quantifier in particular is the relevant one is a contextual matter and depends mainly on what is predicated of the objects quantified over (compare [7,28]). An analogy with bare plurals can be illustrative here: 'Mice are mammals' is interpreted by a universal quantifier, while 'Mice will come out of this hole if you wait long enough' – by an existential quantifier. The same plural noun is here quantified universally or existentially, depending on what is predicated of mice.[14] In the

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[13] This last dependence is exemplified by the discussion of (3) in below.

[14] "the source of the existential quantifier is not the determiner of the NP, but rather what is being predicated of it at the time" ([7, p. 451]).

case of (3) the type of the quantifier – the definite description – is dictated by the predicated properties of 'having left a footprint' (a property retrieved from the extra-linguistic context) and 'being a giant' (linguistic context), which typically are the properties of just one individual (world knowledge). As a result, the structure of the proposition expressed is the following:

$$\text{THE}_x\big(\text{MALE-WHO-LEFT-THIS-FOOTPRINT}(x), \text{GIANT}(x)\big)$$

– 'The man who left this footprint is a giant.

On the other hand, indexicals interpreted descriptively seem to be semantically numberless in the sense that they do not provide a clue as to what kind of quantifier should be used in providing the structure of the general proposition.[15] In (3) it was a definite description, but in (6), another example of Nunberg's [42]:

(6) He is always the last one to know,

it would be the universal quantifier, even though in both the pronoun was the same.[16] The descriptive reading of (6) is triggered only if we interpret this utterance as a proverb – this is usually uttered in the out of earshot presence of the relevant husband – and thus it is the context of the proverb that triggers the universal interpretation 'Every husband is always the last one to know', where 'husband' is the property retrieved from the context via the mechanism of descriptive anaphora.[17] Since (6) may in exceptional situations be interpreted as

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[15] On the semantical numberlessness of pronouns see [39].

[16] An anonymous referee proposed an alternative analysis of (6) – 'In every extra marital affair situation/event x, the husband in x is the last to know' – where, according to the proposal, the indexical is analysed as a definite rather than a universal quantifier and suggested that it might be possible to analyse all of the descriptive uses of indexicals as definites. I agree that this analysis is possible for (6), but its adequacy comes from the dependence of the definite quantifier on the universal one. As a result, semantically we still quantify over all husbands of unfaithful wives in all extra marital affairs. Since both 'always' and 'every' are universal quantifiers, the analysis proposed in this paper and the one proposed by the referee are equivalent. Nonetheless, the strategy of analysing all of the descriptive uses of indexicals as definites would not work for examples such as 'Today is always the biggest party day of the year', uttered on New Years Eve (adopted from Nunberg [43]), where we universally quantify over days that are New Years Eves.

[17] Importantly, the quantifier 'always' quantifies here over events – affairs of the wives of the relevant husbands – and thus it does not give the structure to the whole proposition, but appears in the second argument of the quantifier:

$$\text{EVERY}_x\big(\text{HUSBAND}(x), \text{ALWAYS}_y\big(\text{AFFAIR-OF-WIFE-OF}(y, x),$$
$$\text{LAST-ONE-TO-KNOW-OF}(x, y)\big)\big)$$

– '(Every) husband is always the last one to know (about his wife's affair)'.
The truth conditions of both the quantifier 'every' as well as of the quantifier 'always' are those of a universal quantifier:

concerning just the person demonstrated (not necessarily a husband), the fact that (6) is interpreted as a proverb is a purely contextual matter. The context of a proverb supplies the generality requirement, which makes the referential interpretation trivial.

I conclude that both linguistic and extra-linguistic context play crucial and quite specific roles in triggering, as well as in constructing, the descriptive interpretation of indexicals.

4   Propositional Attitudes

In most accounts of propositional attitude ascriptions it is assumed that attitude ascriptions that contain indexicals are *de re* ascriptions (see [57]), i.e. such that the mode of presentation of the referent of the indexical does not affect the truth conditions of the belief report and we are usually not told how the subject of the attitude thinks about the referent.[18] Thus in contrast to belief reports such as (7) ([10]):

(7) John believes that the winner will go to Hong Kong,

which are ambiguous between the wide scope ('There is somebody who is the winner and of whom John believes that he will go to Hong Kong') and the narrow scope readings ('John believes that there is somebody who is the winner and who will go to Hong Kong'),[19] the sentence (8):

(8) John believes that you will go to Hong Kong,

is supposed to have only one – *de re* – reading, the thesis of which can also be expressed by saying that indexicals always take the wide scope in the context of proposition attitude verbs or that indexicals are 'open to exportation' within the that-clause ([35]; compare [54]).

Because the exercised mode of presentation (the mode used by the reporter; see [53]) is referential due to the referentially of the indexical, there is an object the attitude is about, given by the context of the report. Since the believer is

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$$\mathfrak{M}^{gi} \models \text{EVERY/ALWAYS}_x(\phi(x), \psi(x)) \quad \text{iff} \quad \phi^{\mathfrak{M}gi} \subset \psi^{\mathfrak{M}gi}.$$

For details of this construction as well as for the analysis of indexicals used in proverbs as descriptively used indexicals see [26].

[18] The notions used in the literature for describing the behavior of indexicals in attitude contexts include '*de re*', 'relational' ([50,54]) or 'transparent' ([51,53,54]). In [54] Recanati argues that the *de re/de dicto* distinction should not be confused with the relational/notional distinction. I will not go into detail here, as they do not affect my argument. In [54] he also uses the terms transparent/opaque in a slightly different way, than in [53]. Again, these distinctions will not be relevant for the point I am going to make.

[19] According to Recanati [53] belief ascriptions that contain definite descriptions are in fact ambiguous in many-ways, but this complication will not be relevant for the case of indexicals, so I will ignore it here.

usually not a part of the context of the utterance of the report, according to Recanati [53] it seems that "there is no reason to suppose that the mode of presentation in question is also a constituent of the believer's thought" (p. 400). Yet, Recanati admits, the believer may be part of the context, as cases of self-ascriptions of belief testify, so we must leave room for transparent interpretations [in the sense of being about a particular and identified object] in which a specific mode of presentation – that supplied by the linguistic meaning of the indexical – is ascribed to the believer. Such readings would not, however, be general but they would contain the object referred to together with the mode of presentation of the object ([53]). Also Balaguer argues in [2] for the necessity of including the linguistic meaning of the indexical in the content of the reported belief in cases of what he calls the essential uses of indexicals, which are reminiscent of Prior's "Thanks goodness it's over" examples ([48]; see [44]). In [52] Recanati concedes, persuaded by Morgan [37], that indexicals also admit readings in which the ascribed mode of presentation is not the linguistic meaning of the indexical but some other mode of presentation of the referent – for example a visual mode of presentation – that is supplied by the context. All these cases remain non-general, however, because "even on the opaque reading of a belief sentence in which a singular term occurs, reference is made to some particular individual" ([54, p. 132]). Thus, from the fact that an indexical has been used in the that-clause of an attitude ascription we cannot infer that no mode of presentation of the referent is ascribed to the believer. But, Recanati maintains, we can infer that the ascribed mode of presentation is singular:

Singularity of the Ascribed Belief
An indexical within the that-clause of an attitude ascription indicates a singular mode of presentation of the referent in the ascribed belief.

The implied singularity allows for an explanation of the intuitions of Kripke concerning Sosa's example [59]:

"[A] spy and his accomplice see through a window how an investigator finds some incriminating evidence in the spy's footlocker. The accomplice could very naturally say 'He knows that you are a spy now. You must escape.' In fact, and so far as the accomplice knows, the investigator does not know the spy, and knows practically nothing about him: the footlocker had been searched only as part of a general investigation of the base. What the investigator knows is ⌜the owner of the footlocker is a spy⌝ " [59, p. 891].

Kripke, commenting on this example in [30], finds Sosa's intuitions pertaining to the appropriateness of the accomplice's remarks 'strange', since, according to Kripke "Sosa's accomplice obviously would not say, 'he knows that you are a spy now,' though he might say, 'watch out, they may soon find out that you are a spy, once they find out who owns the footlocker." [30, p. 340] Here I agree with Kripke against Sosa. What makes this report inappropriate is the implied singularity of the ascribed mode of presentation of the spy. 'He knows that you

are a spy now' suggests that the investigator has a *de re* knowledge about the spy, while they only know *de dicto* that the owner of the footlocker is a spy. This has practical consequences. If it was only the reporter who saw the scene and reported it to the spy, the latter, assuming the police know of him (*de re*) that he is a spy might have undertaken a decision of immediate and risky flight in a situation, which in fact left some (minimal) time for preparation. Such a result might, of course, be intended by the reporter.[20] Paraphrasing Richard we might put it as follows: "an ascription is true provided [it] ascribes belief in a proposition which is believed and the ascription doesn't imply anything false about what pictures are held by the believer" [57, p. 446].[21]

   While Sosa's case is misleading, which means at least that it allows for a singular interpretation of the ascribed belief,[22] there are situations in which it is obvious from the context that the reported belief could not have been a singular one. In such cases it seems that the indexical used in the that-cause is just exercised but not attributed, contrary to Recanati's thesis of the singularity of the ascribed belief. This would happen when the referent of the indexical is present in the context of the ascription but, for reasons obvious from the context, could not have been present during the reported utterance. Example (1), repeated here, is a case in point:

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[20] Examples of intentional alteration of expressions used in the report and the consequences thereof were discussed by Bonomi [5], Aloni [1] and King [27]; see footnote 22.

[21] This is a citation from Richard, but the paraphrasing aspect stems from the fact that I do not explain the technical meaning Richard assigns to the notion of a 'picture' in his theory and instead I intend the notion to be understood in a non-technical, common-sense way.

[22] A similar example was given by King in [27]: "Suppose Glenn believes all politicians are corrupt. [. . .] Glenn has never met or heard of Bob [the mayor of San Diego]. [. . .] Glenn's boss is throwing a party as a fundraiser for a charity. [. . .] [He] tells Glenn and the other employees to look over the guest list, which includes Bob, and tell him if anyone corrupt is on it. The boss is adamant that should anyone fail to tell him about someone they believe to be corrupt, they will be fired. Glenn and the others look over the list and no one says anything. Alan, a conniving coworker of Glenn's who is always trying to get Glenn in trouble and who knows both Glenn's views on politicians and Bob's profession, says to Glenn's boss at the party pointing at Bob: 'I am surprised Glenn didn't say anything: Glenn believes he is corrupt.' This seems false in the new context, as would 'There is someone at this party Glenn believes to be corrupt' or any other such *de re* ascription concerning Bob to the effect that Glenn believes him to be corrupt." But the important difference between both this and Sosa'a examples and the example that follows – (1) – is that unlike in (1), the hearer may interpret the reporter as ascribing a *de re* believe about the relevant subject to the believer. The inappropriateness of the remark relies upon this possibility and in King's example it even constitutes the intended outcome. Since referential interpretation is available and relevant, descriptive interpretation is thus not triggered in Sosa's and King's examples (and they were not intended as descriptive by these authors).

(1) The Founders invested me with the sole responsibility for appointing Supreme Court justices.
uttered by George H. W. Bush in 1992

In this case it is obvious that the Founders could not have had *de re* thoughts about George H. W. Bush and the hearer, if aware of the fact, does not interpret the president as claiming so much. Additionally, the hearer is able to reconstruct the reported general belief by relying on the mechanism of descriptive anaphora.

On the descriptive anaphora interpretation, George H. W. Bush (the person, not the name) is the extra-linguistic antecedent of this token of 'he' and points to his silent property of 'being the president of the United States' ('US-president' for short). The quantifier that gives the structure to this general proposition is the binary universal quantifier and the property obtained from the context serves as its context set. As a result, we obtain the following structure of the original declaration (RASCJ is short for 'having been given the responsibility for appointing Supreme Court justices'):

$$\text{EVERY}_x(\text{US-PRESIDENT}(x),\ \text{RASCJ}(x))$$

– 'Every president of the United States has been given the responsibility for appointing Supreme Court justices', which seems to be the intended interpretation of the reported belief.

Another example is the following (see [42]):

(9) According to all the textbooks, you often get in trouble with that move.
uttered by a chess teacher giving an introductory lesson to a student who has just played 4. N x P . . .

The authors of textbooks are unlikely to know the present player and have *de re* attitudes towards him, not to mention this particular move of his. (9) contains an indexical 'you' and a demonstrative 'that move'; both receive descriptive interpretation.[23] 'Often' is a quantifier that in this context quantifies over events of type X (4. N x P . . .) and the property delineating the type is supplied via descriptive anaphora by this particular move. This property serves as the context set for 'often', while the property of 'being a player who has played a move of type X (4. N x P . . .)', supplied by the referent of 'you', serves as the context set for the covert quantifier 'the', dependent on 'often':

$$\text{OFTEN}_x(\text{CHESS-MOVE-OF-TYPE-X}(x),\ \text{THE}_y(\text{PERSON-WHO-MAKES}(y, x),$$
$$\text{GET-IN-TROUBLE-WITH}(y, x))),$$

– 'The person who makes a move of type X (4. N x P . . .) often gets in trouble with that move'. This captures the reported belief.[24]

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[23] For reasons why 'that move' in this example should not be interpreted as deferred reference to a kind and for details of the analysis see [22].

[24] Other examples of this kind were given by Recanati [53], and Bezuidenhout [4].

The unavailability of the referent in the context, which is a characteristic trigger for the descriptive use of indexicals of type II, may thus be the result of the physical absence of a suitable referent in the context of utterance,[25] or – as it is the case in some attitude ascriptions – may come about due to the impossibility of the presence of the referent of the expression used in the report in the context of the reported belief. Crucially, for the mechanism of descriptive anaphora to work, it is required that the referent of the indexical in question exemplified, or was taken to exemplify,[26] the property that is essential for the reported belief.

5   Conclusion

I hope to have shown that, contrary to the prevailing view, the use of an indexical in attitude ascription does not guarantee the singularity of the ascribed mode of presentation of the relevant object. Additionally, the indexical plays a double role in some cases – the referential role in the exercised mode and the descriptive role in the ascribed mode. In such cases it is possible to reconstruct the reported belief via the mechanism of descriptive anaphora that, I claim, is operative in all cases of descriptive uses of indexicals.

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[25] Deferred and (classically) anaphoric interpretations must be excluded as well, see Sect. 2.2.

[26] For a discussion of the weakening of the requirements of the factivity of the relevant property see [22].

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