Scare quotes as deontic modals*

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Contents

Abstract

The aim of this paper is to propose a formal semantic account of scare quotation (SQ). I present data showing that SQ, though flexible, is subject to regular and so far largely unnoticed limitations following from the infelicitous use of irony as well as the division between at-issue and not-at-issue content parts. While these effects can hardly be accounted for by assuming that the ironic aspect of SQ involves negation, they are in harmony with basic properties of deontic modality. I formulate a deontic modal account of SQ which not only predicts the complex behaviour of SQ, but also sheds much new light on the formal nature of irony.

KEYWORDS: scare quotes, quotation, irony, use-mention distinction, deontic modality, reportative modals, model shifting, not-at-issue content

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1 Introduction

Recent semantic and syntactic inquiry on quotation has pushed the level of understanding this category much beyond the one achievable for purely logical and philosophical approaches. In particular, important progress has been made in understanding the sense of quotation being, as illustrated in (1), not an atomic string of symbols *simpliciter* (Geach 1957; Quine 1960).

(1) a. His "I really like you" was quite surprising, but I don't think he really does.
b. Bush probably "misunderestimated" his guests.

Various accounts (Ginzburg & Cooper 2014; Pagin & Westerståhl 2010) have been proposed to show how even pure quotation as in (1a), which blocks substitution *salva veritate*, can remain transparent, e.g. for the sake of ellipsis. Others (Maier 2014a; Shan 2010) explained why mixed quotation as in (1b), while retaining morphosyntactic properties of quoted expressions, incorporates into grammar expressions that would be blocked if not quoted. In this sense they investigated quotation as form-rigid and thus atomic on the one hand, but transparent and thus complex on the other.

Viewed from that angle, there is one type of quotation, called *scare quotation* (SQ), that deserves more attention than it has gained in formal semantics. To see this, consider the dialogue in (2) in a context where B is highly critical of the president.

(2) A: I talked with the president$_i$.
B: The "president"$_i$ disregards the constitution!
$\not\Rightarrow$ "He"$_i$ disregards the constitution.
$\rightsquigarrow$ B negatively evaluates A's use of the expression *president*.

SQ is more challenging than other types of quotation. Not only does it retain the properties of mixed quotation, in particular the lack of substitution *salva veritate* (as shown by $\not\Rightarrow$), but also provides additional content ($\rightsquigarrow$). Moreover, despite a growing interest in the semantics-pragmatics interface properties of SQ, there is no strict framework solving two basic problems. First, what is the formal mechanism responsible for the emergence of the interpretational properties of SQ? While this problem has been investigated for mixed quotation (Maier 2014a; Shan 2010), no relevant extension has been proposed for SQ. In particular, while it has been widely accepted that the kind of negative evaluation involved by SQ is some sort of not-at-issue content part (Gutzmann & Stei 2011; Gutzmann & McCready 2016; Härtl & Seeliger 2019), the exact mechanism generating it has not been specified. Second, what is the source of limitations of SQ? While the flexibility of mixed quotation and the relatively unconstrained pragmatic character of negative evaluation might explain the fact that almost every expression can be scare-quoted, the problem of infelicitous SQs has been neither specified nor solved.

It is the aim of this paper to contribute to the understanding of these two aspects of SQ. I start in Section 2 from discussing the flexibility and limitations of SQ, as well as sensitivity to tests showing the complex distribution of their at-issue/not-at-issue content parts. Then, in Section 3, I show how these data are problematic for recent proposals and sketch a conceptual outline of a modal account of SQ. Finally, in Section 4, I check how this framework captures the data discussed in Section 2 when formalized within a strict model-theoretic setting. Section 5 summarizes the results and suggests paths for future research. Computational details are given in Appendix.

I argue that SQ is a type of deontic modality, in harmony with other modal properties of quotation, such as those investigated by Wiślicki (2021). Negative evaluation lying at the heart of SQ, as well as various effects showing its limitations, can be accounted for and explained in terms of norms to which the event of uttering the quoted expression poorly conforms. In this sense, SQ is part of a more general grammatical category, i.e. modality. This general strategy has been already proposed in the literature. Klockow (1978) pointed out the modalizing function of quotes; it provides information of what the quoted speaker, but not necessarily others, conceives of as a normal use of language. This idea was taken up by Meibauer (2007), who goes for a strictly pragmatic account. In the formal semantic tradition, Bary & Maier (2021) propose a Kratzerian modal account according to which quotation involves shifting the actual event to a speech-event. The present paper develops this direction by offering a formal account of an especially challenging type of quotation. It involves a non-default use of quoted expressions, but also its negative evaluation. Data come mainly from nominals, whose wide range of semantic properties conveniently shows the flexibility and, more importantly, limitations of scare-quoting.

2 The data

In this section I scrutinize the range of expressions and contexts for which the SQ effect can emerge. First, in Section 2.1, I show this effect can apply to various content parts of quoted expressions. Then, in Section 2.2, I discuss limits of felicity of scare-quoting, as well as its sensitivity to tests for the at-issue/not-at-issue character.

2.1 Flexibility of scare quoting

SQ is often discussed together with quotes used to emphasize irony, as in (3), or non-literal uses of expressions, as in (4):

(3) [With no salient speaker uttering the word "clever"]
Paul is such a "clever"$_{\textit{ironic intonation}}$ guy!

(4) [With no salient speaker uttering the word "bicycle"]
He made a kind of "bicycle" with an additional engine and wings.

In (3), the intended reading is that Paul is not clever and in this sense the quoted predicate is negated. However, (4) is more delicate. The intended reading is that the vehicle at hand is not a typical bicycle. Still, the degree to which it resembles normal bicycles or to which it still counts as a (perhaps very odd) bicycle remains underspecified. Thus, what links the two examples is not straightforward negation, but rejection of some content part. This is also observed for SQs. To see this, consider first (5).

(5) **Context**: A mistakenly took an MP for the president.
A: Look, the president denies his own words.
B: The "president" is an opposition MP.

Quotes flanking the noun *president* indeed mark the fact that B denies that the person at hand is a president. From the semantic point of view, B's reply involves the rejection of at-issue content (roughly in the sense of Potts 2015). Still, it is not simply negation of the predicate *president*(x) that gives rise to the special SQ effect. Otherwise, there would be no difference between simple negation and SQ (for more far-reaching differences between ironic and non-ironic denials, see Härtl & Bürger 2020):

(6) He is not a president, but an opposition MP.

Rather, the effect arises as a result of downgrading A's use of expression *president* as false and thus rejecting the relevant content part. This intuition is supported by Itō's (2020) findings for Japanese, where SQ is felicitous provided the whole sentence is topped by the particle *ne* marking the low informative value of the sentence.

(7) Hontō "gūzen" da $^{\#}\varnothing/^{\checkmark}$ne
really "coincidence" COP $^{\#}\varnothing/^{\checkmark}$ne
It's really a "coincidence"!
(cf. Itō 2020)

The same effect can be observed for proper names as in (8).

(8) A: Anna Smith called yesterday.
B: "Anna Smith" is now Anna Harris, she got married last month.

Just as in (5), B ironically rejects the at-issue content, i.e. the fact that the name of the person mentioned by A is *Anna Smith* (cf. Matushansky 2008), as false.

This intuition is supported by data from scare quotes flanking expressions with more complex semantic structures. Note that the above simple analysis is possible due to the fact that irony in B's statements is rooted in denying the fact that the person at hand is a president/is called *Anna Smith*. But the problem becomes more puzzling in the case of judge-dependent predicates (Bylinina 2017; Coppock 2018), as in (9).

(9) **Context**: Two persons disagree on the evaluation of Peter.
A: Peter is a prodigy!
B: In my opinion, your "prodigy" is just a normal boy.

While being a president is a matter of fact, falling under the concept of prodigy is to much extent a matter of personal judgement. Thus, while x cannot be a president for A but not for B, the same does not hold for being a prodigy. And it is exactly this judgement that underlies B's statement in (9). Rather than simply denying the fact that the boy at hand is a prodigy, B states that according to him/her Peter is not a prodigy and that A's opinion is groundless. Thus (9) is remarkably different from (5) in providing faultless disagreement, i.e. two contradictory statements both of which are true. This is reasonably ruled out in the case of (5), for which a modification as in (10) is odd.

(10) ?In my opinion, the "president" is an opposition MP.

Accordingly, both (5) and (9) involve rejecting the at-issue content. In both examples the SQ effect does not follow from straightforward negation but from rejecting the use of expression as inappropriate. The difference is that while in (5) the objective content of quoted expression is rejected as false, in (9) the judge-dependent content is rejected as a groundless opinion. Importantly, while the source of rejection is rooted in different semantic properties, it is driven by the same general mechanism.

These observations are supported by the fact that the nature of rejection depends on the type of rejected content. Note that if the SQ effect is rooted not in straightforward negation, but in downgrading and thus rejecting someone's use of expression, it is natural to expect it to arise as a consequence of various types of inappropriateness. A given use of expression can be rejected not only as being false or groundless, but, e.g., awkward or impolite. Then rejection targets both at-issue and not-at-issue content parts. To illustrate, take a look at (11), with the same SQ as in (5), but placed in a different context:

(11) **Context**: B is highly critical of the president.
A: The president talked about the bill.
B: The "president" disregards the constitution!

Here B questions neither the fact that the person A talks about is a president, contrary to (5), nor A's opinion, contrary to (9). In this sense SQ does not involve rejecting the at-issue content part, as it is generally assumed by Meibauer (2014). Rather, B downgrades A's use of expression *president* by suggesting that the person does not meet a demand generally assumed for presidents. Put more precisely, what seems to be rejected is not the content of the at-issue predicate *president*(x), but part of presupposition (in the sense of Stalnaker 1974) saying that presidents follow constitutions of their countries. Such SQs arise across various types of nominals, as in (12)–(13).

(12) **Context**: A and B discuss Peter's role in supervising A.
A: Peter was the true Napoleon of my thesis.
B: Your "Napoleon" doesn't understand semantics!

(13) **Context**: A and B see a cloud whose shape resembles the word *love*.
A: There is "love" written in the sky by a jet pilot.
B: Your " "love" " is just an accidental shape of that cloud.

The name *Napoleon* in its non-rigid use presupposes that the person at hand is a competent leader of certain enterprise. For the pure quote *"love"*, it is presupposed that the relevant string represents a linguistic expression. Both presuppositions are undermined, which underlies the SQ effect. Importantly, just as in the case of (11), neither of the two involves straightforward negation. Peter in (12) might have formally been a supervisor; so does the cloud in (13) might have had a shape of the word *love* (for the role of shape in the semantics of quotation, see Pafel 2011). Accordingly, A's use of these expressions gives rise neither to falsehood as in (5), nor to a different judgement as in (10), nor to presupposition cancellation *simpliciter*. Rather, A's uses of these expressions are at odds with some presuppositions and thus ironically downgraded as inappropriate.

The range of content parts subject to the SQ-type of rejection is wide, covering information encoded at various stages of computation. Apart from the at-issue content and presupposition, the SQ effect can be encoded at the level of syntactic derivation or of a use of quoted expression. To see this, consider the following examples.

(14) **Context**: A points at the particular person.
A: He talked about the bill.
B: "He" is a woman!

(15) **Context**: Emperors of Japan are widely considered to have a high social rank.
A: Did you see that guy?
B: "That guy" is the Emperor of Japan!

(16) **Context**: Someone stole B's car.
A: Did you see his new car?
B: He stole "his" new car from my garage!

In (14) the problem concerns morphosyntactic features, arising in the form of the choice of gender. B downgrades A's use of pronoun as incorrectly stating that the person at hand is a man. Assume, as standardly in the minimalist syntax (Hornstein et al. 2005), that φ-features ([PERSON], [GENDER], [NUMBER]) are inserted in terminal nodes of syntactic structure. Then disagreement in (14) is rooted in rejecting the content part obtained as a result of computing φ-features. Thus the rejected piece of information is encoded at the level of syntactic derivation. By contrast, (15) exemplifies SQ targeting content part regulated by the rules of conventional implicature. A's use of *that guy* is downgraded because it is inappropriate given the social rank of the Emperor of Japan. This content part, assuming Levinson's (1983) approach to honorifics, emerges as a conventional implicature. Accordingly, the SQ effect can be rooted in rejecting a conventional part of expression other that the truth-conditional one. Finally, in (16) SQ involves the rejection of the particular use of possessive, emerging as a result of various ways of understanding the relation of possession, rather than regulated by grammar. Here, A's use of pronoun is rejected as assuming the relation of ownership, unjustified if the property was stolen.

To close this part of discussion, let us take a look at the SQ effect targeting content-independent properties of quoted expressions. Consider the examples in (17)–(18):

(17) **Context**: Jan cannot master basic English grammar.
According to Jan, all the students "should studies" harder.

(18) **Context**: Whenever John gets nervous, he starts stammering.
John again couldn't find his "k-k-k-keys".

Contrary to previous examples, here the SQ effect is rooted not in content-related, but form-related properties of quoted expression.[1] In (17), the form marks the improper morphosyntactic relation within the quoted phrase, in (18) disfluency. What is interesting is that while the ability of quotation to contribute to the overall meaning by exposing an utterance form has already been noticed in the literature (Potts 2007: 405–406), these examples show that the form itself can be a target of irony involved in SQ.

The examples presented above show that scare quotes are flexible with respect to a type of nominal and aspects of quoted expressions relative they can be applied to. The former include common nouns, proper names, pronouns, pure quotations; the latter the at-issue content, judge-dependent content as well as pieces of information encoded at the level of syntactic derivation, part of presupposition, conventional implicature, the use of pronoun, morphosyntactic relations or the utterance form of quoted expression. However, so far nothing has been said about limits of scare-quoting. I will discuss this in the next subsection.

2.2 Limits of scare quoting

I divide the following discussion into two parts covering limits of scare-quoting rooted in quotation as such (2.2.1) and in negative evaluation (2.2.2).

2.2.1 Limits following from the use of quotation

The apparent flexibility of SQ is rooted in the fact that, from the syntactic point of view, it is mostly used as a mixed quotation and thus inherits its formal properties (Maier 2014a; Maier 2017). On the one hand, it incorporates into grammar any material, including an ill-formed one as in (17), while retaining its morphosyntactic features. On the other hand, it imposes certain limitations. First, it allows any material provided it is interpreted as defined in the idiolect of the quoted speaker and, in this reading, is meaningfully interpretable. Thus for (19) to be acceptable, *misunderestimates* must be a transitive verb, interpretable as a Bushism and agreeing with subject's formal features ([3*rd*], [SING]).

(19) I'm afraid that Bush is the only person that "misunderestimates" his guests.

Second, just like any mode of quotation, SQ blocks substituting *salva veritate* a quoted expression with a co-referential/-extensional one, as in (20). Still, contrary to pure quotation, mixed and scare modes

[1] Interestingly, this difference affects the requirement of marking SQ. In Japanese, a sentence like (18) does not require the particle *ne*, contrary to irony targeting content parts, as in (7). This suggests some semantic patterns regulating the optional character of marking quotation (De Brabanter 2020).

encode speech events. For mixed quotation, its lack has been shown by Maier (2014a) to give rise to the effect of *hey-wait-a-minute* test (Shanon 1976; Fintel 2004), as in (21):

(20) A: I talked with him$_i$.
B: #The "president"$_i$ disregards the constitution.

(21) [With no salient speaker using the word *president*]
A: The "president" disregards the constitution.
B: Hey, wait a minute! Who ever said *president*?

These observations show that SQ provides different limits than non-reportative uses of quotes as those in (3)–(4), where they mark irony or non-literalness (Meibauer 2014; Ludwig & Ray 2017). This, together with the fact that it is only quotation that allows ungrammatical material to become an object of negative evaluation as in (17), show that SQ involves a stronger formal mechanism than non-reportative uses of quotes.

2.2.2 Limits following from negative evaluation

The properties shown in (20)–(21) have their more far-reaching effects observed for the ironic aspect of SQ. To see this, consider the example in (22).

(22) A: I talked with president Smith.
B: ✓The "president"/ #"Smith" disregards the constitution!

This effect is more problematic. Not only are the two quoted phrases co-referential, but also each of them has been uttered by the quoted speaker; thus the demand illustrated in (21) is met. Nevertheless, the SQ effect is blocked for one of them.

Intuitively, the source of this effect is simple. Irony concerning the attitude towards the constitution is well-targeted when applied to the use of the word *president*, but not a proper name. The reason is that irony cannot emerge if the content part being its target is not carried by the scare-quoted phrase. The content carried by expressions, in turn, varies relative to their type; this gives rise to differences in acceptability. A quick comparison between co-referential expressions (contexts remain unchanged) is helpful in this regard.

(23) A: Anna Smith$_i$/She$_i$ called yesterday.
B: ✓"Anna Smith"$_i$/#"She"$_i$ is now Anna Harris, she got married last month.

(24) A: The president$_i$/ He$_i$ talked about the bill.
B: The ✓"president"$_i$/ #"He"$_i$ disregards the constitution!
B: The #"president"$_i$/ ✓"He"$_i$ is a woman!

(25) A: There is a word$_i$/"ghlmp"$_i$ written on the wall.
B: The ✓"word"$_i$/#" "ghlmp" "$_i$ is a gibberish!

Nevertheless, these observations suggest that the problem does not lie in formal properties of quoted expressions alone, but rather in the interaction between these, the context and the common ground (CG). The context updates CG; then its part provides a reason of downgrading the relevant content part of scare-quoted expression. Thanks to this, discourse participants can understand negative evaluation. For the SQ effect to arise, the result of this interaction must be some sort of match between the relevant part of CG and a piece of information which is contradictory to the one carried by the quoted expression and the context. To see this, let us move back to the above examples. In (22) the context provides the general assumption that presidents follow constitutions of their countries. Since this is contradictory to what is stated by B, the use of the noun *president* becomes the object of negative evaluation. Still, that kind of match does not hold for the proper name *Smith*. No part of CG provides restrictions on the use of the name *Smith* relative to one's attitude towards constitution. By contrast, a use of proper name can be an object of irony if the context is updated by a proposition saying that the person at hand is misnamed, as in (23). Here it is the pronoun that does not carry the relevant piece of information. On the other hand, it is the pronoun that is used inappropriately, giving rise to the gender mismatch in (24). Though the [GENDER] feature is encoded both in pronouns and nouns, it is unambiguous only in the case of the former. Finally, an effect similar to the one observed for (22) holds for pure quotation as in (25). This mode of quoting does not presuppose referential properties of quoted expressions (in this regard, pure quotations behave to a certain extent like proper names, cf. Maier 2014b).

The third type of limitations imposed by SQs is connected with the lack of straightforward accessibility of truth values for the ironic content, exposed by the *that's-*(*not*)*-true* test. As for the non-quotative ironic content, the test was used by Härtl & Bürger (2020) in their discussion on the (not) at-issue character of such expressions. As the authors show, the ironic content is hardly subject to negation if treated as at-issue. However, the same content can be naturally rejected if it is questioned at the presuppositional level by means of the *hey-wait-a-minute* test:

(26) [After an ambivalent performance]
A: Well, that lead singer really delivered every note in place.
B: ??No, that's not true–she hit every single tone!
B: Wait a sec–she hit every single tone!
(cf. Härtl & Bürger 2020)

This supports other arguments presented by the authors in showing that the ironic content is more of a presuppositional than of an at-issue character. This, in turn, shows that the at-issueness of ironic content is graded. Such an approach opens up an interesting path in exploring the nature of irony and, more generally, negative evaluation involved by SQ. A quick look at the data shows that this content part is not straightforwardly retrievable in simplest forms. To see this, take Q-at-issueness, i.e. the ability to address the question under discussion (QUD).

(27) A: Anna called him "president". Do you think it's fine?
B: # He is a "president".

Even if B puts the ironic intonation on quotation, his reply is clearly odd. Thus the negative evaluation of the use of quoted expression is not straightforwardly retrievable as Q-at-issue. However, weakening the notion of (Q-)at-issueness by letting it address just some part of QUD (as discussed in AnderBois 2016) or be subject to negotiation (AnderBois et al. 2015) improves the retrievability of the negative evaluation content part encoded in SQ as at-issue.

(28) A: Was their wording fine?
B: They said that the manifestation was "illegal"!
A: And why do you think it's bad?

Importantly, while not infelicitous, B's reply would become less natural had scare quotes been omitted. In this sense SQ and a richer context make negative evaluation more easily retrievable as at-issue. The reason seems to lie in the highly limited transparency of this content part. Note that even if overtly marked by means of intonation, explicating its exact meaning remains a matter of approximation. The richer the surrounding context, the more data for formulating such an approximation, and thus the more retrievable the at-issue content part.

This effect is confirmed for two tests illustrated in (26). As discussed by Kaufmann (2012), while the *that's-*(*not*)*-true* test, at least in the simplest form, is not sufficiently sensitive to capture propositionhood, it reveals some important properties of expressions that are problematic for this test in general. Interestingly, though Kaufmann discusses imperatives, SQs to much extent align with such expressions, pushing the results worked out for irony by Härtl & Bürger (2020) a step further. While imperatives do not pass the simple *that's-*(*not*)*-true* test, they pass its enriched version as in (29):

(29) A: How do I get to Rüsselsheim?
B: Take the S8.
A: Oh right, that's true.
A: #No, that's not true.
(Kaufmann 2012:166)

SQs also pass the *that's-true* test, provided it is enriched by a modal follow-up pertaining to the metalinguistic dimension. Moreover, even that kind of enrichment does not allow the negated version, i.e. the *that's-not-true* test:

(30) A: Did you see that guy?
B: "That guy" is the Emperor of Japan!
A: That's true, I shouldn't say so.
A: #That's not true, I don't have to obey all these customary rules.

Though the exact type of follow-up largely depends on the content of quoted expressions (just as in the case of imperatives, cf. Kaufmann 2012:168), in general SQs pass the test.[2] Interestingly, what makes replies for SQs, not strictly information-seeking questions and imperatives acceptable in this regard is a cataphoric relation with modalised propositions.

(31) A: Who is going to do the dishes?
B: That's true, we should have thought of this.
(Kaufmann 2012:164)

(32) A: Do your homework right now!
B: That's true, I should have done it yesterday.

The question that arises is, of course, whether the felicitous reply made by A in (30) is not possible exclusively thanks to SQ. Note that it would also be acceptable (as a kind of suggestion) had quotation in B's statement been replaced by a co-referential pronoun, as in (33). Still, SQ alone can give rise to this effect. As shown in (34), a bare (non-question-seeking) SQ-question, contrary to a bare pronoun question, can be felicitously addressed as at-issue by making use of a modal.

(33) A: Did you see that guy?
B: He is the Emperor of Japan!
A: That's true, I shouldn't say so.

(34) A: Did you see that guy$_i$?
B$_1$: "That guy"?
A$_1$: That's true, I shouldn't say so.
B$_2$: Him$_i$?
A$_2$: #That's true, I shouldn't say so.

This confirms that negative evaluation is an at-issue content part being just more easily retrievable when enriched by the surrounding context.

As for the absence of felicitous *that's-not-true* replies, Kaufmann (2012) explains it in terms of authority condition. She takes it to be a presupposed content part which allows evaluation of new information relative to an ordering source. Such an ordering is imposed by speaker's will, commands, etc. The evidence for that kind of a presupposed piece of content comes from rebukes concerning the lack of necessary authority.

(35) A: Go home immediately!
B: Hey wait a minute, you are in no position to give me commands.
(Kaufmann 2012:150)

Rather than the content, B addresses A's authority to give commands. Moreover, the fact that it passes the *hey-wait-a-minute* test proves that this content part is presupposed, thus not-at-issue. Again, a closely related effect can be observed for irony involved in SQs.

(36) A: Did you see that guy?
B: "That guy" is the Emperor of Japan!
A$_1$: Hey wait a minute, you are in no position to tell me how to speak.
A$_2$: Hey wait a minute, I don't have to obey all these customary rules.

[2] All the examples pertaining to the modal properties of SQ are my own; my informants confirmed that they, as well as their Polish and German counterparts, are consistent. Still, two comments are in order. First, note that the improper honorific form alone does not allow replies as in (30). Even assuming that slurs encode a negative attitude towards the person at hand (Gutzmann & McCready 2016), this content part does not pass the *that's true* test.

(1) A: The damn Kaplan got promoted.
B: #That's true, I don't like him either.

Second, an anonymous reviewer points out that *that's true* as used here expresses agreement (*that's right*, *I agree*), rather than targets the truth value. This, however, does not weaken the observations. First, that kind of agreement does concern the truth value, even if it is relativised to the discourse participant. Second, even under this reading the test filters out not-at-issue content parts, e.g. in parentheticals.

(2) A: John, who likes Paris, is a really irresponsible guy!
B: # That's right/I agree, he goes there every year.

This might show, as suggested by the reviewer, that at-issueness should be treated in a slightly wider way than traditionally done in the literature on implicatures. But this is consistent with recent findings concerning at-issueness (Koev 2018). Third, what is crucial here is that SQ shares the general properties of imperatives, and this effect is fully predicted by such constructions (see Kaufmann 2012:166).

As discussed in the context of (30), the exact type of rebuke depends on the content being an object of SQ. Nevertheless, the crucial point is that what is rejected in (35) and (36) is not the content of command/irony but the speaker's authority to give the command/evaluate the way one speaks.

To close this part of discussion, let us have a look at two close cousins of (35)–(36).

(37) A: Go home immediately!
B: Don't tell me what to do!

(38) A: Did you see that guy?
B: "That guy" is the Emperor of Japan!
A: Don't tell me how to speak!

These observations are important for two reasons. First, they confirm that there is some set of properties shared by SQs and imperatives. Second, the fact that part of it can be addressed directly, i.e. without making use of the *hey wait a minute* test or peripherality markers (cf. Koev 2018), supports the claim of its at-issue character.

Examples discussed in this subsection show that the apparent flexibility of SQ has certain limitations. These are rooted in a complex relation between the at-issue content and CG. On the one hand, various pieces of information, either concerning the existence of quoted utterance, contradictory information or information responsible for *hey-wait-a-minute* and *that's-*(*not*)*-true* tests, are parts of presupposition. On the other hand, the felicity of irony as well as possible replies to utterances containing SQs largely depend on at-issue content. Finally, SQs behave to much extent like imperatives with respect to ways of rejecting or accepting commanding/advising and irony.

2.3 Interim summary No. 1

In this section, I discussed various types of scare-quoted nominals. The data show a highly complex relation regulating the at-issue and not-at-issue character of three aspects of SQ, i.e. its scope, underlying mechanisms and the level of encoding irony. First, there is a wide range of properties of quoted expressions, i.e. their (not-)at-issueness, morphosyntactic features or utterance form, whose negative evaluation gives rise to the SQ effect. Second, morphosyntactically SQ mostly instantiates mixed quotation, thus sharing its basic properties. Third, the ironic content is sensitive to tests for accessibility of not-at-issue and, when enriched by follow-ups, at-issue content parts.

On top of that, effects marking the dual at-issue/not-at-issue character were shown to be common for SQs and imperatives. In the next section, I show that this fact is not accidental, arguing that semantics of SQ is driven by a covert deontic modality.

3 Conceptual framework for scare quotation

The data presented in Section 2 reveal at least two challenges concerning SQ. First, if SQ is a type of quotation, then it should be framed within a more general semantics of quotation, already shown to be compositionality-wise challenging (Werning 2005; Potts 2007; Pagin & Westerståhl 2010; Shan 2010; Maier 2014a). Second, the formal grammatical category of SQ should be specified in a way explaining the role of at-issue and not-at-issue content parts in regulating the emergence and limits of irony.

Following these observations, I propose to take SQ as a type of deontic modality. I argue that the properties of SQ discussed in Section 2 follow from a negative evaluation of the use of quoted expressions. I start from indicating in Section 3.1 technical points that are problematic for recent proposals concerning SQ in light of data presented so far. Then in Section 3.2 I present conceptual and empirical arguments based on these data and supporting a modal approach to SQs.

3.1 Technical problems with capturing scare quotation

The first major observation, made in Section 2.1, is the flexibility of scare-quoting. Targets of irony span various parts of content, as well as properties connected, e.g., with morphosyntactic features or an utterance form. These facts are important for understanding the emergence of the SQ effect. To see this, consider two basic approaches to irony (Härtl & Seeliger 2019), closely related to SQ .

The first approach assumes that irony involves negation. Taking the most straightforward view, Schlöder (2017) lets irony arise as a result of negation (e.g. *I'm not at home* for an ironic *I'm at home*)

or of picking out an element from the opposite end of scale (e.g. *terrible* for an ironic *amazing*). A less straightforward approach had been proposed by Giora (1995) and developed by Giora et al. (1998) and Giora et al. (2005). It takes irony to involve the literal implicated meaning and the negated one. The greater the gap between the literal meaning and the context, and thus the smaller the gap between the negated meaning and the context, the easier the computation of irony.

In the second approach, the ironic content underlying SQ emerges as a result of an attitude involving a negative evaluation of the use of quoted expression. It can be driven by hostility towards the use of expression (Predelli 2003b), ironic treatment of the use of expression (Predelli 2003a), distancing oneself from or rejecting the use of expression (Gómez-Torrente 2017; John 2013; McCullagh 2017; Härtl 2018), as well as the lack of commitment to a content part of quoted expression (Hess 2018). There are also hybrid approaches assuming both the contrary meaning relative to what is literally said and a negative evaluation of the denotatum (Härtl & Seeliger 2019).

The data discussed in Section 2 show that while the first approach is untenable, the second one is on the right track. First of all, it is not true that SQ in general involves negation. It clearly does so in the case of (39), extracted form (5). Assuming a sufficiently fine-grained machinery, where negation covers not-at-issue content parts, it might do that in the case of (40), extracted from (11). But it cannot explain (41), extracted from (18), where the target of irony is the utterance form, as such not subject to negation.

(39) The "president" is an opposition MP. $\rightsquigarrow$ s/he is not a president

(40) The "president" disregards the constitution! $\rightsquigarrow$ s/he is not a good president

(41) John again couldn't find his "k-k-k-keys".

This might suggest that the notion of irony should be limited to cases involving negation; then (41) would exemplify a different category. Still, since, as I argue, there is a common mechanism based on negative attitude and the related evaluation covering a wider range of examples, I find this approach more suitable. In addition to this, there are strong arguments from Japanese supporting the attitude-based approach. As shown by Itō (2020) and discussed in the context of (7), the SQ reading is available in Japanese provided there is the particle *ne* attached to the whole sentence. Since independent observations show that the particle marks the fact that the sentence's informativity value is judged low (McCready 2009),[3] the negative attitude naturally follows. What the general attitude-based accounts lack is a mechanism capturing various sources of such attitudes and related felicity conditions of irony. Without this, as I show at the end of this subsection, they largely overgenerate.

The second problem concerns the position of ironic content in the layered representation of SQ. According to the most widely assumed approach, the ironic content is part of not-at-issue meaning of SQs. Predelli (2003b), criticised by Horn (2008) and Meibauer (2014), takes this part to be added to the main content part and corresponding to much extent to conventional implicatures. Pointing out problems arising for quoted contradictory information, Gutzmann & Stei (2011) let this content part be conversational implicature. This general approach is supported by Meibauer (2014), Itō (2020) and, indirectly, Cappelen & Lepore (2007). According to it, sentences containing SQ have a two-dimensional representation roughly depicted in (42):

(42) The "president" disregards the constitution!
$\rightsquigarrow$ At-issue: $x : x$ is called by the speaker S *president*, disregards the constitution
Not-at-issue: S's use of the expression *president* is inappropriate

This approach is related to those proposed for irony, honorifics or slurs (Castroviejo et al. 2020; Gutzmann & McCready 2016). One of its pros is that it correctly predicts some of felicitous and infelicitous replies targeting the ironic content. To see this, take a look at (43), extracted from (30) and (36):

(43) B: "That guy" is the Emperor of Japan!
A_1: #That's not true, I don't have to obey all these customary rules.
A_2: Hey wait a minute, you are in no position to tell me how to speak.
A_3: Hey wait a minute, I don't have to obey all these customary rules.

If this type of negative evaluation is treated as not-at-issue, the fact that it fails the *that's-not-true* test and passes the *hey-wait-a-minute* test is expected. However, a closer look into data shows that the

[3]This effect is probably rooted in the fact that *ne* is merely a confirmation particle. It provides no new information and cannot be used when the information introduced by the sentence it is attached to is not part of CG (Hasegawa 2010; McCready 2012).

ironic content cannot be accounted for as not-at-issue simpliciter. First, what these examples show is not that the whole negative evaluation is not-at-issue, but rather its two parts, i.e. the relevant authority and the underlying rules or norms. Second, experimental findings made by Härtl & Seeliger (2019); Härtl & Bürger (2020) show that various content parts giving rise to irony, i.e. negative evaluation and non-literal meaning, are interpreted as not-at-issue to various degrees. This is partially in harmony with the observation showing that the truth value (at least for affirmatives) becomes accessible for replies if they are repaired by follow-ups containing, e.g., modals as in (30). Note, however, that this cannot be explained if the ironic content is simply taken as not-at-issue. Rather, such content parts must be encoded at the at-issue level of semantic representations of SQs, and thus made accessible for certain replies.

Finally, the third problem concerns perhaps the most understudied pieces of data, i.e. those showing limitations of scare-quoting. As mentioned above, the attitude-based approaches to SQ, contrary to those assuming negation, are flexible enough to capture the variety of sources of irony exemplified in (39)–(41). However, as they stand they are too general to encode such sources and link them with the emergence of irony. To see the problem, recall (24), repeated below as (44):

(44) A: The president$_i$/ He$_i$ talked about the bill.
B: The $^{\checkmark}$"president"$_i$/ $^{\#}$"He"$_i$ disregards the constitution!
B: The $^{\#}$"president"$_i$/ $^{\checkmark}$"He"$_i$ is a woman!

What the general approaches mentioned above are able to capture is that in each case the speaker judges the use of quoted expression inappropriate, hence the effect of scare-quoting. Thanks to this, they do not involve the abovementioned problems arising for the negation-based approach. However, until the relevant relation between pieces of information that give rise to the SQ effect (e.g. being a president, but not a male, and obeying the constitution) is present in the formal representation of SQ, infelicitous examples remain unaccounted for. Since neither of the abovementioned accounts secures these, they do not capture infelicitous cases and thus overgenerate. An interesting step forward is proposed by Itō (2020). Drawing on Lasersohn's (2005) idea of judge-shifting operators, he takes SQ to involve a salient judge. Combining this with the abovementioned fact that Japanese overtly marks the low informativity value of the sentence it is attached to, it receives the following simplified interpretation:

(45) A: It is really a coincidence.
B: It is really a "coincidence"!
$\rightsquigarrow$ the informative value of the proposition including the word *coincidence* as understood by A is judged low

The significance of this step lies in that it is not the use of expression in general, but the use of expression as understood and uttered by the quoted speaker that is judged inappropriate. To this extent the object of irony becomes more specified. What is further needed is the source, and not just object, of evaluation that filters out infelicitous examples like those illustrated in (44). Note that such a source is not included in the quoted utterance or even in its surrounding context. Thus, even enriched information concerning the judge and the quoted utterance is not enough. Rather, the source is provided by the surrounding and situational context of the quoting sentence. The context is updated in (45) by phrases *disregards the constitution* and *is a woman*. Accordingly, the relevant pieces of information marked by these phrases should be encoded in formal representations of SQs. I am going to propose that kind of extension in the next subsection.

3.2 Connection between scare quotation and modality

An interesting fact, discussed in Section 2.2 but to my knowledge never pointed out in the literature, is that the ironic content involved in SQ can be a target of modals. One example was shown for the *that's-*(*not*)*-true* test, passed by SQ in its modalized version:

(46) A: Did you see that guy?
B: "That guy" is the Emperor of Japan!
A: That's true, I shouldn't say so.
A: $^{\#}$ That's true, he has a high social rank.

Another important observation comes from rebukes, repeated below as (47).

(47) A: Did you see that guy?
B: "That guy" is the Emperor of Japan!

A_1: Don't tell me how to speak!
A_2: Hey wait a minute, you are in no position to tell me how to speak.
A_3: Hey wait a minute, I don't have to obey all these customary rules.

Two comments are in order. First, as discussed in section 2.2.2, these effects are common for SQ and imperatives, shown by Kaufmann (2012) to be covert deontic modals. Second, these rebukes confirmi the presence of covert modality in SQ tested in (46). As discussed by Bhatt (2006), such infinitival structures involve covert modals.

(48) Don't tell me how to speak!
⇝ Don't tell me how I should speak!

This shows that the relevant modal is covertly encoded in rebukes made by A_1 and A_2, which is supported by its overt presence in the one made by A_3.

These observations are important for at least two reasons. First, they are in harmony with the intuitive explications of SQs mentioned in section 3.1. These take SQ to contribute speaker's judgement that the use of expression is, for various reasons, downgraded. The notion of evaluation (goodness), in turn, has been shown in the literature to be in a tight relation with the semantics of deontic modals like *should*/*ought*, in some languages manifested overtly (cf. Chung 2019; Lassiter 2017; Oshima 2019). Second, the above observations provide arguments for taking deontic modality to be encoded in the meaning of SQ. Otherwise, the grammar could hardly explain the at-issue presence of modals or the not-at-issue presence of their source, i.e. an authority and rules/norms upon which the negative evaluation is based. Putting these facts together, we can formulate the first approximation of the meaning of SQ as follows:

(49) "That guy" is the Emperor of Japan!
⇝ x: x is the Emperor of Japan, was called *that guy* and, given the salient norm, such a use of language should not take place

In this approach, SQ instantiates a covert deontic modality defined at the metalinguistic level and targeting an inadequate use of language. Such an account, however, poses at least two challenges. First, the presence of the evaluated speech event of using the quoted expression in the formal representation of SQ. Second, the problem of ill-formed quoted expressions. Let us have a closer look into them.

First, evaluating the use of quoted expression as inappropriate (one that should not take place) requires a variable ranging over speech events encoded in the formal representation of SQ. Such speech events were recently used, also in modal frameworks, by Bary & Maier (2021) and Shimamura (2021). Still, these accounts are limited to reports with overt *say*-predicates which by default provide such events; mixed quotation, where such events are not overtly introduced, are left aside. SQ, in turn, mostly instantiates mixed quotation with an additionally imposed at-issue speech event required by evaluation. Accordingly, it is so far an unresolved problem.

Second, as discussed in the context of (17)–(19), quotation, including SQ, incorporates into grammar expressions that are not interpretable in the model in which it is interpreted. This is problematic in light of the fact that mixed quotation retains morphosyntactic features of quoted expressions. In this regard, Maier's (2014) approach seems to be in a position to capture SQ. Still, there are two reasons for which an extended approach is required. First, in Maier's account speech events are not-at-issue. As shown in (50)–(51), though correct for mixed quotation, it leaves the fact that speech events in SQ are retrievable as at-issue unaccounted for.

(50) A: Bush "misunderestimated"$_{\textit{mixed quotation}}$ John.
B: #That's not true, he didn't say that./ ✓Hey wait a minute, he didn't say that.

(51) A: "That guy"$_{SQ}$ is the Emperor of Japan!
B: ✓That's true, I shouldn't say so./ ?Hey wait a minute, I can say so.

Second, it does not capture the metalinguistic reading of modals involved by quotation, which applies also to SQ. To see this, consider a slightly rewritten version of one example discussed by Predelli (2003b):

(52) **Context**: An orthodox speaker of British English having a negative attitude towards American spelling:
You can watch you "color" TV, we will watch "colour" TV.

Under the prominent reading, permission introduced by the modal does not concern the action of watching TV, but of using the expression *color*, downgraded by SQ.

So, these two observations show that SQ requires a deontic modal framework which additionally (i) provides at-issue speech events that are subject to evaluation; (ii) captures the non-compositional yet morphosyntactically transparent character of quotation.

In order to secure a framework meeting these two demands, I let SQ be derived in two steps. First, as a standard mixed quotation; next, as quotation downgrading the use of quoted expression. These steps are introduced by two formal concepts within a hybrid scalar-quantificational type of modality (cf. Herburger & Rubinstein 2019). First, I use a quantificational machinery. Apart from assuming the basis of demonstrative theory of quotation (Davidson 2015), its crucial contribution is that it takes the interpretation of quoted expression to be relativised to a non-actual model. The shifted model provides an interpretation for the idiolect of the quoted speaker in which it is interpreted. Models of idiolects conceptualize Chomsky's (1986) idea of I-languages, together with a model-theoretic formalization securing rules of interpretation. Thus a sentence containing mixed quotation receives the following simplified interpretation:

(53) $[\![\text{Bush "misunderestimated" John}]\!]^{\mathcal{M},w}$
$\rightsquigarrow$ *for the accessible model* $\mathcal{M}_{Bush}$, $\langle Bush, John\rangle \in [\![\text{misunderestimated}]\!]^{\mathcal{M}_{Bush},w}$, *where* misunderestimated *as defined in* $\mathcal{M}_{Bush}$ *for* w *has the utterance form demonstrated by the form* ⌜misunderestimated⌝

This approach secures at least two demands listed above. First, it captures the non-compositional character of quotation and at the same time retains the morphosyntactic transparency of quoted expression. Second, it remains neutral towards speech events, taken by Maier (2014a) to be encoded by default as part of presupposition. Thanks to this, it does not assume that speech events of quoted expressions are not-at-issue, exactly as shown in (51) to be required by SQ.

Still, if that kind of model shifting machinery remains neutral towards quoted speech events, they must be additionally encoded for the sake of evaluation. As shown in (50)–(51), it is SQ, not just mixed quotation, that provides at-issue speech events. Thus, it is natural to introduce such events together with an operation providing evaluation, independently from the one yielding mixed quotation (here corresponding to model shifting). As discussed in the context of (46)–(49), evaluation involved by SQ has crucial hallmarks of deontic modality, encoding at-issue modals and salient norms as well as showing connection with the notion of goodness. These factors must be compatible with the model-shifting machinery providing mixed quotation. This motivates the second tool within the proposed hybrid scalar-quantificational account in the form of measure function introducing degrees. Such degrees encode the flavour and strength of modals. Drawing on Lassiter's (2017) account of *should* in (54), I let SQ involve a measure function providing a negative evaluation of speech events, as in (55).

(54) $[\![\text{Peter should win}]\!]^{\mathcal{M},w}$
$\rightsquigarrow$ the degree to which Peter should win exceeds the salient threshold θ_{should}

(55) $[\![\text{"That guy" is the Emperor of Japan}]\!]^{\mathcal{M},w,CG}$
$\rightsquigarrow$ the degree to which every situation e of uttering *that guy* should not take place exceeds the salient threshold $\theta_{should\ not}$ relative to the CG-salient NORM, where:

(i) for the accessible model $\mathcal{M}_i$, $[\![\text{that guy}]\!]^{\mathcal{M}_i} \in [\![\text{Emperor of Japan}]\!]^{\mathcal{M},w}$, where *that guy* as defined in $\mathcal{M}_i$ for w has the utterance form demonstrated by the form ⌜that guy⌝, and

(ii) NORM_{CG}: social ranks are respected

Let us now have a look at crucial elements of the simplified and yet underspecified interpretation in (55). First, it is widely assumed that deontic modals are computed relative to salient rules or norms. These underlie judgments that relate propositions to states taken as preferred relative to the modal strength (Fintel & Iatridou 2008; Pasternak 2019) or at least taken as normal (Yalcin 2016). In scalar approaches, such norms feed orderings relative to which degrees and thresholds are defined. I let SQ be driven by the fact that the use of quoted expressions is judged as being at odds with these norms. This is encoded in the form of the relevant degree exceeding the salient threshold value; the threshold marks the borderline beyond which the use of quoted expression should not take place. This part of grammar secures and specifies two issues discussed in Section 3.1. First, the fact that in the case of SQ the use of quoted expression is judged inappropriate. Second, the necessity of encoding into the meaning of SQs the source of negative evaluation. The metalinguistic character of such judgements is rendered by relations which,

in the case of quotation, provide orderings over speech events of uttering quoted expressions, interpreted in the idiolect of quoted speaker.

This approach is compatible with the model-shifting account of quotation as well as the conceptual properties of SQ. The negative evaluation discussed in Section 3.1 suggests that it instantiates a type of necessity modal. Still, it does not give rise to effects observed for strong necessity modals. In particular, it does not give rise to non-negotiable requirements (Portner & Rubinstein 2016). This is shown by the fact that the ironic content involved by SQ passes various tests for gradability, as illustrated in (56):

(56) A: I talked with the president.
B: Rather a "president". Did you see what he had done with the protesters?
B: At most a "president". Did you see what he had done with the protesters?
B: He is more a "president" than a (true) president.

Finally, the norm becomes part of presupposition as a result of CG-update. The surrounding context suggests a norm relative to which the evaluation involved in SQ is defined and adds it to CG. This is motivated by two factors. First, as shown by Itō (2020), there are overt elements of Japanese grammar (particles *yo* and *ne*) that encode new/old information in CG and relative to this block/allow the effect of SQ. Second, as discussed in Section 2.2, unless the relevant norm is made salient, and thus added to CG, the SQ effect is blocked. Importantly, a norm itself is presupposed, as standardly assumed for deontic modals. This is in harmony with the effect observed for the *hey-wait-a-minute* test as in (43), showing that the content part carried by such norms is not-at-issue.

To close this section, it is worth pointing out that the general strategy proposed here has its predecessor. In their account of laughter involved in SQ, Ginzburg et al. (2015) take it to follow from a clash between the enthymeme and a topos. While the enthymeme is supposed to instantiate the topos, the laughter marks the fact that this assumption fails. Within the framework sketched above, the effect of scare-quoting follows from the fact that the situation of uttering the quoted expression is at odds with the presupposed norm. The present proposal not only accounts for numerous problematic issues like at-issueness, but also makes use of more standard and well-specified grammatical mechanisms.

3.3 Interim summary No. 2

In this section I sketched a modal approach to SQ. It is motivated by two factors. First, the existing accounts are too coarse-grained to capture problems revealed in Section 2. There is no formal mechanism capturing the interaction between at-issue and not-at-issue content parts which give rise to and limit the emergence of SQ effects. Second, these problems are addressed by elements of deontic modality. Such an approach is compatible with the intuitive explication of SQ, strictly modal effects it involves, and a more general modal semantics of quotation. In the next section, I show the exact way of implementing this framework and discuss how it solves problems exposed above.

4 Deontic modal framework for scare quotation

Formal semantic accounts of deontic modality fall into two general types (see Katz et al. 2012; Lassiter 2016, 2017; Portner 2009 for critical comparisons). The Kratzerian quantificational approach (Kratzer 1981; Kratzer 1991) assumes orderings over worlds relative to salient norms. Then the shifted world, in which the proposition is evaluated, is relativised to such orderings, as roughly shown in (57).

(57) $[\![$The president should protect the constitution$]\!]^{w,CG} \approx$
$\lambda w.[\forall w' : w' \in Best_{\text{Norm}}(R(w)) \Rightarrow$ *the president protects the constitution*$_{w'}]$
Norm$_{CG}$: presidents protect constitutions of their countries

Scalar approaches (Lassiter 2017) also assume orderings, but let them feed measure functions $\mu_i : \{p\} \rightarrow N$ from propositions to numerical values. Values of μ_i are then related to contextually salient thresholds θ_i regulated by modal strength.

(58) $[\![$The president should protect the constitution$]\!]^{CG} \approx$
$\mu_{should}($*the president protects the constitution*$) \geq \theta_{should}$
Norm$_{CG}$: presidents protect their constitutions

In order to capture the metalinguistic type of modality additionally involving negative evaluation of speech events, I integrate the two approaches into one. I combine the mechanism providing model shifting (required for capturing quotation) with a measure function providing the negative evaluation of

speech events relative to salient norms. I start from discussing the conceptual basis of taking SQ as a norm-matching problem.

4.1 Scare quotation as a norm-matching problem

I capture SQ as a phenomenon rooted in a problem with matching certain norms pertaining to the metalinguistic level of representation. I implement this through the linguistic notions of norms and (in)compatibility with norms, both of which have been proved to play a significant role at various areas of linguistics connected with SQ.

In his article on the connection between norms and morphology, Härtl (2016) shows that quotes are used more often with (lexicalised) compounds than with their phrasal counterparts. Since, contrary to compounds, phrases are expected to give rise to the standard, compositional reading, Härtl's findings prove that quotes often mark the non-default use of expressions. Norm, in this sense, provides a default meaning, i.e. the one retrievable from parts of the whole expression. Compatibility with the norm, in turn, stands for the relation between the actual and the default meaning. The less compatible a meaning with the norm, the more its interpretation remote from the default.

Data presented so far show that SQ can be conceived of as a more complex phenomenon driven by the same mechanism. First, quotes mark the fact that the quoted expression is not to be given the default interpretation. Second, the marker of SQ, most often the ironic intonation or a gesture, provides the constraint that this non-standard use of quoted expression does not match the salient norm. It marks the fact that the expression the actual speaker has chosen is not a perfect match with regard to the situation at hand or that the way the quoted speaker has used it is inappropriate.

Norms and compatibility with norms are formal tools used to implement these facts. It is by means of norms that the particular use of expression is encoded as not being a perfect or even a right match. This general mechanism, in turn, is what in formal semantics underlies deontic modality, shown to be common also for the concept of goodness (Lassiter 2017). Given that the data discussed so far support these theoretical hints, in the next subsection I provide the crucial elements of formal semantic system specifying and computing SQ.

4.2 Formal system: Quoting and scare-quoting

The hybrid scalar-quantificational system proposed in this paper assumes a strict division of labour. First, the model-shifting device captures the operation of enquotation yielding mixed quotation. Second, the operation introduced through measure function provides negative evaluation yielding the SQ effect. Here I provide the general description; the relevant technical details are given in subsection 6.1

Let us start from the former. Quoted expressions must be interpreted as understood by the quoted speaker. For reasons discussed in subsection 3.2, I let quotes shift the interpretation of quoted expressions from the actual model to that of the idiolect of the quoted speaker. This account can be defined in two major steps. First, model shifting defined for quotation requires a new accessibility relation. This is given in (59).

(59) **[Reportative accessibility relation for quotation]** Assume that:

i. M is a set of models such that $\mathcal{M}, \mathcal{M}_1 \in M$;

ii. if W is a set of worlds defined in $\mathcal{M}$, then $\mathcal{M}$ and $w : w \in W$ are the actual model and world of interpretation;

iii. if W_1 is a set of worlds defined in $\mathcal{M}_1$, then $w_1 \in W_1$.

Then $\mathcal{R}$ is an accessibility relation such that $\mathcal{M}_1 \in \mathcal{R}(\mathcal{M})$ iff every expression E defined in $\mathcal{M}_1$ for $w_1 : w_1 = w$ is defined for the quotational context as 'E' in $\mathcal{M}$ for w, where the form $\ulcorner \mathrm{E} \urcorner$ demonstrates E.

The relation in (59) selects models of idiolects in which quoted expressions are interpreted. Importantly, while a different model, in principle, provides its own set of worlds, the relation imposes the identity $w_1 = w$. This is empirically supported. Note that both mixed- and scare-quoted expressions cannot be evaluated in different worlds than the rest of the sentence. Otherwise, B's utterance in (2) might have been interpreted as concerning a completely different individual than the one A is talking about.

Given this, the operation of enquotation, in general overtly marked and affecting the online processing also in the case of SQ (Schlechtweg & Härtl 2020a,b), corresponds in the formal system to a modal operator Q. And this is the second major step in defining semantics of enquotation. The operator

behaves like the familiar $\Box$, with the proviso that it shifts models of interpretation. Accordingly, a simplified interpretation of the quoted NP *president* is as follows (for the relevant technical details, see Appendix):

(60) $[\![\text{“president”}]\!]^{\mathcal{M},w_@}=\mathsf{Q}[\![\text{president}]\!]^{\mathcal{M},w_@} \approx$ *set of individuals* $\{x_i\}$ *such that: for every accessible model* $\mathcal{M}_i, x \in [\![\text{president}]\!]^{\mathcal{M}_1,w_1}$, *where* president *as defined in* $\mathcal{M}_1$ *for* w_1 *has the utterance form demonstrated by the form* ⌜president⌝

The quotational operator as sketched in (60) secures two crucial properties of quotation. First, the quoted expression is interpreted as defined in the model $\mathcal{M}_1$ of the idiolect of the quoted speaker. Second, its interpretation is rigid with respect to the form of quotation, which in turn covers the non-compositional semantics of quotation.

Nevertheless, such an unconstrained model shifting overgenerates. Note that the operator Q provides quantification over all accessible models. But this is not what is generally meant. B's utterance in (2) does not mean that the use of the word *president* as defined in every accessible model is ranked low relative to the norm. Rather, it means that the use of the word *president* as defined in the model of A's idiolect is ranked low relative to the norm. Thus, the range of accessible models must be constrained.

This effect is not new in the literature and various findings show that it can hardly be solved by means of context-independent mechanisms. The problem is that there is no fixed syntactic/semantic position at which the speaker of quoted expression could be identified. To illustrate, in each of the following examples the quoted speaker is reconstructed from a different piece of information (carried by the adjunct and possessive pronouns).

(61) John: I talked with the president.
Paul: The “president” is, as Martin would put it, “the destroyer of the constitution”.

(62) A: The president is great!
B: And so is the first lady!
C: Your$_A$ “president” and your$_B$ “first lady” disregard the constitution!

Bearing such effects in mind, Maier (2014a) straightforwardly takes the speaker of mixed-quoted expression to be contextually salient (related phenomena were discussed for embedded V2 structures by Djärv 2022). Still, Maier's approach cannot be directly applied to restrict accessible models in the present framework. For such an account (cf. Rullmann et al. 2008), as pointed out by an anonymous reviewer for an earlier version of this paper, the accessibility relation must have been λ-bound.

Accordingly, I provide a stronger version of accessibility relation.[4] I let a model $\mathcal{M}_1$ be $\mathcal{R}_{CG}$-accessible iff it is $\mathcal{R}$-accessible and the fact that terms whose parts are interpreted as defined in $\mathcal{M}_1$ can be added to CG (see subsection 6.1, point 3). To illustrate, given the very simple context created by the dialogue in (62), the relevant $\mathcal{R}_{CG}$-accessible models are those of the idiolect of A and B. The reason is that, given the surrounding context, A and B are the only candidates for quoted speakers; all other models would not be compatible with CG. Thus the information that the quoted expression is interpreted as defined in different models could not be added to CG.

Let us move to the second part of hybrid modality, i.e. the operation yielding negative evaluation of the use of quoted expression. As shown above, such an operation has the hallmarks of negated weak necessity modal *should not*. Bearing in mind empirical reasons discussed in subsection 3, I adapt Lassiter's (2017) approach sketched in (58). To see how this works, consider first the two examples given above. As shown in (61), where only the first quotation exemplifies SQ, negative evaluation not necessarily targets all quoted expressions appearing in the sentence. Nevertheless, their number is not limited to one, as shown in (62). Rather, negative evaluation targets precisely those expressions whose use is regulated by salient norms.

Given this, I let negative evaluation involved by SQ be defined as follows:

(63) **[Measure function for scare quotation]** Let $\textsc{Norm}_{CG}$ be a set of propositions stating norms and present in CG, and φ represent a proposition interpreted as follows: $[\![\varphi]\!]^{\mathcal{M},w} = f(t_1,\ldots,t_n) = 1$ *iff* $\langle [\![\mathrm{t}_1]\!]^{\mathcal{M},w},\ldots,[\![\mathrm{t}_n]\!]^{\mathcal{M},w}\rangle \in [\![\mathrm{f}]\!]^{\mathcal{M},w}$. Then $\mu_{should\ not}([\![\varphi]\!],e)$ is a value n within the interval $[-1,1]$ in $\mathbb{R}$ such that the event e of using every expression $\mathrm{t}_1,\ldots$ as defined in $\mathcal{M}_1, w_1,\ldots$ is judged as one that should not take place iff n exceeds the salient threshold $\theta_{should\ not}$ relative to the $\textsc{Norm}$, where φ is true and:

[4] Due to the fact that formulating a detailed mechanism identifying candidates for mixed-quoted speakers has neither been proposed, nor is it directly connected with the problem of scare-quoting, I assume the general picture applied to partially related problems by Djärv (2022). The exact mechanism selecting quoted speakers requires an independent paper.

i. $[\![t_1]\!]^{\mathcal{M},w}$,... appears in the truth conditions defined for $[\![\varphi]\!]^{\mathcal{M},w}$;

ii. terms of $[\![t_1]\!]^{\mathcal{M},w}$,... are within the scope of Q and are interpreted as defined in $\mathcal{M}_1, w_1$,...;

iii. for every t_1,... as defined in $\mathcal{M}_1, w_1$,... there is a NORM in NORM_{CG} regulating its use;

Let us pause for a moment and take a look at some immediate consequences of this definition. Perhaps the most important property from the formal point of view is that $\mu_{should\ not}(\cdot)$ is defined neither for atomic propositions *simpliciter*, nor for structured propositions (Pickel 2019).[5] Note that a straightforward adaptation of Lassiter's proposal outlined in (58), where the measure function is defined in terms of atomic propositions alone, would not work. The reason is that the function must select those terms that are within the scope of the quotational operator Q. This would not be possible had the measure function been defined just in terms of atomic propositions taken as sets of possible worlds. Therefore, it seems to be a better solution to let $\mu_{should\ not}(\cdot)$ take structured propositions. This, however, gives rise to other complications. To itemise a few, it is not clear how the information concerning the structured proposition is preserved in the course of computation and how a structured proposition provides truth conditions, given that it cannot be automatically reduced to an atomic one. Therefore, I make use of the standard solution proposed in model-theoretic approaches to modality (cf. Fitting & Mendelsohn 1998; Glüer & Pagin 2007). I use the structured proposition, whose form follows directly from the output of the interpretation of φ, to define the truth conditions under which the atomic proposition is true. Thanks to this, the measure function is able to identify quoted terms as those appearing within the scope of Q and at the same time avoid problems connected with non-atomic propositions.

The very measure function is defined only for those expressions whose use is regulated by norms.[6] These norms are made salient by being added to CG. Given this, the value of measure function corresponds to the negative evaluation of the use of quoted expression. The less compatible it is with the norm, the closer the value n of $\mu_{should\ not}(\cdot)$ to 1 (see subsection 6.1, points 1, 2). In this regard, the measure function is partially related to the account proposed by Potts & Kawahara (2004) for honorifics.

This is the last element required for grasping formal semantics of SQ. Now I show how these tools interact with each other to secure its compositional computation.

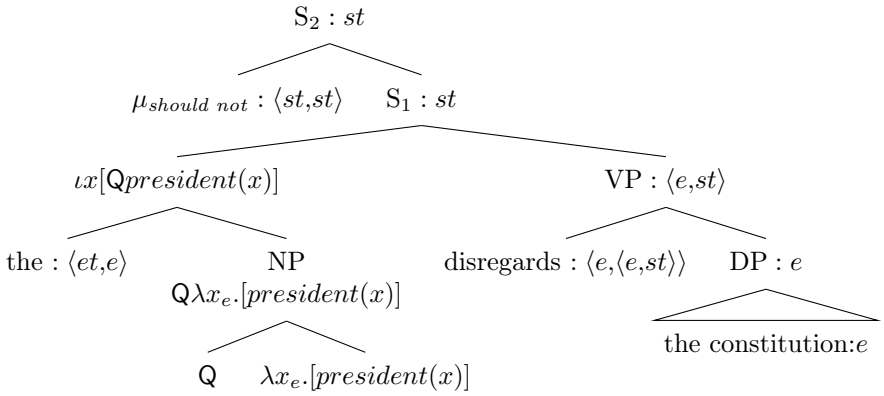
4.3 Computing scare quotation

In order to show how the system successively introduced so far computes SQ, I start from an assumption concerning salient norms (for the detailed formal computation, see subsection 6.2). I take the context surrounding SQs to add to CG norms regulating, among other things, the use of quoted expression.

(64) The "president" disregards the constitution!
NORM = [[presidents protect constitutions of their countries]]
$\text{NORM} \in CG$

Given this, the grammar is in a position to provide a compositional computation of SQ. There are two crucial items of this computation, i.e. the operator Q providing quotation and the measure function $\mu_{should\ not}(\cdot)$ relating the use of quoted expression to salient norms (for a complete formal specification, see subsection 6.1, point 4). To see how this works, consider first the derivation in (65), irrelevant details omitted.

(65)



[5] I owe this all-important point and the long discussion on its various aspects to an anonymous reviewer.

[6] Assuming this formal approach, the role of special intonation often marking SQ is exactly to mark those expressions whose use is supposed to be regulated by salient norms.

Let us check the derivation step by step. Forming the VP proceeds standardly. Without going into irrelevant details, I assume a possibly simple semantics of DPs (cf. Elbourne 2013; Heim & Kratzer 1998). The first major step is the operation of enquotation. It is represented by the operator Q corresponding to the interpretation of any marker of quotation. The operator merges with the NP *president* and yields the quotative expression *"president"*. Composition-wise, the operator behaves just like the standard modal operators $\Diamond$ and $\Box$ (cf. Fitting & Mendelsohn 1998) in that it does not affect types of λ-terms (here *et*). Thanks to this, the merger of the quotative NP *"president"* and the definite article is unproblematic. The result is the DP *the "president"* picking out the unique individual x which is what in the model of the idiolect of the quoted speaker is defined as *president*. Importantly, the shifted model is compatible with options left by CG, i.e. it is $\mathcal{R}_{CG}$-accessible, as stated in the previous subsection. The richer the contextual information added to CG, the more restricted the set of accessible models.

At the level of S_1, the derivation yields a proposition with a mixed-quoted NP. It picks out a set of worlds in which the individual denoted by the word *president* as understood by the quoted speaker disregards the constitution. Still, recall that truth conditions are defined for propositions in terms of structured propositions, as given in (63). This is important for the upcoming part of derivation which turns the mixed-quoted NP into a scare-quoted one. This move is formally implemented by the measure function, for short depicted in (65) as $\mu_{should\ not}$.[7] The function takes as its argument an atomic proposition. The next steps follow from the definition in (63). First, the function identifies all the quoted expressions which occur in the structured proposition and selects those, whose use is regulated by CG-salient norms. This is secured by the fact that structured propositions are contained in the meaning of atomic ones as following from the relevant formulas. Here, there is only one candidate for SQ, namely the NP *"president"*. Finally, the measure function relates the use of selected quoted expressions to CG-salient norms. Here the salient norm states that presidents protect constitutions of their countries. Given this, the fact that the proposition at hand, also added to CG, states that the word *president* has been used to denote someone who disregards the constitution gives rise to a conflict between this use and the norm. This conflict is exactly the formal implementation of the intuitive fact that scare-quoted expressions are regarded as instantiating not a perfect match, given the situation at hand. Due to the conflict between the norm and the situation, the value returned by $\mu_{should\ not}$ extends the salient threshold. This formally implements the interpretation of SQ, i.e. the fact that the use of quoted expression should not take place.

The final output of computation sketched above is a term providing three crucial pieces of information. The first one, not at-issue, is the norm regulating the use of quoted expression, added to CG as part of presupposition. The remaining ones are at-issue. The second one is a proposition saying that the individual described by the word *president* as defined in the model of the idiolect of the quoted speaker disregards the constitution. The third one is the negative evaluation stating that, given the salient norm, the use of quoted expression is judged as one that should not take place.

This step ends the computation. In the next subsection, I will have a look at how the proposed account of SQ captures its properties discussed so far.

4.4 Computing scare quotation: Consequences

To see some immediate consequences of the proposed account, let us recall the main effects discussed in Section 2 and 3.1. I start from those that can be traced in (64) and its structure laid out in (65). First, the proposed semantics captures the non-compositional character of quotation. The interpretation of SQ is form-rigid and relativised to the way it is understood by the quoted speaker, as discussed in the context of (19). Second, it secures the negative evaluation of the use of quoted expression by relating the situation of uttering it to the norm. In this sense it implements the attitude-based, and not negation-based approach, as discussed in Section 3.1. This is important for at least two reasons. First, it is coherent with the data from Japanese particles *yo* and *ne* discussed by Itō (2020) as involving attitude-related semantic effects. Second, it is not trapped in problems arising for negation (as assumed by Giora 1995; Schlöder 2017, a.o.). Recall that (64) does not mean that the person at hand is not a president. The proposed account correctly captures this as well as an opposite effect, namely the fact that contrary to (64), (66) finally does give rise to the effect of negation:

(66) The "president" is an opposition MP!

[7] The syntactic position of this item is in harmony with Hacquard's (2006; 2009) findings on two types of deontics, i.e. *ought-to-do* and *ought-to-be*. The former are subject-oriented and appear low (they are connected to a participant of the VP event), the latter are addressee-oriented and appear high (they are connected to a participant of the speech event). In the case of SQ, the obligation is clearly on the participant of speech event, i.e. the quoted speaker, and definitely not on the subject.

In the present account, both effects follow from the fact that the value assigned to the situation of uttering the quoted expression is judged as one that should not take place. In the case of (66), the norm is close to Grice's maxim of quality, i.e. *speak truthfully*.[8] The speech event at hand poorly conforms to the norm, hence the effect of negation in (66). Still, neither (64) nor (66) assumes negation as such, as required. Finally, the proposed account correctly predicts the balance between the at-issue and not-at-issue content parts. On the one hand, by taking SQ as covert deontic modality, it captures the presence of modal content revealed by (46)–(47), as well as gradability in (56). On the other, it predicts the presence of not-at-issue content parts as in (43). Here, A rejects the authority allowing one to formulate the ordering at hand (cf. Kaufmann 2012). The ordering is part of presupposition, exactly as suggested by (43).

Moving to more general issues, the proposed framework bridges the flexibility of SQ discussed in Section 2.1 with its limitations shown in Section 2.2. The first property is secured by the modal operator Q and norms underlying the negative evaluation. The former allows quotation to combine with any expression, regardless of its formal properties. The latter provides a slot for norms that are assumed by the users of language as regulating everyday discourse. To illustrate, there are widely assumed norms for as different types of SQ as those in (67), here captured within a single account.

(67) a. He stole "his" new car from my garage!
NORM: thieves do not become owners of the goods they steal.

b. John couldn't find his "k-k-k-keys".
NORM: linguistic expressions are pronounced clearly.

On the other hand, norms and the fact that they must be made CG-salient explain limitations of scare-quoting discussed in Section 2.2. These follow from the lack of relevant norms as in (68), or simply from the fact that they have not been added to CG.

(68) A: I talked with president Smith.
B: ✓The "president"/ #"Smith" disregards the constitution!
There is no NORM: people with certain names protect constitutions

Again, the negation-based approach is hardly in a position to account for these effects.

4.5 Discussion

Let us now have a look at how the proposed account contributes to the recent debate on quotation. There are at least four aspects of this debate that are developed by the present framework. These are the modal character of quotation, the role of quoted source in the semantics of quotation, the balance between at-issue and not-at-issue content parts and the demonstrative nature of quotation. Below I discuss these aspects one by one.

First, the offered formal account specifies an idea that has already been proposed in the literature (Bary & Maier 2021; Klockow 1978; Meibauer 2007; Wiślicki 2021). The idea is that quotative expressions have a modalizing function. I show how SQ, in addition to mixed, direct and pure quotation, can be formally captured as driven by the same basic modal mechanism, here representing deontic modality. The offered formal specification of the modalizing function of quotation, informally pointed out by Klockow (1978), has yet another important consequence. It shows that the fact that users of language sometimes negotiate the use of expression, especially when the particular word is not a perfect match, is not just a matter of language use. Rather, it has its formal grammatical implementation in the form of a fragment of the semantic structure of SQ. While certain general tendencies concerning the relation between the use of quotes and negotiations concerning the use of expression as not meeting certain norms were empirically confirmed by Härtl (2016), the above discussion shows exactly which part of grammar is responsible for this effect. This is reflected by both empirically and formally supported measure function, whose role is to provide the value encoding the extent to which the use of expression is not perfect and thus must be a matter of some sort of negotiation. Such negotiations take place between quoted and quoting participants of the discourse at hand.

Second, it has already been argued (Shan 2010; Maier 2014a; Ginzburg & Cooper 2014) that the interpretation of quoted expression must be relativised to the quoted speaker. Itō (2020) pushes forward these ideas showing that this sort of relativisation has certain hallmarks of attitudinal semantics, involving a judge. The present account shows that both of these points are correct, having an underlying model-theoretic mechanisms.

[8] Related effects rooted in Grice's maxims are confirmed by Itō (2020) for quoted speech events.

Third, there is an ongoing debate on the extent to which quotation is a pragmatic or semantic phenomenon. In a series of articles, de Brabanter (2010; 2017; 2020; see also Schlechtweg & Härtl 2022) provides a wide range of effects arguing that these support a pragmatic approach to quotation. Applying the *hey-wait-a-minute* test, Maier (2014a) specifies the division of content parts for mixed quotation into presupposed and at-issue. Pushing this line of reasoning, I argued for a different division of content parts, showing that the deontic modal framework solves these problems for SQ.

Finally, the recent debate, mainly after Davidson (2015), provides growing evidence for the demonstrative character of quotation. This property has been argued not only to go in hand with the fact that quotation can appear without quotes and involve a non-serious interpretation of quoted expression (De Brabanter 2020), but also to involve multi-modal acts of demonstration (Maier 2019, 2020; Steinbach 2020, to appear). The offered account shows that this property follows from its semantics based on model-shifting and a core fact concerning symbolic systems, namely the conventional form-meaning pairing secured by a model.

4.6 Interim summary No. 3

In this final section, I formalised the framework sketched in Section 3 and applied it to data presented in Section 2. The framework specifies and extend modal approaches to quotation already proposed in the literature by formulating a deontic modal account of SQ. The strength of the present proposal lies in at least four points. First, thanks to the flexibility of modal operator and deontic norms, it captures a wide variety of quoted expressions and their aspects targeted by the negative evaluation involved by SQ. Second, the architecture of deontic modals, including the presupposed character of norms, specifies and explains which content parts are at-issue and not-at-issue. Third, the idea of model-shifting contributes to the present understanding of formal and purely empirical aspects of quotation. Finally, the proposed account provides a strict way of combining two accounts of modality within a hybrid system.

5 Conclusion and future prospects

In this paper, I discussed effects observed for scare-quoted nominals, focusing on so far not scrutinized data from limitations of scare-quoting as well as tests showing the complex balance of at-issue and not-at-issue content parts. Then I proposed a modal framework for SQ and applied it to these data.

The contribution of this discussion is two-fold. First, it provides and tests a model-theoretic framework capturing some problematic effects rooted in quotation. The proposed account not only provides a precise mechanism deriving and computing SQ, but also specifies its modal character. In this regard the proposed formal develops and specifies proposals dating back at least to Klockow (1978), capturing various aspects of the modalizing function of quotation. Second, it captures and explains numerous effects rooted in the ironic character of SQ. The modal framework not only specifies the formal sense of downgrading the particular speech event, but also predicts important properties involved by irony, including its limitations and the scope of not-at-issue content part.

Apart from this, the fact that the complex nature of SQ can be accounted in terms of deontic modality opens up at least two paths for future inquiry. First, it invites further research on irony formalized as a strictly modal category involving scales based on salient norms. If proved correct, this would raise the prospect of capturing irony within a generalized semantics of attitudes. Second, it provides a precise framework for investigating the relation between at-issue and not-at-issue content parts involved in irony. Härtl & Bürger (2020) and Härtl & Seeliger (2019) argue that the way the users of language access at-issue or not-at-issue parts of ironic content is graded, rather than simply zero-one. The argument comes from experiments showing a graded rating of acceptability of sentences involving rejection of various parts of meaning. If this is correct, then there should be a formal relation between at-issue and not-at-issue content parts responsible for the effect at hand. The present framework opens up one possible way for investigating this relation by checking, how exactly is the measure functions (at-issue) driven by salient norms (not-at-issue). The question to be pursued on empirical grounds is whether the effect of graded access to each content part correlates with how the measure function interacts with norms.

6 Appendix: Details of sample computation

In this section I provide technical details of formal computation of (69) generally explained in subsection 4.3. I split the discussion into two points corresponding to crucial obligatory assumptions and the

compositional computation.

(69) A: I talked with the president.
B: The "president" disregards the constitution!

6.1 Assumptions

1. Norms
Let Common Ground (CG) be interpreted as a set of propositions $\{p_i\}$. Then for (69), CG is updated to CG_1 as follows:
$\textsc{Norm} = [\![\text{presidents protect constitutions of their countries}]\!]^{\mathcal{M},w}$
$CG_1 = \{p_i\} \cup \{[\![\text{presidents protect constitutions of their countries}]\!]^{\mathcal{M},w}\}$
Comment: This move makes the norm CG-salient. Without this, interpreting quotation as instantiating SQ is not possible.

2. Orderings
If $\mathbb{E}$ is a set of speech events and Norm is a proposition in CG, then there is an ordering $\langle \mathbb{E}, \prec_{\textsc{Norm}} \rangle$ such that for $e_1, e_2 \in \mathbb{E}$, $e_1 \prec_{\textsc{Norm}} e_2$ iff e_1 is less compatible with the Norm than e_2. Then for every measure function $\mu_{should\ not}$ defined in terms of Norm it is true that $e_1 \prec_{\textsc{Norm}} e_2 \Rightarrow \mu_{should\ not}([\![\varphi]\!], e_1) > \mu_{should\ not}([\![\varphi]\!], e_2)$.
Comment: This assumption provides a link between qualitative orderings secured by norm and a quantitative orderings derived from the qualitative one. The less compatible the given speech event with the norm, the higher the degree to which it should not take place.

3. Accessible models
Given the dialogue in (69), the only candidate for the quoted speaker is A. Thus, the only $\mathcal{R}_{CG}$-accessible model of interpretation of quoted expression is the model $\mathcal{M}_1$ of A's idiolect. Accordingly, CG is updated as follows:
$CG = CG_1 \cup \{\mathcal{R}_{CG}(\mathcal{M}) = \{\mathcal{M}_1\}\}$
to be read: CG is updated by the proposition which states that the set of accessible models is a singleton set consisting of the model $\mathcal{M}_1$ of A's idiolect.
Comment: This move specifies the quoted speaker. Without it the interpretation of quotation overgenerates, providing unwarranted models of interpretation.

4. Lexical items
Terminal expressions appearing in the structure in (65) are interpreted as follows:[9]

$[\![\text{the}]\!]^{\mathcal{M},w} = \lambda f_{et}.[\iota x(f(x))]$	*: there is exactly one* $x \in [\![\text{f}]\!]^{\mathcal{M},w}$
$[\![\text{constitution}]\!]^{\mathcal{M},w} =$	
$\lambda y_e.[constitution(y) = 1]$	*iff* $y \in [\![\text{constitution}]\!]^{\mathcal{M},w}$
$[\![\text{president}]\!]^{\mathcal{M},w} =$	
$\lambda x_e.[president(x) = 1]$	*iff* $x \in [\![\text{president}]\!]^{\mathcal{M},w}$
$[\![\text{disregard}]\!]^{\mathcal{M},w} =$	
$\lambda y_e.\lambda x_e.\lambda e_s.[disregard(x, y, e) = 1]$	*iff* $\langle x, y, e\rangle \in [\![\text{disregard}]\!]^{\mathcal{M},w}$
$[\![\text{"}\ldots\text{"}]\!]^{\mathcal{M},w} = \mathsf{Q}$	
$[\![\mu_{should\ not}]\!]^{\mathcal{M},w,CG} =$	[by (63)]
$\lambda p_{st}.\lambda e'_s.[\forall e(\mu_{should\ not}(p, e) \geq \theta_{should\ not})$ in $e' = 1]$	
iff the value of every situation e *of uttering* $\text{t}_1,\ldots$	
as judged in e' *exceeds the threshold* $\theta_{should\ not}$	
relative to the Norm*, where:* p *is true and*	

i. $[\![\text{t}_1]\!]^{\mathcal{M},w},\ldots$ *appears in the truth conditions defined for* $[\![p]\!]^{\mathcal{M},w}$;
ii. *terms of* $[\![\text{t}_1]\!]^{\mathcal{M},w},\ldots$ *are within the scope of* Q *and are interpreted as defined in* $\mathcal{M}_1, w_1,\ldots$;

[9] Technically speaking, truth conditions should be added within the scope of λ-terms. I put them on the right (or, in the next subsection, below) solely due to expository reasons.

iii. *for every* t_1,... *as defined in* $\mathcal{M}_1, w_1$,... *there is a* NORM *in* NORM_{CG} *regulating its use*;

Comment: Formal interpretations are defined along the lines of standard model-theoretic settings (cf. Fitting & Mendelsohn 1998).

6.2 Computation

Given the simplified syntactic structure in (65) and the standard composition principles (Heim & Kratzer 1998), the computation proceeds as follows.

$$
\begin{aligned}
&[\![\text{the constitution}]\!]^{\mathcal{M},w} = \\
&[\![\text{the}]\!]^{\mathcal{M},w}([\![\text{constitution}]\!]^{\mathcal{M},w}) = \\
&\lambda f_{et}.[\iota y(f(y))](\lambda y_e.[constitution(y)]) \qquad \text{[by FA]} \\
&\iota y(constitution(y))
\end{aligned}
$$

Result: The unique individual y such that y is a constitution.

$$
\begin{aligned}
&[\![\text{“president”}]\!]^{\mathcal{M},w,CG} = \\
&\mathsf{Q}[\![\text{president}]\!]^{\mathcal{M},w,CG} = \\
&\mathsf{Q}\lambda x_e.[president(x) = 1] \textit{ iff} \\
&\forall \mathcal{M}_1(\mathcal{M}_1 \in \mathcal{R}_{CG}(\mathcal{M}) \Rightarrow x \in [\![\text{president}]\!]^{\mathcal{M}_1,w_1}) \\
&\textit{where } \text{president } \textit{as defined in } \mathcal{M}_1 \textit{ for } w_1 \\
&\textit{has the utterance form demonstrated by the form } \ulcorner\text{president}\urcorner
\end{aligned}
$$

Result: A set of individuals $\{x_i\}$ such that x is what in the model $\mathcal{M}_1$ of the idiolect of the quoted speaker and the world w_1 is defined as *president*. The model $\mathcal{M}_1$ is $\mathcal{R}_{CG}$-accessible, which means that it must be compatible with the CG-salient set of candidates for the quoted speaker. The world w_1 is a world of $\mathcal{M}_1$ equal to w of $\mathcal{M}$.

$$
\begin{aligned}
&[\![\text{the “president”}]\!]^{\mathcal{M},w,CG} = \\
&[\![\text{the}]\!]^{\mathcal{M},w}([\![\text{“president”}]\!]^{\mathcal{M},w,CG}) = \\
&\lambda f_{et}.[\iota x(f(x))](\mathsf{Q}\lambda x_e.[president(x)]) \qquad \text{[by FA]} \\
&\iota x(\mathsf{Q}president(x))
\end{aligned}
$$

Result: The unique individual x such that x is what in the $\mathcal{R}_{CG}$-accessible model $\mathcal{M}_1$ is defined as *president*.

$$
\begin{aligned}
&[\![\text{disregards the constitution}]\!]^{\mathcal{M},w} = \\
&[\![\text{disregards}]\!]^{\mathcal{M},w}([\![\text{the constitution}]\!]^{\mathcal{M},w}) = \\
&\lambda y_e.\lambda x_e.\lambda e_s.[disregard(x,y,e)](\iota y(constitution(y))) \qquad \text{[by FA]} \\
&\lambda x_e.\lambda e_s.[disregard(x, \iota y(constitution(y)), e) = 1] \\
&\textit{iff } \langle x, \iota y(constitution(y)), e\rangle \in [\![\text{disregard}]\!]^{\mathcal{M},w}
\end{aligned}
$$

Result: A set of triples $\{\langle x,y,e\rangle_i\}$ where y is the unique individual such that y is a constitution and x disregards y in e.

$$
\begin{aligned}
&[\![\text{S}_1]\!]^{\mathcal{M},w,CG} = \\
&[\![\text{The “president” disregards the constitution}]\!]^{\mathcal{M},w,CG} = \\
&[\![\text{disregards the constitution}]\!]^{\mathcal{M},w}([\![\text{the “president”}]\!]^{\mathcal{M},w,CG}) = \\
&\lambda x_e.\lambda e_s.[disregard(x, \iota y(constitution(y)), e)](\iota x(\mathsf{Q}president(x))) = \qquad \text{[by FA]} \\
&\lambda e_s.[disregard(\iota x(\mathsf{Q}president(x)), \iota y(constitution(y)), e) = 1]
\end{aligned}
$$

iff

$\forall \mathcal{M}_1(\mathcal{M}_1 \in \mathcal{R}_{CG}(\mathcal{M}) \Rightarrow \langle \iota x(\mathsf{Q}pres(x)), \iota y(const(y)), e\rangle \in [\![\text{disreg}]\!]^{\mathcal{M},w,CG})$

where president *as defined in* $\mathcal{M}_1$ *for* w_1

has the utterance form demonstrated by the form ⌜president⌝

PRESUPPOSITION :

NORM = [[presidents protect constitutions of their countries]]$^{\mathcal{M},w}$

Result: A proposition which is true iff the unique x such that x is what in the idiolect of the quoted speaker is defined as *president* disregards in e the unique y such that y is a constitution. The proposition makes CG-salient a norm stating that presidents protect constitutions of their countries. The norm gives rise to the ordering relation over speech events such that $e_1 \prec_{\text{NORM}} e_2$ iff e_1 is less compatible with the NORM than e_2.

$[\![\text{S}_2]\!]^{\mathcal{M},w,CG} =$

$[\![\mu_{should\ not}]\!]^{\mathcal{M},w,CG}([\![\text{The "president" disregards the constitution}]\!]^{\mathcal{M},w,CG})$

$\lambda p_{st}.\lambda e'_s.[\forall e_1(\mu_{sh\text{-}n}(p, e_1) \geq \theta_{sh\text{-}n})$ in $e'](\lambda e_s.[disreg(\iota x(\mathsf{Q}pres(x)), \iota y(const(y)), e)) =$

[by FA]

$\lambda e'_s.[\forall e_1(\mu_{sh\text{-}n}(\lambda e_s.[disreg(\iota x(\mathsf{Q}pres(x)), \iota y(const(y)), e)], e_1) \geq \theta_{sh\text{-}n})$ in $e' = 1]$

iff the value of every situation e_1 *of uttering* president

as judged in e' *exceeds the threshold* $\theta_{should\ not}$

relative to the NORM*, where:*

$\forall \mathcal{M}_1(\mathcal{M}_1 \in \mathcal{R}_{CG}(\mathcal{M}) \Rightarrow \langle \iota x(\mathsf{Q}pres(x)), \iota y(const(y)), e\rangle \in [\![\text{disreg}]\!]^{\mathcal{M},w})$

where president *as defined in* $\mathcal{M}_1$ *for* w_1

has the utterance form demonstrated by the form ⌜president⌝

PRESUPPOSITION :

NORM = [[presidents protect constitutions of their countries]]$^{\mathcal{M},w}$

and for NORM $\in CG$ *and* $e_1 \in \mathbb{E}, \langle \mathbb{E}, \prec_{\text{NORM}}\rangle$ *holds*

Result: The final output is three-fold. First, it is a set of situations $\{e'_i\}$ such that every use e_1 of the word *president* is judged in e' as one that should not take place. This is possible thanks to two facts: (i) that the relevant part of term is identified as a quotative one (i.e. lying within the scope of Q); (ii) that its use is regulated by the norm which gives rise to the ordering of speech events. The measure function $\mu_{should\ not}$ preserves the ordering $\prec_{\text{NORM}}$, so the evaluation is derived from the qualitative ordering imposed by the norm. Second, it is a proposition which is true iff the unique x such that x is what in the idiolect of the quoted speaker is defined as *president* disregards in e the unique y such that y is a constitution. Third, it is the not-at-issue content part covering the salient norm and the related ordering.

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