

The curious case of the clever quacker: on iconicity, at-issueness, and composition in prohibition signs

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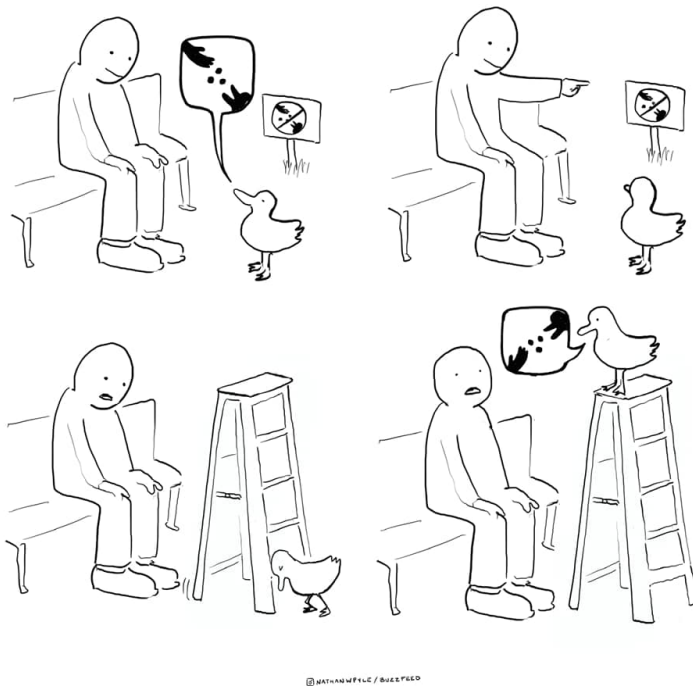
Abstract In this note, I make some empirical observations about not-at-issue content in prohibition signs and discuss their implications for our theories of pictorial semantics and pragmatics. In particular, I show that some aspects of pictorial representations can be not-at-issue because they are not meant to be interpreted iconically in the first place, while others are iconic, but behave similarly to non-restricting modifiers in language. In both cases, the status of a given aspect of a pictorial representation is not fixed based on the nature of that aspect, but is determined by the pragmatics of the whole picture. I, furthermore, argue that iconic, but not-at-issue aspects of pictorial representations are, in fact, non-restricting modifiers, rather than some sort of sublexical presuppositions, as their behavior for the purposes of ellipsis/anaphora resolution and alternative generation suggests semantic composition.

1 Intro: the clever duck

Look at the comic by Nathan W. Pyle in (1).

(1)

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¹<https://www.facebook.com/nathanwpyle2/photos/a.1377156059035720/2745700495514596/>

Why is it funny? In one sentence, the duck interprets (or pretends to interpret) the directionality of the food-tossing motion depicted in the prohibition sign iconically and as part of the at-issue content of the sign—contrary to the intent of the sign, which aims to prohibit duck-feeding in general.²

Now, the duck could’ve made its life easier and avoided the need to bring in the ladder by choosing to treat the mereological properties of the food being tossed or the tossing event depicted in the sign as at-issue—say, by demanding that the human toss four rather than three food morsels or that the morsels be tossed in a different spatiotemporal arrangement (e.g., one by one rather than all at once). It could’ve also demanded that the human toss the food with something other than their hand or put it on the ground rather than toss it in the first place. The possibilities are endless. In all these cases, the effect would be similar and would be due to a mismatch between the intent of the prohibition sign and the iconic and at-issue interpretation of the aspects of the pictorial content of the sign that are not meant to be interpreted as iconic or at-issue. The intuition seems clear, but let’s delve a little more into the issues of iconicity, at-issueness, and pictorial compositionality that this comic alerts us to.

2 (Non-)iconicity and (not-)at-issueness in prohibition signs

The goal of a prohibition sign is to prohibit, and at the compositional level, it ostensibly involves embedding under negation,³ typically represented by the circle-backslash symbol, resulting in an interpretation similar to *No X!*. So, while the prohibition message intended by the sign in (1) could be paraphrased as *No duck feeding!* (or something more general like *No waterfowl/wildlife feeding!*), the duck chooses to interpret it along the lines of *No duck feeding from above!*⁴ Prohibition signs are, thus, an interesting test ground for which parts of pictorial representations are interpreted (i) iconically, and (ii) as at-issue.

In order for a given aspect of a pictorial representation in a prohibition sign to be interpreted as an essential part of what’s prohibited, it has to be interpreted both iconically (at least to some level of precision) and as at-issue. However, when a given piece of content is not interpreted as an essential part of what’s prohibited, it can be either because it is iconic, but not-at-issue or because it is not meant to be interpreted iconically in the first place. For instance, in (1), the directionality is not meant to be at-issue (all duck-feeding events are prohibited, including non-prototypical ones), but it is arguably still interpreted iconically, along with many other properties of the picture, since a prototypical duck-feeding event involves tossing a few morsels of food from a higher position in space to a lower one. However, the number of food morsels in the picture is arguably not interpreted hyper-iconically: while a plurality of food morsels is usually involved, there doesn’t have to be exactly three. Three, however, seems to often be the default number to represent a plurality of individuated atoms (see, e.g., Schlenker & Lamberton 2019 on how three repetitions often indicate any cardinality higher than two in sign). Some aspects of pictorial representations are, thus, simply due to stylization conventions (discussed, for instance, in Greenberg 2019) and are, therefore, less iconic.

How do we know that manner (tossing) and directionality (downwards) in (1) are still interpreted iconically, even if they are not-at-issue? The prohibition sign in (1) does seem to come with inferences along the lines of ‘a duck feeding event usually involves tossing’ and ‘the tossing in a duck feeding event is usually directed downwards’,⁵ while it does not give rise to inferences of the form ‘food tossing in a duck feeding event usually involves exactly three morsels of food being tossed simultaneously’. In other words, certain aspects of the depicted event are interpreted iconically, but as *non-restricting modifiers*, i.e., instances of modifiers that are truth-conditionally vacuous in a given context, as defined in Esipova 2019a (see also Leffel

²It is also funny because the duck is purportedly speaking, but in the context of the comic, it is actually producing a pictorial utterance; the joke wouldn’t work as is if we tried to represent the duck’s utterances with spoken language only. However, the spirit of the joke could be preserved in the following exchange, for instance:

- (i) Duck: Toss me some food!
Human: *points to the prohibition sign*
Duck: OK, then put the food on the ground.

³Or a negative deontic modal akin to Russian *nel’zja* ‘not-allowed’. It is not clear to me, however, whether the modal is part of the meaning of the circle-backslash symbol, or it is external to it, similarly to how it is external to *no* in *No X!*

⁴**Bold** marks contrastive focus, which helps enforce the at-issue interpretation of the modifier in the spoken utterance.



⁵Relatedly, multiple commentators on the original Facebook post with the comic noted that the last panel evokes regurgitation rather than feeding, even though that clearly wasn’t the intended interpretation.

2014 for an earlier discussion of non-restricting modifiers).⁶

Whether a given instance of a modifier is intended as non-restricting is determined by pragmatic factors. For example, in (2a), the adjective *deadly* is likely to be non-restricting, but in (2b), it is restricting, i.e., picking out a (potentially) smaller subpart of the denotation of the expression it combines with and, thus, truth-conditionally non-vacuous.

- (2) a. *Context: The speaker believes that processed meat causes cancer.*
 I shouldn't be eating so many deadly hot-dogs.
 = I shouldn't be eating so many hot-dogs. (truth-conditional vacuity)
 → All hot-dogs are deadly. (non-restricting modifier inference)
- b. *Context: The speaker runs a chemistry lab and is talking to her assistant.*
 All deadly substances are stored in this cabinet.
 ≠ All substances are stored in this cabinet. (truth-conditional non-vacuity)
 ↗ All substances are deadly. (no non-restricting modifier inference)

The same is true for directionality in signs: when it is interpreted iconically to begin with, it can be either non-restricting or restricting, depending on the pragmatics of the sign. For instance, in the signs in (3), the directionality is obviously restricting.

- (3) a.  ⁷
 ≠ No turn!
 ↗ All turns are leftward.
- b. 
 ≠ No way out!
 ↗ All ways out are {leftward, rightward}.

But to know whether a given piece of iconically interpreted pictorial content is restricting or not, one needs to have very specific world knowledge, for instance, that feeding wildlife in general is likely to be prohibited, but not specifically feeding wildlife from above. The same applies to distinguishing between content that is iconic, but non-restricting and content that is not meant to be interpreted iconically in the first place (which also involves knowledge of the relevant stylization conventions). For instance, in the sign prohibiting crowding in (4), the mereological properties of the depicted plurality are meant to be interpreted much more iconically than in (1): while the exact number of the atoms depicted still isn't meant to be interpreted precisely, their higher-than-the-default number and closer-than-the-default arrangement are both meaningful (and, furthermore, at-issue). In contrast, while the plurality in the prohibition sign in (5) also contains five atoms that are quite densely arranged, the sign is still interpreted as prohibiting bird-feeding in general. Once again, this difference in interpretation arises due to world knowledge, namely, that crowding is something that is routinely prohibited, but over-(or under-)feeding wildlife is not.

⁶These inferences are also reminiscent of “cosuppositions” posited in Schlenker 2018a as assertion-dependent presuppositions triggered by co-speech gestures and extended in Schlenker 2018b to other types of content. I argue in Esipova 2019a that Schlenker’s “cosuppositions” are but non-restricting modifier inferences in disguise, so I will continue to use the more specific and transparent notion.

⁷https://commons.wikimedia.org/wiki/File:Road_Sign_No_Left_Turn.jpg

(4)



www.shutterstock.com • 1557392825

(5)



#110265810

Another case in point are public bathroom signs depicting acceptable and unacceptable ways of relieving oneself. For instance, the sign in (6) from a Sochi bathroom made the news during the 2014 Winter Olympics—and it is certainly noteworthy for the purposes of this squib.

(6)



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First, the top right sign and the one below it in (6) don't prohibit passing waste in general, but doing so in a specific position, which is in clear contrast to the sign in (1). Second, the arrangement of pee droplets in the top right sign in (6) is meant to be interpreted iconically (more so, at least, than the arrangement of the food morsels in the sign in (1)), but in a non-restricting fashion, with an inference that peeing while standing results in droplets of pee spraying all over the place. Of course, to interpret these signs correctly, one needs a great deal of world knowledge, but also, the presence of the explicit permitted alternative in the top left corner helps rule out the—hypothetically possible—restricting interpretation of the pee droplet arrangement in the top right sign, whereby peeing while standing is OK as long as one avoids pee spraying—assuming that the top left sign provides the exhaustive list of the permitted alternatives.

The German bathroom signs in (7) make similar points explicitly, by contrasting acceptable and unacceptable alternatives and by providing spoken language instructions; once again, the liquid mereology in these signs is meant to be iconic, but not-at-issue.

⁸<https://twitter.com/SebToots/status/429546115604938752>

(7)



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Note that the spraying arrangement of droplets in the prohibition signs in (6) and (7) is optional. Thus, the sign in (8) makes the same at-issue point, i.e., it prohibits peeing while standing, but without showing all the mereological consequences of doing so.

(8)



However, while the more complex depictions of the pluralities in (6) and (7) aren't necessary, they are justified, as they explain the rationale behind the rules. This is similar to how non-restricting modifiers in language often need to be licensed by relevance considerations (see, e.g., Leffel 2014). However, not all non-restricting modifiers obey this relevance constraint. For instance, in language, modifiers that are morphosyntactically obligatory, such as *phi*-features on pronouns, which I argue to be non-restricting modifiers in Esipova 2019a, don't have to be relevant.¹⁰ It is also possible that some non-restricting modifiers are non-obligatory, but “cheap” from the point of view of production, i.e., they don't require a lot of extra articulatory effort, and can, thus, circumvent the relevance constraint. Similar considerations seem to apply in the pictorial domain: in the sign in (1), some relative spatial arrangement between the agent and the goal of the tossing event is inevitable, so one might as well go with the most prototypical one, without requiring that the downward direction of the tossing motion be particularly relevant. However, in a bathroom sign like the ones above, the author can choose whether to go with a schematized, unembellished depiction of a pee stream or with an iconically modified version, in which case the modification has to be relevant in the context of the sign.

3 Semantic composition or sublexical meaning? An argument from ellipsis/anaphora resolution and alternative generation

Now, why call the various meaningful aspects of pictorial representations, such as directionality of events and mereological properties of pluralities, modifiers? Why not assume that pictorial content is interpreted holistically, with its various meaning components being sublexical? One argument for the compositional treatment comes from how these meaning components behave for the purposes of anaphora and ellipsis resolution as well as alternative generation. In particular, when directionality in a sign is not-at-issue, it can be ignored when recovering an elided constituent¹¹ or an antecedent for *same*, as well as when generating alternatives negated by *only*, as shown in (9).¹²

⁹<https://immi.de/wc-schild-bitte-im-sitzen-pinkeln-saubere-toilette/>

¹⁰Although, as I point out in Esipova 2019a, fn. 90, some speakers of English sometimes drop non-default gender on pronouns when the gender of the referent is not relevant, even if it is known.

¹¹I use gapping data from Russian here, because Russian allows more gapping possibilities than English.

¹²The original sign also contains the text *Do not feed the coyotes*, and, naturally enough, one of the comments under the picture makes a joke about the weirdly specific nature of the food item in the sign, which is clearly not meant to be interpreted as at-issue—but also doesn't seem to be an obvious characteristic of a prototypical coyote-feeding event: ‘Sign was cut off – “Do not feed the coyotes chocolate chip biscuits, they like honey snaps.”’

- (9) Context: In a zoo, the coyote enclosure has the following sign:



The speaker nods at this sign and says:

- a. Žirafov tože nel'zja [].
giraffe.PL.ACC too not-allowed
'One can't [feed] giraffes either.' (Russian)
- b. A žirafov možno [].
and/but giraffe.PL.ACC allowed
'But one can [feed] giraffes.' (Russian)
- c. The same applies to giraffes.
- d. This only applies to coyotes.
- (a-d): ↗ {Giraffes, all other relevant animals} are typically fed from above.

Naturally, when directionality in a prohibition sign is at-issue, it cannot be ignored in any of these cases:

- (10) Context: The speaker nods at the sign in (3a) and says:
- a. Na sledujušem perekrěstke tože nel'zja [].
on next intersection too not-allowed
'One can't [turn left] at the next intersection either.' (Russian)
- b. A na sledujušem perekrěstke možno [].
and/but on next intersection allowed
'But one can [turn left] at the next intersection.' (Russian)
- c. The same applies at the next intersection.
→ Turning left is prohibited at the next intersection.
↗ Turning is prohibited at the next intersection.
- d. This only applies at this intersection.
→ It's not the case that turning left is prohibited at all other relevant intersections.
↗ It's not the case that turning is prohibited at all other relevant intersections.

As observed in Esipova 2019a and further expanded upon in Sailor & Colasanti 2020, similar facts hold for modifiers, spoken and gestural, which can be ignored under ellipsis and *only* when they are non-restricting and, thus, not-at-issue, as shown in (11), where I've also added data for *same*-anaphora resolution.

- (11) a. Context: *Lea has only one dog, as does B.*



- A: Lea won't be bringing {her enormous dog, her dog_{LARGE}} to the party, as one of the guests is allergic.
- B: Ah, OK, then I won't [] either. Even though mine is a York, and those are sometimes claimed to be hypoallergenic, but better safe than sorry.
↗ B's dog is large. (variation of Sailor & Colasanti 2020, (15a))
- b. Context: *Lea has only one dog, and so does the speaker.*
Well, if Lea's gonna bring {her enormous dog, her dog_{LARGE}} to the party, then I'll do the same. Especially because mine is tiny.
↗ The speaker's dog is large.

¹³<https://www.flickr.com/photos/adactio/2156791720/>

- c. *Context: Lea has only one dog, and so does every other relevant person.*
 Only Lea brought {her enormous dog, her dog_{LARGE}} to the party. No one else did. Not even Mia, who has a tiny, innocuous chihuahua.
 ↗ Every other relevant person's dog is large.

This is in contrast to sublexical presuppositions, i.e., presuppositions arising as part of the lexical meaning of certain words, which cannot be ignored in such environments, as shown in (12).

- (12) a. Jackie stopped smoking, {but Daisy didn't, and Daisy did the same}.
 → Daisy used to smoke.
 b. Out of these three women, only Jackie stopped smoking.
 → Each of these three women used to smoke.
 c. O-Ren knows that she is in danger, {but Vernita doesn't, and the same is true for Vernita}.
 → Vernita is in danger. (under the sloppy reading)
 d. Out of these three women only O-Ren knows that she is in danger.
 → Each of these three women is in danger. (under the sloppy reading)
 e. Kim regrets cheating on the exam, {but Abernathy doesn't, and the same is true for Abernathy}.
 → Abernathy cheated on the exam.
 f. Out of these three women only Kim regrets cheating on the exam.
 → Each of these three women cheated on the exam. (Esipova 2019a, (7.4), adjusted)

It was also observed in Schlenker & Chemla 2018 that directional properties of hand gestures can be ignored under ellipsis and *only* when they are not-at-issue, which led the authors to assimilate directionality of gestures to *phi*-features on pronouns. They furthermore point out a contrast with some sublexical presuppositions, but do not attribute said contrast to the distinction between compositional and sublexical meaning. Both directional properties of gestures and *phi*-features on pronouns are analyzed as modifiers in Esipova 2019a and are, thus, expected to pattern with other modifiers when it comes to behavior under ellipsis and *only*. A relevant paradigm is given in (13) (Schlenker & Chemla focus on non-co-speech gestures, but this difference is irrelevant for the issue at hand).

- (13) *Context: Zoe and Skyler are practicing face punches with sparring partners.*



- a. Zoe_i punched_{PUNCH-HIGH} her_i sparring partner, {but Skyler didn't, and Skyler did the same}.
- b. Only Zoe_i punched_{PUNCH-HIGH} her_i sparring partner.
- (a,b):
 → Zoe's sparring partner is taller than Zoe.¹⁴
 → Zoe is female.
 ↗ Skyler's sparring partner is taller than Skyler.
 ↗ Skyler is female. (Esipova 2019a, (7.2), adjusted)

The fact that directionality in pictorial representations of events patterns with modifiers rather than sublexical content for the purposes of ellipsis/anaphora resolution and alternative generation under *only* suggests that interpreting pictorial content involves a syntactic level of representation that feeds semantic composition, and, at least in the cases discussed here, directionality is compositionally independent at that level of representation.

¹³I write gesture labels in ALL CAPS. Co-speech gestures are written as subscripts, with underlining indicating their approximate temporal alignment without making any syntactic claims. New gestures are accompanied with illustrations, placed at their approximate onset.

¹⁴Or more precisely, Zoe's sparring partner's face is higher than Zoe's.

4 Outro

In this short note, which started as a reflection about a random comic on the Internet, I have shown several things about pictorial content:

- (i) Re iconicity: some aspects of pictorial representations are not meant to be interpreted (hyper-)iconically. But whether a given aspect of a pictorial representation is interpreted iconically is not fixed based on its nature, but instead depends on the pragmatics of said representation. Thus, the mereological properties of the depicted plurality (the number of the food morsels and their arrangement) are not meant to be interpreted iconically in the prohibition sign in (1), but similar properties of pluralities are much more iconic in the ‘No crowding!’ sign in (4) and in the bathroom signs in (6) and (7).
- (ii) Re at-issuedness: some aspects of pictorial representations that are meant to be interpreted iconically can, nonetheless, be not-at-issue, and, once again, whether this is the case within a given representation depends on its pragmatics. For instance, directionality is meant to be iconic, but not-at-issue in the intended interpretation of the prohibition sign in (1), but it is at-issue in the signs in (3). Similarly, mereological properties of pluralities are iconic, but not-at-issue in the bathroom signs in (6) and (7), but they are at-issue in the ‘No crowding!’ sign in (4). Furthermore, in some cases, iconic, but not-at-issue aspects of pictorial representations, such as the droplet arrangement in (6) and (7), seem to be licensed by relevance considerations, similarly to non-restricting modifiers in language.
- (iii) Re composition: data from ellipsis/anaphora resolution and alternative generation under *only* suggest that such “aspects” of pictorial representations contribute meaning in a compositional way. That is, processing pictorial content involves a syntactic level of representation whose output is interpreted in a compositional fashion, and such components of pictorial content as directionality of events and mereological properties of pluralities act as modifiers at this level of representation, at least in the examples discussed here. Therefore, the at-issue vs. not-at-issue distinction for such components of pictorial content is best captured via the notions of restricting vs. non-restricting modification (following similar ideas for various “secondary modality” content in spoken language in Esipova 2019a,b).

Methodologically speaking, prohibition signs proved useful in getting at the at-issue vs. not-at-issue distinction in pictures without creating speech-picture hybrids (cf. Schlenker 2019), as they, by virtue, involve embedding under negation. Relatedly, the pragmatics of prohibition signs is usually very clear, especially in the presence of explicit permitted alternatives, which makes judgements about what’s at-issue and what’s not fairly straight-forward and, furthermore, highlights the role of pragmatics for this distinction in pictures.

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