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MIND DE RE

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The study outlines the semantics of verification and examines its interaction with de re ascriptions. Verification sentences are analysed as having a layered structure comprising two unary operators, VER and ACT, represented as VER(ACT(p)). The operator VER establishes a link to a verification event in which agent X has established the truth of p in the actual world, while ACT renders the proposition pre-verified, that is, open to verification or falsification. Standard accounts of the de re versus de dicto distinction maintain that, in contexts of belief and desire, de re attitudes involve ontological commitments to the existence of objects in the actual world. Within a Davidsonian framework, events are treated as spatiotemporal particulars. Accordingly, sentences of the type VER(ACT(p)), which posit the existence of verification events in the actual world, pattern with de re constructions. On this basis, lexical markers of VER, such as English 'indeed', 'really', 'in fact', and Russian 'dejstvitel'no', 'na samom dele', may be analysed as de re modal elements conveying a meaning of epistemic necessity. A distinct class of discourse markers includes English 'certainly' and 'naturally', and Russian 'razumeetsja' and 'estestvenno', which introduce the operator AFF and signal that the speaker's expectations are fulfilled. These two classes of operators display different semantic properties: markers of certainty do not entail that p is verified de re, whereas VER markers do not encode speaker certainty. The operator AFF may take scope over VER, yielding the configuration AFF(VER(ACT(p))), which is well-formed, whereas the inverse order VER(AFF(ACT(p))) is ill-formed. The proposed analysis accounts for two empirical generalisations. First, VER is invariably realised overtly at the phonetic level. Second, counterfactual constructions require components that are pre-verified or verified and exclude anti-veridical markers in the protasis. This constraint supports the view that, within the metaphysics implicit in natural language, counterfactual worlds are treated as real and are capable of hosting verification events.

***Keywords**: attitude reports, de re, de dicto, modality, verification, operator words, logical form, phonetic form, communicative structure*

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Do re mi, and do mi re,
Learn de dicto, mind de re.

1. Introduction: modal categories and language theory

Language theory and logic need each other. The former provides the conceptual apparatus for such notions as semantic interpretation, truth conditions, quantification, presupposition, entailment, and implicature, whereas the latter requires fine-grained representations of linguistic data to assess the gap between formal logical systems (e.g. Lewis and Langford 1932; Hintikka 1969) or formal languages (Montague 1970; Hamblin 1973) and natural languages along with their semi-formal models (Frege 1892; Russell 1905; Carnap 1955; Stalnaker 1972; Grice 1975; 1981; Harman 1972; Davidson 1970; Vendler 1967; Paducheva 1974; Arutyunova 1988; Partee 2004).

Modality constitutes a domain of shared interest. Philosophers must cultivate linguistic intuitions to identify applications of modal logic (Carnap 1947; Kripke 1980; Lewis 1979; Kuslij and Veretennikov 2024), whereas linguists must ground their descriptions of expressions of possibility and necessity in concepts derived from logic (Kratzer 1991).

Modal expressions quantify over possible worlds. A proposition p is true in a world $w \in W$ if and only if $w \in p$; otherwise, p is false in w. The notions of modal base (e.g. circumstantial or epistemic) and ordering source (e.g. deontic, bouletic) are cross-linguistically robust: the modal base determines the set of worlds accessible from a given world w, while the ordering source imposes a ranking on this set (Ibid., p. 642).

Following Johan van der Auwera and Vladimir Plungian (1998), one may adopt the notion of a path, understood as a semantic transition. A modal meaning of one type, for example, epistemic possibility ('in view of the available evidence, p is possible'), may develop from a modal meaning of another type, for example, deontic possibility ('in view of certain norms, p is possible'), and vice versa. In addition, modal expressions often originate from non-modal lexical items or may lose their modal force over time (Ibid., p. 111).

Van der Auwera & Plungian and Kratzer share the intuition that the meaning of most language modals is underspecified, i.e., ambiguous, vague, or diachronically unstable[1]. Bulygina & Shmelev (1997, pp. 218—231) argue that Russian modal verbs *dolžen* 'must' and *možet* 'can' are ambiguous between alethic, deontic, and epistemic readings. A similar point regarding the predicative *nado* 'must' is made in (Kobozeva, Laufer 1991). Unambiguously epistemic, cf. Eng. *certainly*, deontic, cf. Eng. *should*, and alethic modals, cf. Russ. *Tebe ne vyjti otsjuda* 'It is not in the cards for you to come out from

[1] Similar points have been made concerning indefinite pronouns, cf. (Haspelmath 1997) and (Kratzer, Shimoyama 2002).

here' are not always expressed by verbal lexemes. In the last example, the alethic flavour is contributed by the dative-infinitive construction, which is aspect, polarity, and mood-sensitive (Mitrenina 2017). I will not dwell on the grammar of modals and state that overt modality is typically encoded lexically. This is, however, not the case with the famous *de re* versus *de dicto* distinction. In *de re* sentences, the existential quantifier scopes over the modal operator, which gives rise to the existential reading 'There is some x that is such that is necessarily A', cf. (1).

(1) DE RE. $\exists(x)\ \Box A(x)$

In *de dicto* sentences, the modal operator has a wider scope than the quantifier, which gives rise to the non-existential reading 'Necessarily, some x is such that it is A', cf. (2).

(2) DE DICTO. $\Box\exists(x)A(x)$

The received wisdom is that there are no lexically marked *de re* and *de dicto* predicates, but the *de re* versus *de dicto* distinction is diagnosed in the contexts of belief and desire, where the matrix predicates like *believe*, *think*, *want*, *wish* license both *de re* and *de dicto* readings (Kaplan 1969). In this paper, I discuss a candidate for the role of lexically marked *de re* — the cross-linguistically stable class of discourse words expressing the meaning of verification and introduce the operator *VER*. A word x_L of the language L is a lexical *VER* marker iff x_L is a discourse word of L, and verification is part of its assertive meaning. I argue that *VER* markers, aka *de re* modals, must be kept apart from commitment markers like *certainly*, *naturally,* that represent a different sort of meaning.

Before I turn to my arguments, I should first explain the title of this article. It revokes the names of two great scholars — Elena Paducheva (1935—2019) and Tatiana Bulygina (1929—2000). To Paducheva's anniversary, Bulygina composed a song, where the singer asserts that even children in the backyard (*deti vo dvore*) nowadays know about *de dicto* and *de re*, presumably, after Paducheva's works:

Znajut deti vo dvore
Pro *de dicto* i *de re.*

The translation of this stanza used by me in the epigraph was made by the prominent linguist Anatoly Liberman. Liberman also proposed an alternative variant, which I reproduce with his kind permission: <*Ding-dong-ding, ding-dong-ding*> *Learn the word,* ***but catch the thing***. Indeed, *de re* translates 'about the thing', '**as things are'**. Meanwhile, *de dicto* translates 'about what is said', 'about the dictum', therefore it can be 'learned' as the poet said or 'evaluated on a set of possible worlds' as logicians put it.

The paper is structured as follows: in section 2, I render some approaches to the *de re* versus *de dicto* distinction and mention Bulygina's and Paducheva's contributions, section 3 discusses *de re* and *de dicto* reports in the context of belief and desire, and section 4 contains the preliminaries to

the generalised analysis of *res* and *de re* claims. Section 5 outlines the semantics of verification, while section 6 discusses the consequences of the chosen approach.

2. The *de re* and *de dicto* in logical analysis and linguistic research

2.1. The philosophical tradition

Nelson (2019), following the debate in Quine (1953; 1956), Kaplan (1969), Burge (1977), and Salmon (1997), cf. also Lewis (1979), Kripke (1979), and Stalnaker (1987), outlines three conceptions of the *de re* versus *de dicto* distinction labelled *syntactic*, *semantic*, and *metaphysical*. A sentence is *syntactically de re* iff it contains a pronoun or variable within the scope of an opacity verb that is anaphoric on or bound by a singular term or quantifier outside the scope of that verb, cf. (2). Otherwise, it is *syntactically de dicto*, cf. (1). The notion of being *semantically de re* is based on the substitution of co-designated terms *salva veritate*: a sentence is *semantically de re* iff it permits substitution of co-designating terms *salva veritate*. Otherwise, it is *semantically de dicto*. It is well-known that in opaque contexts, such verbs as *believe*, *want*, or *hate* do not license the substitution of co-designated terms. Assume that Bill stole the pie, but Mary is not aware of it. Then, the sentences (3) and (4) have different truth-conditional meanings since Mary can hate the person who stole the pie but be unaware that the culprit is Bill. Therefore, (3) is *semantically de dicto*.

(3) SEMANTICALLY DE DICTO. Mary hates the person who stole the pie.
(4) SEMANTICALLY DE RE. Mary hates Bill.

Nelson introduces the third conception of the *de re* versus *de dicto* distinction and labels it 'being metaphysically de re'. An ascription is *metaphysically de re* with respect to an object *o* just in case it directly attributes a property to *o*. This condition is more rigid than being *semantically de re* = be bound by an operator. Assume that Mary has reasons to believe that there is just one man in the room where the pie has been stolen. She sees that the thief is happy but does not know his true identity. Therefore, (5) is not *metaphysically de re*, despite Bill satisfies the condition of uniquely being in the room, where the pie has been stolen.[2] Meanwhile, (6) is *metaphysically de re*, since it contains a singular proposition[3] about the thief:

[2] The contrast between *metaphysically* versus *semantically de re* can be explained by theories where referentiality is treated as a gradable notion or by adopting Hamblin's (1973) postulate that grammar operates on sets, and one should distinguish singleton sets from singular terms, cf. Zimmerling (2025). In Nelson's example with the weakly referential man in the room (= *semantically de re*), one deals with the singleton set of possible thieves, but if the identity of the thief is known to the belief holder (= *metaphysically de re*), one gets a true term expression.
[3] A proposition is singular with respect to an object *o* iff it is about *o* in virtue of having *o* as a direct constituent (Kaplan 1989).

(5) METAPHYSICALLY DE DICTO. Mary believes that the person who stole the pie in the room is happy.

(6) METAPHYSICALLY DE RE. The thief in the room is such that Mary believes that he is happy.

On the Fregean account, *a syntactically de re* sentence is always *semantically de re*, i. e. licenses the term substitution *salva veritate*, and vice versa. The mismatch between *syntactically de dicto* and *semantically de re* can be captured by the competing accounts. The so-called naïve Russellianism treats proper names, cf. *Bill*, demonstratives, cf. *this one*, and definite descriptions, cf. *Mary's brother*, as referential expressions. Along these lines, the definite description 'the person who stole the pie' in (3) can be substituted by the name 'Bill', or by the deictic 'him over there', which means that some *syntactically de dicto* sentences contain their *semantically de re* counterparts and are contained in them. This perspective is interesting, but I do not find it desirable. Therefore, I adopt the Fregean approach and preserve the initial insight that the notions of *de re* and *de dicto* more or less regularly correspond to two different types of contexts. A part of philosophers defended the opposite thesis and maintained that proper quantification in opaque contexts is impossible (Quine 1956) or that opaque contexts require hybrid ascriptions, with a path from *de re* to *de dicto* or vice versa (Kaplan 1969; 1986). Kaplan's proposal was later introduced to formal semantics by Percus & Sauerland (2003), who argued that *de re* ascriptions already contain *de dicto* ascriptions but add an extra piece of logical structure.

The 'metaphysical' condition is compatible with the Fregean account. Let us assume that words like *actually* and *indeed* introduce *de re* beliefs of the speaker that she or someone else verified *p*. The meaning of verification comes from the one-place operator *VER (p)* taking *p* as its argument. If Susi claims that *p* indeed took place, it means that *X* considered *p* and ~ *p* and at some moment established that *p* is true in the actual world. This kind of analysis is relatively common in linguistic research, cf. Yanko (1995), Lohnstein (2018), Zimmerling (2023a), but surprisingly absent from the literature on attitude reports. Let us consider the predicates 'be a thief' and 'steal the pie' in the context of *VER*. Provided that being a thief means 'to be engaged in at least one act of theft', a sentence like *Bill is indeed a thief* directly attributes the property of being engaged in at least one act of theft to Bill, in full accord with Nelson's definition of *metaphysically de re*, cf. (7a). Note that the *VER* operator can embed. In (7b), it is the matrix clause subject *Susi* who has verification commitment and not the speaker.

(7) a. METAPHYSICALLY DE RE. [$_{\text{VER}}$ Bill is indeed [$_{\text{PROPERTY}}$ a thief]].

b. METAPHYSICALLY DE RE. Susi believes that [$_{\text{VER}}$ Bill is indeed [$_{\text{PROPERTY}}$ a thief]].

Let us now make *p* an event proposition. Events as we know after (Davidson 1970) are particulars in space and time, so that the sentence *Bill indeed stole the pie* means that the speaker confirmed that this act of theft took place sometime and somewhere, cf. (8a). This is equivalent to saying that the event

p has the property of being realized at the actual world @ (inhabited by the attitude's holder) at some place in some time. Again, *VER* with an event proposition can embed into the structure led by an overt attitude verb, as in (8b).

(8) a. METAPHYSICALLY DE RE. [VER Bill **indeed** [EVENT stole the pie]].
b. METAPHYSICALLY DE RE. Susi believes that [VER Bill **indeed** [EVENT stole the pie]].

Finally, *VER* can take a proposition containing an attribution of some act. The cleft construction *It was X who did q* expresses the meaning of contrast, i. e. choice on an exhaustive set, cf. Yanko (2001, pp. 49—61). Adding *VER* to this construction yields a reading on which the speaker asserts that she confirmed that it was *X*, but not *Y* or *Z*, who did *q*, so that Bill is the right candidate satisfying the condition of having uniquely stolen the pie on that occasion[4].

(9) a. METAPHYSICALLY DE RE. [VER It was **indeed** [CONTRAST **Bill**] [PROPERTY who [EVENT stole the pie]]].
b. METAPHYSICALLY DE RE. Susi believes that [VER it was **indeed** [CONTRAST **Bill**] [PROPERTY who [EVENT stole the pie]]].

Sentences (7)—(9) show direct attribution of properties to event particulars and objects of other kinds. I will return to this point in section **4** and state here that the VER operator is not sensitive to the sortal type of the embedded proposition, be it a property or an event and combines with higher lying attitude verbs as in (7b), (8b), and (9b).

Tiskin (2021) discusses recent approaches to *de re* and *de dicto* in formal semantics. There are reductionist theories, where *de dicto* is chosen as the default option, while the *de re* reading is triggered by transformational rules or hidden context (Charlow, Sharvit 2014), cf. also the so-called revisionist account, where a *de dicto* report is valued true if the interpreter considers only those belief worlds of the holder where the relevant proposition holds (Lederman 2021). The proposals to analyse *de re* as default (*de dicto* $\supseteq$ *de re*) are less popular, cf. Charnavel (2020). As Tiskin hints, this might align with the fact that *de dicto* sentences are easier to process (Zhang, Davidson, 2024). Sportiche (2020) argues that all structures with syntactic control and the null subject of the controlled clause (PRO) impose a *de dicto* reading. The difficulties with diagnosing *de re* by the substitution test are addressed in Benbaji-Elhadad (2023). An experimental study of *de re* statements is presented in Wang (2025). Since Lewis (1979), it has become customary to postulate a third type of ascription, *de se*, where the agent holds an attitude toward a proposition about themselves. The considerations about hybrid attitudes lying midway from *de dicto* to *de re* are presented in Kusliy (2023), cf. also Rebuschi & Tulenheimo (2011), who implement Hintikka's independence-

[4] I leave out a more sophisticated scenario, where the pie has been stolen by a group of people including *X*. In this case, the uniqueness requirement fails, while the contrast remains.

friendly epistemic logic. In this paper, I do not address *de se* reports and analyse *de dicto* and *de re* from the viewpoint of the person who interprets the attitude reports.

2.2. Linguistic research: two case studies

This section is a tribute to two previously mentioned scholars — Paducheva and Bulygina. The *de re* and *de dicto* terminology is surprisingly rare in Paducheva's works. Her papers on modality and non-veridicality (Paducheva 2015; 2016) do not mention it. In her 2004 book, she argues that deictic expressions violate the <Fregean> compositionality principle as their valuation is only possible outside the embedded proposition (Paducheva 2004, pp. 118—119). I reproduce Paducheva's examples with a modified notation in (10).

(10) Russian (Ibid., p. 118]
a. OK A ved' menja moglo by **zdes'** ne byt'.
'But I might not be **here**.'
b. OK Ja naxožus' **zdes'**.
'I am **here**.'
c. OK Ja naxožus' **tam, gde ja naxožus**'.
'I am **in the place, where I am**.'
d. AKA DE DICTO. *Moglo by byt' neverno, čto ja naxožus' **tam, gde ja sejčas naxožus**'.
int. 'It might be false that **I am there, where I am now**.'
e. AKA DE RE. OK **Dlja togo mesta, gde ja sejčas naxožus**', moglo byt' neverno, čto ja *tam* naxožus'.
'**For the place where I am now**, it might be false that I am *there*.'

Paducheva assumes that the deictic word *zdes'* 'here' has the lexicographical definition 'the place, where I am now'. If one substitutes *zdes'* in (10b) with its definition, one gets (10c), which is an analytic truth. However, the same substitution in the embedded clause fails: the sentence (10d), according to her, is "contradictory and anomalous". Meanwhile, (10a) and its explication (10e) are not anomalous, since the locative restricts the modal verb, which is clear in (10e), where the locative is placed outside the clause containing the modal. This comment amounts to *a syntactically de re* interpretation:

(10e') SYNTACTICALLY DE RE. There is such a place x, such that Z is now in x & Z believes that she could be not in x.

Some speakers of Russian do not share Paducheva's view of the sentence (10d) as weird. For these speakers, (10d) is a variant of (10e) with the locative restrictor *in situ*.

Bulygina's approach to the *de re* and *de dicto* problem is best displayed in her coauthored paper Bulygina, Shmelev (1994) reissued in (Bulygina, Shmelev 1997, pp. 405—416). The authors work out the idea that most speech acts

and attitude reports should be described from the outside by an Interpreter and not by the attitude holder. The Interpreter can apply different strategies. She can minimise her role and aim at preserving the original nominations and reporting the beliefs and assessments of the holder. This is called *(aka)*[5] *de dicto* strategy. But the Interpreter can also aim at describing the things as they are in the world inhabited by her. In this case, she changes the original nominations and adds her own assessments. This is called *(aka) de re* strategy[6].

> With the *de dicto* strategy, we describe the speech acts as if from the inside. With the *de re* strategy, we describe them with a distorting effect from our interpretation (Ibid., p. 415).

Bulygina & Shmelev develop a holistic lexicon-oriented approach to natural language and do not aim at analysing atomic sentences. However, they add a dimension to the *de re* versus *de dicto* issues. Their central claim is that most speech and mental acts, notably those not involving performative verbs, should be described from the outside and not in the eyes and brains of the holder. Therefore, the practice of defining the meanings of the attitude verbs like *say*, *believe*, *hope* on the basis of their use in the 1st person *a la* Wierzbicka (1987), should be discarded (Bulygina, Shmelev, 1994, pp. 49—50). This claim resembles the later revisionist approach, where *de dicto* sentences are valuated true after the Interpreter trims the set of the speaker's attitudinal alternatives (Lederman 2021). In the following sections, I import the Interpreter parameter into the analysis of attitude reports.

3. Belief and desire

Let us focus on the role of the Interpreter in belief and desire reports. I start with an ambiguous example with an indefinite pronoun in the embedded clause. If one wants to formalise the intuition that some attitudinal objects exist in the belief of the holder but not necessarily in the actual world, one needs a more fine-grained semantics. Probably, Rebuschi & Tulenheimo's (2011) category of *de objecto* will suit for this purpose, but I preserve the *de re* and *de dicto* terminology.

3.1. The contexts of belief

(11) Vasja believes that **someone** reported on him.

The *de re* reading is explicated in (12). Let $A(x)$ stand for 'to report on Vasja', then $\exists x\, A(x)$ stands for 'there is such x that x reported on Vasja'.

(12) $_{\text{DE RE}}$. $\exists x \text{A}(x)$, such as V believes that $A(x)$, and V believes that he knows that person.

[5] The 'aka' tag is supplied by myself.

[6] Virtually the same use of the *de re* and *de dicto* terminology is attested by Bogomolova (2024, pp. 45—46) who addresses the indexical shift in Tabasaran (Lezgic).

Translating (12) into two-sorted first-order logic gives the formula (12′). The symbol '@' refers to the world of evaluation aka *the actual world*, R stands for the accessibility relation, and $R_{BEL\text{-}V}w$ reads 'in the belief worlds of *V*'.

(12′) DE RE BELIEF. $\exists x\ (\forall w\ (@R_{BEL\text{-}V}w \rightarrow \mathit{Reported}\ (x, v, w)))$

The use of the non-factive *believe* on the *de re* reading (12) implies that the Interpreter does not know who Vasja suspects to be the informer, but on some reasons is sure that Vasja has some particular individual in mind. Let us now turn to the *de dicto* counterpart (13).

(13) DE DICTO. *V* believes that $\exists x$ A (*x*), and *V* does not know who reported on *V*.

Translating this into two-sorted first-order logic gives the formula (13′).

(13′) DE DICTO BELIEF. $\forall w\ (@R_{V}w \rightarrow \exists x\ \mathit{(Reported\ (x, v, w)))}$.

On the *de dicto* reading, it is irrelevant whether the Interpreter believes that anyone reported on Vasja, but she ascribes to Vasja the belief that *p*, i. e. the informing *event* or the *act* of informing on *V* has taken place, but not the knowledge of the actor. In other words, she restores an *event proposition* in Vasja's mind and ascribes it to the belief holder, cf. (14).

(14) PRESUPPOSITION. *V* is sure that *p*.

In two-sorted first-order logic, the meaning (14) can be represented as (14′), the interpretation being 'for all worlds *w* belief-accessible from the world @ of Vasja's evaluation, there is an informing event'.

(14′) $\forall$w (R_V *(@, w)* $\rightarrow$ *Informing (w))*

The Interpreter can render Vasja's *de dicto* attitude in more than one way. I outline two types of *post hoc* reconstructions of the Interpreter. The first of them can be called *holistic*, cf. (15). The point is that Vasja does not need to check all accessible possible worlds to be sure that *p*, since this sort of belief can be based on the observations on the world @ inhabited by him and the potential informer.

(15) HOLISTIC INFERENCE. *V* did not consider accessible possible worlds, where the role of the Informer could be taken by different people, but concluded that $\exists x\ A\ (x)$ based on the information about the world @ inhabited by him.

Note that the information used by *V* in (15) is not necessarily backgrounded, cf. the scenario (16).

(16) HOLISTIC DE DICTO. The director looked askance at Vasja, and Vasja concluded that someone had reported on him.

The second type of inferences can be labelled *split*. It boils down to the Interpreter's guess that the holder developed the intuition that *p* by checking

the accessible possible worlds inhabited by non-identical informers. The point here is that Vasja still may hold the presupposition that *p* without knowing which of the worlds considered is real.

(17) SPLIT DE DICTO. *V* considered different accessible possible worlds inhabited by the potential Informers and checked the relevant set of individuals {*X*, *Y*, *Z*}. In w_1, only *X* can be the Informer, in w_2 — only *Y*, in w_3 — both *X* and *Y*, in w_4 — neither *X* nor *Y*, but some unknown *Z*, and *V* does not know which of these worlds is real.

The upshot is that in the contexts of belief, the Interpreter (*Y*) always recovers the mental state of the attitude holder (*X*), opting either for the *de dicto* or *de re* reading. If *Y* ascribes to *X* the lack of knowledge of the true identity of some event participant, and the event itself is supposed to be known to *X*, one gets a *de dicto* report. If, on the contrary, *Y* ascribes to *X* the belief that *X* knows the identity of the event participant, one gets a *de re* report. If we assume that the Interpreter inhabits some world, then the choice of *de dicto* versus *de re* reading on behalf of the Interpreter can be considered her *mental act*. Therefore, the epistemic state of *Y*, who checked *X*'s belief report and assigned it the status of *de dicto* or *de re*, should also be reconstructed by some *Z*, and so on.

3.2. The contexts of desire

Desire contexts can be analysed along similar lines, with the proviso that the verbs of desire have a more complex meaning than the verbs of belief. Let us start from the example (18), which is ambiguous between the *de re* and *de dicto* readings, while *de dicto* has multiple triggers.

(18) Vasja wants to invite the female student with the maximum score to dinner.

The holder's desire in contexts like (18) apparently feeds on the holder's belief that the corresponding event *p* took place in the world of evaluation @ (both *de re* and *de dicto*), and the relevant participant, i. e. the object of desire, exists in some world(s) *w* (only *de re*). Let us abstract from the scenario, where the holder's desire is directed towards things he knows do not exist in @, and consider a *de re* reading. On this reading, Vasja wants to invite a particular student, say, Mary, and believes that Mary satisfies the condition $\exists x A(x)$ 'being a female student with the maximal score on the exam'.

(19) DE RE. $\exists x\ A(x)$, such that *V* believes that $A(x)$, and *V* wants to date that person.

The bouletic *de re* reports like (19) do not mean that the holder expresses his wish that the definite girl with the maximal score exists. He only presupposes that she exists in @, though his intuition is not necessarily shared by the Interpreter. I sketch the variant of the two-sorted first-order notation below: B stands for 'belief', and D for 'desire'[7].

[7] I am grateful to Daniel Tiskin (p. c.) for this proposal.

(19′) DE RE BOULETIC. $\exists x((\forall w(@R_{BEL\text{-}V}w \rightarrow \mathit{FemaleStudent}(x) \,\&\, \mathit{MaxScore}(x), w)) \,\&\, (\forall u(@R_{DES\text{-}V}w \rightarrow \mathit{Invite}(v, x, u))))$

Let us now turn to the *de dicto* counterpart (20).

(20) DE DICTO. *V* believes that $\exists x\, A(x)$, and *V* does not know who that person is.

The translation into two-sorted first-order logic is given in (20′).

(20′) DE DICTO BOULETIC. $\forall w(@R_{DES\text{-}V}w \rightarrow \mathit{Invite}(v, \imath x(\mathit{FemaleStudent}(x) \,\&\, \mathit{MaxScore}(x)), w))$

In (20), the holder is ready to invite to dinner any student who satisfies $\exists x\, A(x)$ and, according to the Interpreter, *does not care* who that person is. In other words, the Interpreter attributes to Vasja *indifference* to the true identities of his companions, along with the presupposition that the set of candidates is not empty.

(21) PRESUPPOSITION. *V* is sure that *p* is true.

In two-sorted first-order logic, the meaning of (21) can be set as (21′), the interpretation being 'for all worlds *w* belief-accessible from the world @ of Vasja's evaluation, there is a maximal scoring-event'.

(21′) $\forall w\, (R_V(@, w) \rightarrow \mathit{MaxScore}(w))$

The Interpreter can render Vasja's *de dicto* attitude in more than one way. On the *holistic* scenario, Vasja did not check any accessible possible worlds where different female students get the maximal score since his wish to meet the Maximal Scorer holds at all worlds accessible from @. I outline a holistic scenario in (22) and skip the issue of how the holder gets to know the exam stats.

(22) HOLISTIC DE DICTO. The stats of the exam are known, but *V* is not interested in them as he is ready to meet any Maximal Scorer, provided she is a female student.

On the second *de dicto* scenario, which can be labelled 'split', the results of the exam are not yet determined, and Vasja (or the Interpreter restoring his report) must consider different variants.

(23) SPLIT DE DICTO. The final results of the exam are not yet established. There are different scenarios. In w_1, *X* wins, in w_2, the winner is *Y*, in w_3 — *Z*. *V*. is monitoring the situation, but he is ready to meet any winner.

The upshot is that in the context of desire, the Interpreter (*Y*) restores the mental state of the Subject of Desire (*X*) in opting for a *de re* or *de dicto* reading. If the Interpreter attributes to *X the interest* to the identity of the object of desire, it is *de re*. If the Interpreter attributes to *X the indifference* to the identity of the object of desire, it is *de dicto*. The metalinguistic term 'indiffe-

rence' corresponds to two cognitive states — the *non-involvement* in the process, cf. (22), or the *firm will not to change one's plan*, cf. (23). In both cases, the choice of *de dicto* versus *de re* reading on behalf of the Interpreter can be considered her *mental act*. Therefore, the epistemic state of *Y,* who checked the *X*'s belief report and assigned it the status of *de dicto* or *de re*, should also be reconstructed by some *Z*, and so on.

4. Approaching *res* and *de re*

4.1. Semantic complexity of de re claims

It is plausible that *de dicto* and *de re* are umbrella terms for non-homogeneous language data from diverse fields, in which the two types of attitude reports can be viewed as opposed. From the viewpoint of naïve interpretative semantics, the opaque contexts with an indefinite or ambiguous phrase in the embedded clause favour *de re* readings, while *de dicto* readings like *X-s* interest to a non-referential girl seem made-up. Formal semantics explains how the logical form[8] of the sentence (hence, *LF*) and its syntax are generated. From a derivational perspective, it is convenient to set *de dicto* as the default, since it is simpler to obtain the *de re* readings by moving the quantifier to the matrix clause. As Tiskin (2021, p. 4) points out, under the scope approach to intensionality *de dicto* is the default option as the attitude verb scopes over the attitude clause.

I work out the insight that *de re* readings do not only contribute to the description of *res* in the actual world, but apply to *res* in accessible possible worlds: the latter in the *de re* perspective are considered *as if they were real*, i.e. as the worlds of evaluation. This applies to the substitution of the co-designating terms in fictional worlds. A statement that *Clark Kent* and *Superman* are the same character *de re* does not differ from the statement that *Hesperus* and *Phosphorus* are the same celestial body. The *de re* problem does not boil down to the interpretation of names, e.g. *Paderewski* in the opaque contexts[9]. What matters is the attitude towards describing the things (*res*) in some world *as they are there*. But what actually makes that world real? — It is the accessibility route to other worlds. If Ivar utters an identity sentence *Andrej and Elena's husband are the same person,* and adds a verification marker like *actually*, he makes a statement that *A* and *E's husband* are identical, not just in his world of evaluation but in all worlds epistemically accessible from it[10].

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[8] The term 'LF' is used throughout this paper in the sense of (Harman 1972) and refers to the abstract representation of the sentence that is interpreted according to the provided rules. In philosophy, the term 'LF' is occasionally used as a synonym for 'truth conditions', cf. Kuslij & Veretennikov (2024, p. 191). I share the standard assumption that there are no optional components at the level of LF.

[9] In Kripke's example, Paderewski the pianist and Paderewski the prime minister inhabit different belief worlds of the attitude holder, who assumes that P. the pianist is musical but P. the prime minister is not.

[10] It is not so easy with the name 'Andrej' and the description 'Elena's husband' if one wants to claim that they are always co-designating in the accessible worlds of the

(24) DE RE. Ivar: — VER Andrej and Elena's husband are **indeed** the same person.
(25) DE RE. $\forall w(R_I(@, w) \rightarrow (Andrew(w) = Helen's\ husband(w))$

One might object that the accented words like *indeed* are neither logical connectives nor modals but commitment markers that express a high degree of certainty (Krifka 2023), while the verum meaning is concealed in the identity proposition itself. This view should be rejected. If the identity proposition does express the verum meaning, it must be triggered by the operator VER contained at LF. The cross-linguistic observations support the view that VER is always overtly marked by prosody, notably by the placement of the *verum* accent on the verb or copular complement (Yanko 1995; Lohnstein 2018). With the lexically marked VER, the verum accent shifts from the verb to the discourse word marking VER, unless this word is a clitic (Yanko 2001, p. 62)[11]. In Russian, the verum accent is realised as a reinforced falling contour tagged below as '↘↘' and differs from the default focus accent tagged below as '↘' (Zimmerling 2023a). Following the convention introduced in (Zimmerling 2008), I put the accent tags before the corresponding word form. The syntax of the *VER* markings is shown in (26); the discourse word introducing VER is boldfaced.

(26) Russian
a. Andrej — muž ↘ Eleny. <no *VER*>
'Andrej is Elena's husband.'
b. [VER Andrej — **↘↘ dejstvitel'no** muž Eleny].
'Andrej is **indeed** Elena's husband.' <*VER*>
c. Andrej i muž Eleny — odno ↘ lico. <no *VER*>
'Andrej and Elena's husband are the same person.'
d. [VER Andrej i muž Eleny — **↘↘ dejstvitel'no** odno lico] <*VER*>
'Andrej and Elena's husband are **indeed** the same person.'

Meanwhile, commitment markers affirming the expectations of the speaker, cf. *razumeetsja* 'of course', *samo soboj* 'as a matter of fact', do not take over the accent in contexts like (27). I tag below the affirmative operator as AFF and boldface the corresponding discourse item. The tag '$_0X$' before the word form reads 'no relevant phrasal accent'.

(27) Russian
a. [AFF Andrej — $_0$**razumeetsja** muž ↘ Eleny]. <*AFF*, no *VER*>
'Andrej is, **of course,** Elena's husband.'
b. [AFF Andrej i muž Eleny — $_0$**razumeetsja** odno ↘ lico]. <*AFF*, no *VER*>
'Andrej and Elena's husband are, of course, the same person.'

holder. First, one has to stipulate that proper names and descriptions are rigid designators, and the names of different individuals called 'Elena' and 'Andrej' are quasi-homonymous. For the second, one has to ignore the possibility that in some accessible worlds Andrej can be called 'Ferdinand' and Elena — 'the Queen', but the identity of Andrej and the Queen's husband will hold.

[11] The same holds for the grammaticalized segmental markers of *VER* like accented *do* in sentences like [VER *Andrej DID prove that theorem*].

4.2. De re and de dicto claims with discourse words

There is a near consensus in linguistic research that firm beliefs, when the speaker is committed to *p* differ from probabilistic statements introduced by the words like *probably*, *likely*, when the speaker introduces his belief that the likelihood of *p* is higher than the likelihood of ~ *p*, *P (p)* > *P (~p)*, cf. similar points made by Paducheva (1996, p. 313), Krifka (2023, p. 122) and Krylova (2021, p. 64—82) in the descriptions of Russian, German, and Danish data respectively. However, the meaning of high certainty can be interpreted differently: Von Wright (1962) classifies it with epistemic probability, while Ayer (1964) and Dmitrovskaja (1988) classify it with epistemic necessity. I attempt to harmonise these accounts by assuming that *AFF* markers express necessity only in the belief worlds of the holder, while *VER* markers introduce *de re* claims about the actual world.

(28) MODAL FORCE GENERALIZAION. *VER* markers express necessity in @, *AFF* markers express epistemic possibility in @, or epistemic necessity in the belief world of the holder.

There are reasons to think that *VER* describes *res* in the whole model set: the speaker excludes ~ *p* in all accessible possible worlds. Unwarranted beliefs and failed attempts at verifying *p* exist both from the perspective of science and common sense. However, the language ontology is different, since verification as a type of *c(ommunicative)-meaning* is, in a way, infallible. Even if the Interpreter does not share the holder's belief that he verified *p*, the attitude containing *VER* does not disappear in oblique and counterfactual contexts. In the following, I label the *VER* sentences 'de re claims'.

(29) Russian

a. DE RE CLAIM. Ivar (naivno) verit v to, [VER čto Andrej i muž Eleny — ↘↘ **dejstvitel'no** odno lico], ne imeja dokazatel'stv.

'Ivar (naïvely) believes [VER that Andrej and Elena's husband are **indeed** the same person], without any proof.' ⇝ Andrej and Elena' husband may be the same person at @.

b. DE RE CLAIM. [VER Esli by Rassel ↘↘ **dejstvitel'no** ne čital Frege], ego sobstvennaja teorija byla by menee posledovatel'noj.

'[VER If Russell **indeed** has not read Frege], his own account was less consistent.' ⇝ Russell read Frege at @.

Conversely, the *AFF* markers' capacity to embed is degraded. They are blocked in counterfactuals and only marginally possible in oblique contexts[12]. If the attitudes with *AFF* are licensed in the embedded clause at all, the *AFF* markings either belong to the reported speech of the holder or rep-

[12] This condition is often neglected, since most authors only mention the ill-formedness of problematic modals in the protasis part but keep silent about *AFF* words. E. g., Krifka (2023, p. 128) says: "…the protasis part of conditionals, which is naturally interpreted as referring to a proposition, hence a TP, does not easily allow for epistemic adverbials, in contrast to epistemic adjectives".

resent a similar attitude expressed by the Interpreter towards the holder. In the following, I label the attitudes containing *AFF* 'de dicto claims' and use superscripts to identify the holder.

(30) Russian

a. DE DICTO CLAIM. [INTERPRETER^{X}: Ivar^{y} estestvenno^{x} sčitaet, [čto Andrej i muž Eleny, *$_{0}$**estestvenno**^{x,y} odno lico]].

'Ivar naturally believes that Andrej and Elena's husband are *naturally the same person.

b. *Esli by Rassel $_{0}$**razumeetsja** ne čital Frege…

Int. 'If Russell, **of course**, has not read Frege…'

Paducheva (1996, pp. 200, 318), sticking to Russell's term, dubs modal discourse words 'egocentricals', i.e. elements projecting the speaker's attitude and divides them into *primary* and *secondary*: the former are only licensed in the 1st person reports, while the latter are also licensed in the 3rd person. *AFF* words overtly pattern with the last group but are primary egocentricals in disguise, since they are blocked in reports pertaining to the beliefs of other people. If *X* says 'certainly^{x} *p*', he asserts that *p* is fulfilled in the actual world, but as *AFF* words incl. *certainly* are anti-veridical, they are deleted in *Y*'s reports: **X believes that certainly*^{x,y} *p*. Meanwhile, *VER* words are either not egocentricals or secondary egocentricals. Therefore, the reports like *X believes that indeed*^{x,y} *p* are not anomalous, and the information that *X raised a re* claim that *p* holds at the actual world is not redundant.

The Interpreter is not obliged to agree with anyone claiming that he verified *p* in the actual world, but if she preserves the *VER* marker, she necessarily confirms that that person did not just express his 'opinion' or 'commitment' but raised the claim that he verified *p* in *his* world of evaluation. This factor contributes to a broad distribution of the *VER* markers, which are attested both in root and embedded clauses in indicative and non-indicative sentences, cf. Zimmerling (2023b, pp. 141—145). A philosopher may find the omnivorous behaviour of the *VER* markers puzzling, but the discrepancies between formal and natural languages notwithstanding or rather owing to them, *de re* claims provide a bridge from classical *de re* reports like those discussed in sections **2** and **3**, where the role of the attitude holder is essential to the statements of quantified modal logic.

5. The semantics of verification

In this section, I sketch two alternative analyses of verification as an LF component.

5.1. The communicative status and the puzzles of verification

VER as a type of language meaning is part of the strictly limited set of *c*-meanings obligatorily marked by prosodic and segmental cues and involved in systemic information-structural relations. The list of currently acknowledged *c*-meanings includes theme (topic), rheme (focus), contrast, emphasis,

and discourse incompleteness (Yanko 2001). Following Lohnstein (2018), I assume that *verum focus* is a subset of focus: sentences with the overtly marked focus may but must not add overt *VER* markings. A competing approach, according to which verum and focus are independent values, is advocated in Gutzmann et al. (2020). Following Yanko (1995), I treat contrast and emphasis as second-order *c*-meanings that modify the basic first-order meanings of theme and rheme. The conventional meaning of contrast is associated with the selection of one element against the background of a Hamblin set, that is, an exhaustive set of relevant alternatives. By contrast, the conventional meaning of emphasis is more accurately understood as the speaker's evaluative stance, expressing strong feelings triggered by the violation of an expected norm (Yanko 2001, pp. 64—65). Unlike emphasis, verification is based on Hamblin semantics and can be analysed as a special case of contrast as long as the speaker makes a choice on the set of two exhaustive alternatives, *p* and ~ *p*, and picks *p*. The same holds for the dual meaning of *falsification*, when the speaker opts for ~ *p*. Mind that under the outlined approach, *c*-meanings not marked overtly at the level of Phonetic Form (PF) do not exist. This is not an a priori claim but a posteriori generalisation based on the previous linguistic research.

Let us now highlight four contexts where the use of *VER* markers deviates from the use of the term 'verification' in the language of science. These cases are relevant for the assessment of Ayer's (1964) theory, which attempts at implementing the scientific notion of verification in the analysis of attitudes and to the works of his followers who distinguish two kinds of attitudes dubbed 'belief-and-opinion' versus 'belief-and-assessment' and link them with different putative verbs (Dmitrovskaja 1988, p. 16). The *belief-and-opinion* class hosts probabilistic statements about the likeness of *p* based on the rational knowledge, while the *belief-and-assessment* class hosts vague statements that cannot be verified (Zaliznjak 2006, p. 190).

The distribution of *VER* markers compromises the Ayerian approach as all propositions uniformly pattern with the vague belief-and-assessment class. In other words, the *VER* operator does not discriminate any kinds of embedded propositions. This effect is puzzling if one assumes that *VER* markers ascribe some mental state to the holder, e. g. 'infallible belief' or 'the feeling of happiness after the successful attempt at verifying *p*', etc. It is, however, predictable if *VER* sentences are modal, as modal operators are not truth-functional, and modal sentences can be true in the case the embedded proposition is false (Veretennikov 2008, p. 35).

5.1.1. Indifference puzzle

The *VER* marker can take any proposition, e. g. a subjective assessment with the predicate 'be a scoundrel', cf. (31). I put the matrix clause with the propositional verb in brackets and boldface the lexical *VER* marker.

(31) DE RE CLAIM. <Ja utveržday, čto> [VER Vasja **↘↘dejstvitel'no** negodjaj].
<I claim that> [VER Vasja is **indeed** a scoundrel.]

The same holds for vague statements that lack a conventional interpretation. In 1957, Noam Chomsky constructed the example *Colourless green ideas sleep furiously* to show that well-formed sentences can be nonsensical. In 1959, Roman Jakobson argued that this sentence is interpretable as part of some real-life text. The sentence (32) introduces a *de re* claim that colourless green ideas exist at @: the Interpreter may support this claim by using a factive matrix verb, *prove* or reject it by opting for a non-factive verb like *imagine* instead.

(32) DE RE CLAIM. <ROMAN *DOKAZAL* ČTO> [VER Bescvetnye zelenye idei **↘↘ dejstvitel'no** jarostno spjat].
<ROMAN *PROVED* THAT> [VER Colourless green ideas **indeed** sleep furiously.]

The context (33) can, with some provisos, be considered neutral regarding the truth of *p* as it refers to a dispute between two scholars. Meanwhile, *p* in some cases is set as false. The common conversational background of most people contains the proposition that the Earth is not flat, which does not prevent the dissidents from claiming the opposite *de re*.

(33) DE RE CLAIM. <KAJRI VERIT V TO, ČTO> [VER Zemlja **↘↘ dejstvitel'no** ploskaja.**]**
<KYRIE BELIEVES THAT> [VER The Earth **indeed** is flat.]

The *VER* marker can also be added to a contradictory or absurd sentence like (34).

(34) DE RE CLAIM. <EST' MNENIE, ČTO> [VER Irracional'nye čisla **na samom ↘↘ dele** racional'nye.**]**.
<THERE IS AN OPINION THAT> [VER Irrational numbers are **actually** rational.]

Earlier philosophers would discard (31)—(34) as loose talk, while their modern colleagues acknowledge loose talk as a research object, cf. Dinges (2024) and define it as deliberate loosening of the truth conditions or deviation from the canonic uses of language expressions. This applies to the Jakobson example (32), which involves a deliberate violation of selectional restrictions. Meanwhile, there is no loose talk in (31), (33), and (34): the mistakes in (34) and (34) are factual and logical but not linguistic.

5.1.2. Counterfactual puzzle

A striking feature of *VER* words is that many of them are licensed in counterfactuals and combine with the irrealis markers, cf. Zimmerling (2023b) for Old Russian. Let us introduce the dual operator *FALS f*or the falsification sentences and consider a pair of counterfactuals (44a-b), where the *VER/FALS* word is in the protasis part. In this case, the falling verum accent '↘↘' expected in the root sentence shifts to the rising accent '↗↗' that differs from the neutral rising accent '↗'.

(35) FALS (p) ↔ VER (~ p)

(36) Russian

a. DE RE CLAIM. [VER Esli by Vasja ↗↗**dejstvitel'no** ljubil Katju], on by podaril ej cvety.

'[VER If Vasja **really** loved Kate], he would give her flowers' ⇝ Vasja does not love Kate at @ & Vasja did not give Kate flowers at @.

b. DE RE CLAIM. [FALS Esli by Vasja ↗↗**dejstvitel'no** *ne* ljubil Katju], on by *ne* podaril ej cvety.

'[FALS If Vasja **really** *didn't* love Kate], he would *not* give her flowers' ⇝ Vasja loves Kate at @, & Vasja gave Kate flowers at @.

The licensing of *VER* and *FALS* in (36a-b) lends a linguistic argument to D. K. Lewis' metaphysics (1973) that counterfactual utterances are true in the sense that it is the case in another world that such a thing occurred[13]. Note that *de dicto* claims with *AFF* are invariably blocked here.

5.1.3. Confirmation puzzle

The verified proposition necessarily gets the status of *fact*, i.e. infallible truth in the holder's world of evaluation. The person who utters a *de re* claim is its guarantor. Meanwhile, the sentence containing a *VER* word is not factive. The Interpreter can support the holder's claim by putting it into a factive shell, by saying ***I know*** *that* [VER *Roman indeed proved p*], or *Roman proved that* [VER *p indeed holds*] ⇝ *p holds at* @. But she can also refute his claim by using an implicative verb and adding her own nominations, like *erroneously*, cf. *Roman* ***(erroneously) imagines*** *that p* ⇝ *p does not hold at* @, or remain neutral, cf. *Roman* ***says*** *that p* ⇝ *p or* ~ *p*. A further complication is that facts as logical truths are atemporal (Arutyunova 1988, pp. 152—168), even though the content proposition describes a spatiotemporal event and the verification attempt is an event in space and time. Cf. ***In 1959, when Roman was in New York****, he proved that* [*the green ideas sleep furiously*] ≡ the green ideas exist and have a confirmed property of sleeping furiously & Roman proved that in 1959 while being in N.Y, or even: ***In 1959****, Roman proved that* [*the green ideas* ***slept*** *furiously* ***in 1959***] ≡ the green ideas **existed** and **slept** furiously in 1959, & Roman proved that in 1959. The upshot is that the factive status of the *VER* sentence that *X* really succeeded in proving *p* is not preserved in the embedding, while the reference to the spatiotemporal event, where *X* raised the corresponding *de re* claim, is not lost.

5.1.4. Framing puzzle

As long as a sentence with *VER* describes *res* in an accessible world, it can be framed by a *de dicto* sentence with a hypothetical modal like *assume* or *probably*. The sentences (37a-b) express the meaning 'It must have really rained, since there are raindrops on the shoes'.

[13] However, I do not see linguistic arguments in favour of Lewis's central claim that accessible worlds are inhabited by our 'counterparts' and not by the same individuals that inhabit the actual world,

(37) Russian
a. [◊ **Ja dopuskaju**, čto [VER dožd' **i ↘↘ pravda** prošël]]: na botinkax kapli.
'[◊ **I assume** that], [VER it **really** rained]: there are drops on the shoes.'
b. [◊ **Navernoe**, [VER dožd' **i ↘↘ pravda** prošël]]: na botinkax kapli.
'[◊ **Probably**], [VER it **really** rained]: there are drops on the shoes.'

Mind that the higher lying hypothetical operator must scope over *VER* (*assume* > *really*; *probably* > *really*). It does not belong to the embedded argument, and the combinations **really* > *assume*, **really* > *probably* are ruled out. The degree of certainty does not matter. The same condition holds for *de dicto* claims with *AFF*, cf. the anomalous examples with AFF *razumeetsja* 'certainly', 'of course'.

(38) Russian
a. * [VER dožd' **i ↘↘ pravda** $^{AFF}{}_{0}$*razumeetsja* prošël].
int. *'it **really,** *of course,* rained.'
b. [VER dožd' $^{AFF}{}_{0}$*razumeetsja* **i ↘↘ pravda** prošël].
int. *'it *of course* **really** rained.'

5.2. Negation and modal operators

A sentence with *VER* may contain the negation and a subordinate modal. According to (35), *VER (~ p)* ↔ *FALS (p)*. However, *VER* (◊*p*) is not equivalent to ◊***VER (p).*** It is intuitively clear that the sentence *Vasja* ***dejstitel'no*** MOŽET *gnut' podkovy* 'Vasja CAN **really** bend horseshoes' is not synonymic to VOZMOŽNO, *čto Vasja* ***dejstvitel'no*** *gnet podkovy* 'It is POSSIBLE that Vasja **really** bends horseshoes'. The Russian verb *možet* can express different flavours. In this pair of sentences, it has the meaning of internal possibility, which is not characteristic of the adverb *vozmožno.* I provide an extra context where this disturbing effect is absent. The variant (39a) has the weak modal *vozmožno* 'possible', the *VER* word **dejstvitel'no** in the root clause, and the infinitival clause introducing the proposition *p*. In (39b), the structure of (39a) is embedded to the matrix predicate *verno* 'it is true that'. In this case, the weak modal *vozmožno* ends up in the embedded clause, while the *VER* word *dejstvitel'no* can be placed in the matrix clause: a copy of this *VER* word can optionally be pronounced in the embedded clause.

(39) Russian
a. [VER [InfP Otozvat' zajavku] **dejstvitel'no** ◊*vozmožno*]].
'[VER It is **really** ◊*possible* [InfP to withdraw the application]].'
b. [VER **dejstvitel'no** verno, [CP čto [InfP otozvat' zajavku] (**dejstvitel'no**) ◊*vozmožno*].
'[VER It is **really** true [that it is ◊*possible* [InfP to withdraw the application]].'

The truth value of (390a-b) is identical, since according to the Modal Force Generalisation (30), *VER* markers express necessity, and □ (◊*p*) → ◊*p*. The interpretation of (39a) could be either (40a) or (40b), but only (40a) is the correct paraphrase.

(40) a. VER **Dejstvitel'no verno**, čto *p* (◊*vozmožno* (otozvat' zajavku)).
'It is **indeed** true that *p* (it is possible (to withdraw the application))' ⇝ *p*
b. # ◊*Vozmožno*, čto VER **dejstvitel'no verno**, čto *p* (◊*vozmožno* (otozvat' zajavku)).
'It is ◊*possible* that it is indeed true that p (◊ it is *possible* (to withdraw the application)).' ⇝ *p* ∨ ~ *p*

The problem is that the *VER* meaning holds only with the order *VER* >, but gets lost if the weak modal lies higher than *VER*. To put it differently, it is impossible to extract the weak modal from the embedded proposition *VER* (◊*p*) and raise it above *VER*, since there is no licit rule like **VER* (◊*p*) → ◊ (*VER (p)).*

5.3. Two models of verification

Verification as a *c*-meaning can be modelled in two ways. According to the first one, it is a degraded case of contrast, where the choice is made on the exhaustive set of two alternatives, *p* or ~ *p* (Yanko 2001, p. 61). This approach can be dubbed 'extensional' or 'Hamblin-style' in honour of Hamblin, who introduced exhaustive sets to linguistics. On this account, a verified sentence does not contain the link to the spatiotemporal situation, where some *X* raised a claim that he verified *p*, e. g. that the Earth is flat or green ideas exist.

(41) HAMBLIN-STYLE VER. The *c*-meaning of verification is triggered by the one-place operator *VER*, which takes a propositional argument and is overtly marked at PF by prosodic and lexical cues. The speaker makes a choice on the set {*p*; ~ *p*} and picks *p* (verification proper) or ~ *p* (falsification). The speaker is the guarantor of verification.

The second account explores the idea that any *VER* sentence contains a link to a real-world situation, where some *X* raised a *de re* claim (Zimmerling 2023a, p. 111—112). This approach can be dubbed 'intensional' or 'Davidson-style' in honour of Donald Davidson, who created the ontology of events.

(42) DAVIDSON-STYLE VER. The *c*-meaning of verification is triggered by the one-place operator *VER*, which takes a propositional argument and is overtly marked at PF by prosodic and lexical cues. The speaker chooses the set {*p*; ~ *p*} and picks *p* (verification proper) or ~ *p* (falsification). The speaker is the guarantor of verification. Each sentence containing overtly marked *VER* or *FALS* contains a reference to a spatiotemporal verification event in the actual world @, where some *X* raised a *de re* claim about @ or possible worlds accessible from @.

For most linguistic purposes, the choice between (41) and (42) is not critical, but since I discuss *res*, I adopt the Davidsonian approach.

5.4. Cross-linguistic parallels and language theory

Gutzmann et al. (2020) address verum constructions in several non-Indo-European languages compared to German. The title of their paper echoes Lohnstein (2018) and claims that *VER* is not a subset of focus but an independent *c*-meaning. Neither Lohnstein nor Gutzmann consider lexical *VER* markers. Contrariwise, Krifka (2021; 2023) who develops a layered model of the speech act does not comment on the prosody of discourse items but tries to explain their meanings by the positions they take in the structure consisting of three layers above the propositional layer: these layers are called *judgments* (associated with the JP phrase in syntax), *commitments* (associated with the ComP) and *acts* (associated with the ActP). Each layer hosts a different group of discourse words. *Judgment modifiers* are epistemics and evidentials, while *commitment modifiers* are expressions that "turn proposition ϕ into a propositional function that the speaker x is publicly committed to in world i to ϕ" (Krifka 2023, p. 122). Finally, *act modifiers* are expressions like Ger. *offen gesagt* 'frankly speaking' specifying certain aspects of the speech act. Regarding commitment markers, Krifka says that they "modify the strength of the commitment and hence may be called "affirmatives" (Ibid., p. 139). This category roughly overlaps with our *AFF* class, but Krifka puts there both *AFF* items like Ger. *ganz sicher* 'certainly', *echt* 'seriously' and some accented *VER* words like *wirklich* 'really', based on some word order tests. However, other *VER* markers like *tatsächlich* 'in fact', *in der Tat* 'indeed', *in Wirklichkeit* 'in reality' do not match these tests, and Krifka admits that he cannot list them as commitment modifiers (Ibid., p. 146). I won't discuss the merits and drawbacks of Krifka's cartographic analysis, but state that classifying *AFF* and *VER* words with one group is not based on semantic criteria. Paducheva (1996, p. 313; 2016, p. 81) mentions a class of Russian discourse words marking that the expectations of the speaker were met and lists five items: *konečno* 'certainly', *estestvenno* 'naturally', *razumeetsja* 'of course', *dejstvitel'no* 'really', *v samom dele* 'in fact'. This is not an accurate description. The first three items are *AFF* words that do not indicate that the speaker verified *p* or attempted at it, they just tell that *p* was expected. The last two items are *VER* words that do not necessarily imply that *p* was expected or mentioned earlier; they just tell that *p* was verified. Along similar lines, Krylova (2021, p. 62—80), who addresses Danish modal particles, distinguishes between 'problematic modals' (= Krifka's judgments) versus 'affirmative modals' (= Krifka's commitments) and puts Danish *AFF* and *VER* words in the same class.

If the *VER* meaning is universal, it makes sense to check whether the distinction of *AFF* and *VER* words is cross-linguistically stable. These issues are discussed by Zimmerling & Baiuk (2025), who experiment with translating 17 Russian *VER* words and *AFF* words into 9 target languages. The stimuli sentences were translated by humans, MT systems, and LLMs. The correct analysis of the stimuli boils down to recognising them as *de re* claims versus *de dicto* claims. The translation itself amounts to a triple task: 1) recognising

the *VER* | *AFF* insertion in the stimulus; 2) extracting the correct operator; 3) providing a valid equivalent from the set of *de re* or *de dicto* words in the target language. This is shown in (43); the symbol W^{VER} stands for the set of all discourse elements containing *VER*, 'SL' stands for the source language, and 'TL' for the target language.

(43) $w_i \in \{_{SL}\, w_1, w_2 \ldots w_n\}^{DE\ RE} \Rightarrow W^{VER} \Rightarrow w_j \in \{_{TL}\, w_1, w_2 \ldots w_n\}^{DE\ RE}$

The results show that the translators preserved the contrast of *VER* and *AFF*, despite the class of *VER* words in all target languages turned out to be smaller than in Russian. The distributional independence of *VER* and *AFF* operators supports their universality.

6. Discussion: *VER* and the actual world(s)

I argued that the standard theory of *de re* and *de dicto reports* should be complemented by the analysis of *de re claims* that the proposition *p* holds at the actual world, and *X* verified *p* in the actual world. *De re claims* are triggered by the one-place operator *VER*, which is present at LF and obligatory marked by the special prosody at PF labelled 'verum focus'. *VER* can also be marked lexically by the words taking over the verum accent. The sentences with lexically and non-lexically marked *VER* are synonymous, cf. [VER *Vasja* ***LOVES*** *Kate*] and [VER *Vasja* ***REALLY*** *loves Kate*] both convey that the speaker confirmed that *V* loves *K* at @ and rejected the hypothesis that he does not. The lexical *VER* markers are involved in a regular contrast with the discourse words containing the *AFF* operator and introducing *de dicto* claims that *p* is true in all belief worlds of the holder. *AFF* sentences express a high degree of certainty. It is unlikely that *VER* sentences describe any mental state, but they introduce *de re* claims that *p* nessessarily holds at the actual world, where any potential Interpreter lives.

De dicto claims with *AFF* are generally deleted in the embeddings, as the information that some *X* at some point was sure that *p* is of minor relevance for the valuation of *p* in the set of worlds accessible from the actual world. Meanwhile, *de re* claims with *VER* may be preserved here, since the *X's* attempt to verify *p* is an event at the actual world. Assume that Bill accepts Roman's theory of colourless green ideas. Bill can utter (i) or (ii): (i) $BILL^x$: [AFF $ROMAN^y$ ***surely***^{x} *proved* [*that green ideas* ****surely***^{x,y} *exist*]]; (ii) $BILL^x$: [VER $ROMAN^y$ (***indeed***^{x}) *proved* [*that green ideas* ***indeed***^{x,y} *exist*]]. In (ii), the lower *indeed*^{x,y} in the embedded clause can be associated both with the holder (Roman) or the speaker (Bill), but as *de re* claims are about the actual world, the index does not matter. The higher *indeed*^{x} in the matrix clause is unambiguously associated with the speaker. The same holds for the higher *surely*^{x} in (i) introducing the *de dicto* claim: it is unambiguously associated with Bill, not Roman. However, the *AFF* word *surely* in (i) is Bill's own nomination, not Roman's, despite both of them allegedly believing in the same things. Therefore, Bill cannot put *surely* in the embedded clause and ascribe his own attitude to Roman. Let us now assume that Mary is sceptical both toward Ro-

man's theory and Bill's skills. She can utter (iii), but not (iv): (iii) $MARY^{x}$: [VER $BILL^{y}$ ***indeed***^{x,y} *believes* [VER *that* $ROMAN^{z}$ ***indeed***^{x,y,z} *proved the existence of green ideas*]]; (iv) $MARY^{x}$: [AFF $BILL^{y}$ ***surely***^{y} *believes* [AFF *that* $ROMAN^{z}$ ****surely***^{x,y,z} *proved the existence of green ideas*]]. The reason is that any attempts at verifying *p* are part of the actual world: the encyclopedic sources tell that Roman published his *de re* claim about green ideas in 1959, and while we do not know when Bill joined him, the *VER* sentence infers that Bill's own *de re* claim must have (spatio) temporal characteristics in @ too. The upshot is that *AFF* words are transparent for the interpretation but normally do not embed, while *VER* words are opaque but embed and project a chain of *de re* claims as in (iii), where the lower *indeed*^{x,y,z} is felicitous on each of the three available indexes (*Roman*^{z}, *Bill*^{y}, and *Mary*^{x}). It is therefore not surprising that the distinction of *VER* and *AFF* words holds in translation.

The omnivorous behaviour of the *VER* words that are licensed in root and embedded sentences in realis and irrealis contexts does not pose a threat to the outlined theory. Moreover, it supports the view that *VER* words pattern with strong modals and not with verbs describing mental states: a modal statement can be true even though the proposition is false. *VER* and *AFF* words apparently have mutually-exclusive characteristics: the former bring about factive presuppositions about *res* and describe logical operations but not mental states, while the latter do not bring about any *de re* presuppositions, and describe mental states but not logical operations. Adding into consideration the third group of discourse modals, Krifka's 'judgment modifiers' yields a more complicated picture: *PROB* words as *likely*, *probably* bring about likelihood presuppositions that $P(p) > P(\sim p)$ in @ and describe logical operations, i.e. calculating of subjective probabilities (Von Wright 1962), while it is a matter of agreement, whether *PROB* words associated with guesses, hypotheses and conjectures ascribe some mental state to the attitude holder. For the sake of clarity, I assume here that they do not.

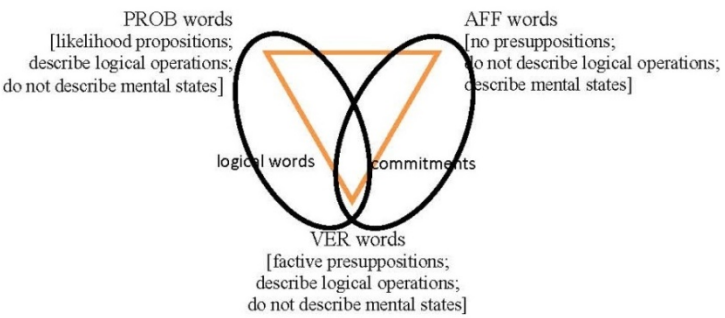

Fig. Three classes of discourse modals and the *de re* versus *de dicto* distinction

Let us now turn to two puzzling consequences from the proposed semantics. One is that in our system, $VER(p) \rightarrow p$, but *p* does not entail $VER(p)$. Another one is the interaction of *VER* with *IRR*, whereby *p* does not hold at the actual world. At the first step, I remind that according to **5.1.4** and **5.2** the *IRR* operator, like other non-veridical operators, cf. *PROB*, *AFF*, or the yes-

no operator '?$_{Y/N}$' must lie higher than *VER*, and the opposite order **VER* > > *IRR*, cf. **VER (probably (p))*, **VER (certainly (p))*, **VER (?$_{Y/N}$ (p))* is illicit[14]. This poses a dilemma: a) either *VER* takes bare propositions that do not embed in any speech act structures, including *IRR* and other non-veridical markers; or b): the absence of the non-veridical operators is due to the presence of a veridical operator that blocks them. I opt for b) and assume that *VER* takes propositional arguments led by the *actuality operator ACT* containing a direct (Crossley, Humberson 1977) or indirect (Rebuschi, Tulenheimo 2011) link to the actual world. Thus, we arrive at the layered structure (44).

(44) IRR (VER (ACT$_{@}$ (p))).

According to Rebuschi and Tulenheimo (Ibid., p. 17), *ACT* is a deictic operator similar to 'now'[15]. Since my task is to explain why *VER* and *ACT* are not redundant, and *VER* is licensed in the irrealis, I cannot accept their claim that the "actual world has been fixed once and for all" and consider multiple worlds of evaluation compatible with *de re*. At the second step, I introduce the notions of *preverified statement* and *constructed actual world*. A preverified statement is a veridical (in the broadest sense, i.e. *not* marked as anti-veridical[16]) sentence that contains *ACT* but not *VER* and does not contain a link to the situation, where some *X* verified *p* in @.

(45) PREVERIFIED-S. A preverified statement *p* is a veridical statement led by *ACT*$_{@}$, which is not linked with any verification event $e_{@}(p)$, where some *X* verified *p* in @.

The sentences of the form *ACT (p)* must be preverified. An indicative *VER* sentence like [VER [ACT *Green ideas* ***actually*** *exist*]] on this account conveys the meaning: "The actual world @ is such that green ideas exist in @ & there is a verification event $e_{@}(p)$ for *Act(p)* in @". A non-indicative *VER* sentence in the context of *IRR*, cf. [IRR *If* [VER [*green ideas* ***actually*** *existed*]], [*the*

[14] Mind that the condition **VER* > *IRR (p)* is about anti-veridical operators *above* the content proposition. The Russian yes-no particle *li* is a 2P element, which adjoins to the first accented word at PF but scopes over the *VER* word *dejstvitel'no* at LF. Therefore, the licit yes-no question ***dejstvitel'no*** LI$_{Y/N}$ (*p* ili$_{\vee}$ ~ *p*) 'Whether it **really** is that (*p* or ~*p*)?' is interpreted ||?$_{Y/N}$ ***(VER** (p or ~p))*||. However, one cannot ask ****dejstvitel'no** p* LI$_{Y/N}$*?* as it sets the illicit scope hierarchy **VER (?$_{Y/N}$ (p))*.

[15] "a world w_0 ('the actual world') has been fixed once and for all… Then… the semantic clause for *ACT* lays down that *ACT* ϕ holds at *w* iff ϕ holds at the designated world w_0." (Ibid.).

[16] Paducheva (2015: 130, 135, 144) identifies non-veridicality with the licensing conditions for the Russian NPI pronouns and emphasises the role of uncertain perception and *PROB* markers like *kažetsja* 'apparently', *edva li* 'hardly'. De Marneffe et al. (2012) treat the veridicality effects as context-dependent and postulate four veridicality values — 'certain' (CT), 'probable' (PR), 'possible' (PS), and 'underspecified' (Uu). I concur with Paducheva in that veridicality should be preferably analysed as a semantic feature, but take de Marneffe et al. point that the CT+ value regularly corresponds to the Uu value of the Interpreter (Ibid., pp. 305, 316). Thus, their Uu category overlaps with our *ACT (p)*, i.e. preverified sentences.

daltonics were disturbed]], conveys a more complex meaning. I skip the interpretation of the apodosis part and interpret the protasis as: "the actual world @ is such that green ideas do not exist in @ & there is no verification event $e_{@}(p)$ for *ACT(p)* in @ & there is an accessible possible world *w*, such as green ideas exist in *w* & there is verification event $e_{w}(p)$ for *ACT(p)* in *w*". This formula captures the observation that counterfactuals require veridical components, i.e. *ACT* (*p*). Indeed, *PROB* and *AFF* operators are ruled out here, cf. anomalous attempts to insert them in *[IRR *If* [PROB *green ideas* ***probably*** *existed]*…], *[IRR *If* [AFF *green ideas* ***certainly*** *existed*]…,] etc.

(46) VERIDICALITY HYPOTHESIS. Irrealis sentences contain a mirror image of the actual world and require veridical components, i.e. preverified sentences, *ACT (p)* or verified sentences, *VER* (*ACT* (*p*)).

The accessible possible world, where *ACT* (*p*) can be verified, is a *constructed actual world*:

(47) CONSTRUCTED ACTUAL W. A world $w^{@}$ is a constructed actual world accessible from @, which is called into existence as the mirror image of @ in the irrealis contexts and preserves the veridical status of the negative counterparts of *ACT* (*p*). If there is a falsification event for *p* in @, there is a verification event for the same proposition in $w^{@}$.

The diagnostics of lexical *VER* markers is easy: the theory predicts them to be accented words licensed in root and embedded sentences in the absence of non-veridical *AFF* and *PROB* operators in the scope of *VER* but above the content proposition, **VER (AFF/PROB (p))*. From the viewpoint of PF, it is *VER* that blocks subordinate *AFF* and *PROB* operators: if the speaker already has a lexical *VER* marker like Eng. *indeed*, *really*, *in fact*, Russ. *dejstvitel'no*, *na samom dele*, she cannot insert *AFF* or *PROB* words like *certainly*, *probably* in the embedded structure. From the perspective of LF, it is rather non-veridical *AFF* and *PROB* words that block the higher lying *VER* operator. This is exactly what formal semantics and related theories tell: semantic (and syntactic) structure is generated from below, bottom-to-top (Montague 1970). I argued that the absence of overt *AFF* and *PROB* markers in veridical sentences is due to the presence of a covert veridical operator that can be straightforwardly identified with Crossley & Humberson's ACT operator. This step provides a key to a uniform account of *de re* and *de dicto* claims.

(48) ACTUALITY GENERALIZATION. All reports claiming that *p* holds at the belief worlds of the holder (*de dicto*) or in the actual world (*de re*) require veridical complements. *De dicto* claims pattern with preverified sentences, i.e. *ACT* (*p*), *de re* claims pattern with verified sentences, i.e. *VER (ACT (p))*.

Recall that *AFF* words are anti-veridical in the oblique speech but infer $AFF^{x}\ (ACT^{x}\ (p)) \rightarrow p$ in the belief world of the holder. Suppose that Bill believes that Roman played a chess game with Paul Morphy last night. The doctor does not know that Paul Morphy died in 1884, and there is no chess

game event (*r, pm, last night*) in @. She remains neutral to Bill's claim but cannot say **Bill believes that Roman, of course, played a chess game with PM*, although Bill is in fact sure that *p*.

(49) Russian

DE DICTO. DOKTOR^{x}: [$_{ACT}$ Bill^{y} verit v to, [$_{ACT}$ čto Roman ***^{AFF}konečno^{x,y} /*^{PROB} navernoe^{x,y}** prošloj nočju igral v šaxmaty s Polom ↘Morfi]].

'THE DOCTOR^{x}: '[$_{ACT}$ Bill^{y} believes [$_{ACT}$ that that Roman ***^{AFF}of course^{x,y} /*^{PROB}probably^{x,y} played^{x,y}** chess with Paul Morphy last night]]' ⇝ $p \vee \sim p$ in @.

The same condition holds for counterfactual sentences evaluated both in @ and $w^{@}$.

(50) Russian

COUNTERFACTUAL. *Esli by Roman *^{AFF}**konečno^{x,y} /*^{PROB} navernoe^{x,y}** igral s Polom Morfi....

Lit. '*If Roman ^{AFF}**certainly, ^{PROB}probably** played with Paul Morphy…',

Int. 'If it were ^{AFF}certain/^{PROB}probable that R played chess with PM...'

Rebuschi & Tulenheimo (2011, p. 5) mention that the contrast of knowledge and belief matters for the assessment of *de re*, *de dicto*, and their third category of *de objecto*, i.e. things existing only in belief worlds of the holder. It does, but only for the Interpreter and not for the holder who may imagine that he proved *p* in @. The doctor may support Bill's claim that *p* holds at @ by adding her own nominations, e.g. factive verbs *know*, *establish*, or *prove* to the matrix clause or remain neutral as in (51a). Mind that (59a-b) contain similar inferences despite the fact that there is a verification event for Bill's claiming that *p* holds at @, and no verification event for Roman's game with Paul Morphy in @.

(51) a. DE RE. THE DOCTOR^{x}: [$_{VER}$ [$_{ACT}$ Bill^{y} **indeed^{x}** believes that [$_{PREVERIFIED}$ $_{ACT}$ Roman played a chess game with Paul Morphy]]]. ⇝ there is a verification event at @ for Bill's claiming that *p* holds at @ & *p* can be true or false at @.

b. DE DICTO. THE DOCTOR^{x}: [$_{PREVERIFIED}$ $_{ACT}$ Bill^{y} believes that [$_{DE\ RE}$ [$_{VER}$ [$_{ACT}$ Roman^{y} **indeed^{y}** played a chess game with Paul Morphy.]]]] ⇝ there is no verification event in @ for Bill's claiming that *p* holds at @ & *p* may be true or false at @ & Bill believes that he proved *p* at @.

Another way of confirming that *X* raised a *de re* claim in @ without verifying the content proposition is to insert adverbials like *surprisingly* into the matrix clause. The difference between (51a) and (52) is that the latter does not contain any word like *indeed*, for which *VER* is part of its assertive meaning. Therefore, I classify (52) with *de dicto*.

(52) DE DICTO. THE DOCTOR^{x}: [$_{PREVERIFIED}$ $_{ACT}$ Bill^{y} **suprisingly^{x}** believes that [$_{PREVERIFIED}$ $_{ACT}$ Roman played a chess game with Paul Morphy]]. ⇝ there may be a verification event in @ for Bill's claiming that *p* holds at @ & *p* may be true or false at @ & it is surprising that Bill believes in *p*.

Finally, the Interpreter may falsify the holder's report by adding the word *wrongly* to her clause. This makes her own speech act a *de re* claim.

(53) DE RE. THE DOCTOR^{x}: [FALS [ACT Billy **wrongly**^{x} believes [FALSIFIED that [ACT Roman played a chess game with Paul Morphy last night]]]] ⇝ *p* is false at @.

A question arises, whether *FALS (p)* ↔ *VER (~ p)* sentences are necessary or contingent truths in @. The answer depends on the context and the conventions of analysis. If the doctor follows Roman on CCTV and knows that he *did not play* any chess game last night in @, the *VER* (~ *p*) clause in (53) is a contingent truth. If, however, she has encyclopedic knowledge that *no one could play* chess with Paul Morphy last night, it is a necessary truth in *her* belief worlds. But then, a second-order Interpreter who believes that ghost chess players exist in @ and finds the doctor too materialistic may disregard her claim that there is a falsification event for *p* in @ and assign *p* a different status.

7. Conclusions

I outlined a semantics of verification motivated by two observations: 1) the *VER* operator must be realised overtly at PF; 2) the counterfactuals and other sorts of irrealis sentences require veridical components in the protasis part. These intuitions are captured by the formula *VER (ACT(p))*, where the lower operator *ACT* links a sentence to the actual world and makes it verifiable, while the higher operator *VER* adds a link to the verification event. Provided that events are spatiotemporal things, i.e. quantified particulars in space and time (Davidson 1970), the *VER* sentences raise *de re* claims. The lexical *VER* markers, i.e. discourse words encoding *VER* as part of their assertive meaning, are in stark contrast to a different class of discourse words containing the operator *AFF*. The current versions of the commitment theory that place *VER* words and *AFF* words into the same class fail to predict the constraint on the use of *AFF* within the scope of *VER*, cf. **Roman indeed naturally won the game* also in the irrealis contexts, cf. **If Roman naturally kills the dragon, the doctor will be amused*, **If Roman certainly had three heads, the doctor would be confused*. This constraint shows that *AFF* words are anti-veridical. For the speaker, 'certainly *p*' entails *p*, while 'probably *p*' does not, but the Interpreter refuses to see any ontological commitments here and classifies both sentences with *de dicto* claims pertaining to the belief worlds of the holder. If *AFF* sentences pattern with *de dicto*, one can no longer claim that *de re* is always semantically and derivationally more complex than *de re* (*de re* ⊇ *de dicto*), since the *AFF (ACT (p))* part is not contained in *VER (ACT (p))* sentences.

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СЕМАНТИКА ПОДТВЕРЖДЕНИЯ И УСТАНОВКИ DE RE

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Строится семантика верификации и прослеживаются связи слов верификации с установками de re. *Предложения верификации имеют уровневую структуру с двумя одноместными операторами VER и ACT: VER (ACT (p)). Оператор VER задает связь с событием верификации, где X доказал p в действительном мире, в то время как ACT делает предложение верифицируемым или фальсифицируемым. Установки* de re *связаны с допущениями о существовании объектов в действительном мире. В онтологии Д. Дэвидсона события рассматриваются как индивиды, локализованные в пространстве и времени, поэтому предложения VER (ACT (p)), утверждающие существование событий верификации в действительном мире, классифицируются как* de re, *а слова VER типа англ.* indeed, really, *рус.* действительно, на самом деле *могут рассматриваться как модальности* de re, *передающие значение эпистемической необходимости. Имеется второй класс дискурсивных слов типа англ.* certainly, naturally, *рус.* разумеется, естественно, *выражающих оператор AFF, который сигнализирует о том, что ожидания говорящего подтвердились. Слова данных классов имеют разные свойства: уверенность в p не подразумевает верификации* de re, *а слова VER не приписывают состояния уверенности носителю установки. AFF может иметь более широкую сферу действия, чем VER, конфигурация AFF (VER (ACT (p))) разрешена, но VER не может иметь более широкую сферу действия, чем AFF, конфигурация *VER (AFF(ACT (p))) запрещена. Предложенный анализ объясняет два наблюдения над языковым материалом: 1) VER всегда маркируется внешне просодией или сегментными средствами; 2) контрфактические предложения требуют верифицируемых компонентов в прота-*

сисе. Это ограничение дает повод считать, что контрфактические миры в перспективе естественного языка рассматриваются как действительные и могут включать события верификации.

Ключевые слова: *верификация, коммуникативная структура, логическая форма, модальность, операторы, пропозициональные установки, фонетическая форма, de re, de dicto*

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