What does it mean to wear a mask?

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If first-order empathy is the ability of Self to take into account Other's point of view, then second-order empathy may be identified as the ability of Self to take into account Other's point of view as including a view of Self. Considering that a hearer may choose between a first-order empathic and a second-order empathic interpretation of speaker utterances, second-order empathy introduces a pervasive indeterminacy in speaker-hearer interactions. The paper introduces this ambiguity potential in terms of the semiotics of face mask wearing during the corona pandemic, and then extrapolates the ensuing pattern of interpretative options to representative speech acts. The interaction between degree of empathy on one hand, and on the other the convergence or divergence of speaker and hearer beliefs is shown to yield six basic interpretative configurations: assertion, mistake, agreement, disagreement, irony, deception. Recognizing this ambiguity potential of second-order empathy is relevant for linguistic intersubjectivity research and post-Gricean pragmatics, and for the psychological theory of mind paradigm.

Keywords: empathy, intersubjectivity, ambiguity, pragmatics, speech act, theory of mind, reflexive recursive mind-reading, irony

1. Facing up to facemasks

The corona pandemic that swept over the world in 2020 has had vast effects on the communicative interaction between people, not just in the sense that we have had to change to digital forms of communication in many circumstances that would otherwise take a live form, but also in the sense that new forms of social interaction – a new social semiotic, if you like – had to be developed. How do you shake hands when your hands shouldn't touch? If a meter and a half is the minimum distance to keep, can we still proxemically manipulate the space that we keep between ourselves and others to express closeness, and distance? And if we come across someone who is not wearing a mask when we expect them to, or

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the other way round, how should we interpret their behavior? In many countries wearing a protective facemask is mandatory in specific circumstances, but then what should we make of someone not wearing the mask when it is required? And how about the circumstances that strictly speaking do not enforce wearing a mask but where it could be seen as a sign of politeness to still do so?

In this brief paper, I would like to point to the profound ambiguity of mask wearing as part of the new social semiotic. The basic situation will be familiar: you meet someone maskless in a situation where you would expect them to wear protective face covering, and you wonder whether that person has simply forgotten to put on the mask, or whether they don't share the assumption that a facemask is relevant in the circumstances, or perhaps whether they are trying to tell you something about your own mask-wearing. Several options for understanding the situation present themselves, and while there are usually additional clues in the context that help you towards a specific reading of the situation, that process of selecting an appropriate interpretation presupposes a spectrum of meaningful options. What I would like to do in this paper, then, is first to give an overview of that spectrum: what are the basic interpretative options that arise in such a situation? Second, I want to point to the underlying dimensions that shape the spectrum. I will show that there is a system in the range of interpretative possibilities, and that that system is to a large extent structured by the level of cognitive empathy assumed by the interpreter. I will explain more extensively what is meant by 'cognitive empathy' further on in the paper, but for starters note that I am using the term in the way in which it would be used in for instance the Theory of Mind literature: an empathic point of view is one in which you take into account the other person's point of view. Third, I want to show that this systematic structure of possible interpretations applies more broadly, and specifically, that it also operates with regard to representative speech acts. The same system of layers of empathy that is fundamental for our understanding of mask wearing as a social semiotic, equally applies to verbal communicative encounters in which we interpret propositions as statements, or lies, or ironies et cetera.

To sketch the background of this analysis there are three points that I would like to draw the attention to. First, the layered type of cognitive empathy illustrated here was introduced and described in some detail in Geeraerts (2021), where I specifically introduced the term 'second order empathy' to refer to forms of cognitive empathy with an embedded empathic layer. If an empathic point of view is one that takes into account the interlocutor's point of view, then a second order empathic point of view is one that takes into account the interlocutor's point of view as taking into account the point of view of the hearer. Given this distinction, a central aspect of the analysis in the following pages is the idea that the possibility for choosing between a first order empathic point of view and a sec-

ond order empathic point of view is a major source of interpretative ambiguity (as we shall soon see when we turn in detail to the semiotics of masks). Inevitably, the present paper overlaps to some extent with the previous one, specifically with regard to the overview of speech act ambiguity. At the same time, what the present paper adds is further evidence for the pervasiveness of the phenomenon, a feature that also looms large in the original paper. In particular, by going outside of the field of verbal interaction, the present text adds weight to the observation (made in passing in the original paper) that the phenomenon encompasses both verbal and non-verbal communication.

Second, from the point of view of my personal research trajectory, the pragmatic orientation of the present paper means that it lies a little bit outside the overriding lexical orientation of my research. However, I would like to emphasize that the notion of empathy-based ambiguity that I will be describing continues the interest in semantic indeterminacy that has from the very beginning been a feature of my work on lexical polysemy. My early interest in prototypicality as a structuring aspect of the architecture of lexical meaning (Geeraerts, 1989) branched off in various directions, including an analysis of the prototype structure of metonymy – the very topic to which Antonio Barcelona has made such insightful contributions. But predominantly, my interest in prototypicality expanded into a view of lexical variation that incorporates (and to some extent privileges) onomasiological variation next to semasiological variation. This is the model of variation that with my Quantitative Lexicology and Variational Linguistics research team I have developed further over the years, specifically also, theoretically, with a cognitive sociolinguistic, and methodologically with a corpus-linguistic orientation. But prototype-based lexical polysemy was also from the start the basis for recognizing a fundamental and possibly irreducible aspect of indeterminacy in semantic description (Geeraerts, 1993). What I am suggesting in connection with the role of empathy and communication is that at the pragmatic level as well, there is an element of potentially irreducible indeterminacy, in the sense that there is a potential for interpretative divergence that arises from the cognitive configuration between speaker and hearer and that is not resolved in the linguistic sign itself.

Third, I am happy that I can offer this paper as a small tribute and token of appreciation to Antonio Barcelona, whose work has done so much to further our understanding of figurative speech. My presentation of the communicative importance of first and second order empathy does not touch on the topic of metonymy, but it does link up with the study of figurative language. One of the advantages of the empathy-based system of interpretative ambiguity is, I believe, that it provides a natural and intuitively plausible position for the phenomenon of communicative irony. Irony of course is one of the forms of figurative language that is most resis-

tant to analysis, but if we can show (as I believe we can) that the phenomenon of irony falls out automatically from a broader system of interpretative options, then this contribution to the study of figurative language will be the collateral benefit from the study of empathic speech act ambiguity.

2. The masked parade

Let us now consider the various ways in which facemasks can be interpreted. I will describe these possibilities in terms of Self, the person doing the interpretation, and Other, the person wearing the mask. In an initial configuration, Self takes an objective perspective and does not think about the point of view of the other person. Regardless of the intentions of Other, the mask is seen as an appropriate, or as the case may be, inappropriate response to an actual situation. But obviously, whether the response is appropriate or inappropriate depends on the outlook, the perspective, the viewpoint, the worldview of Self: as such, the interpretation is only 'objective' within the point of view of Self, but the point of view of Self itself is subjective in the way that all human knowledge is. Specifically, the worldview of Self includes an assumption about the degree of danger and contagiousness of the coronavirus against which the mask is meant to provide protection. For the sake of simplicity, I will reduce these assumptions to two basic opposites: either Self believes that the virus is hypercontagious, or Self believes that the virus is benign. If Self believes the virus is hypercontagious, wearing a mask is seen as objectively contributing to the fight against the pandemic; not wearing a mask will be seen as ill-suited. Conversely, if Self believes that the virus is factually harmless, wearing a mask is unnecessary, and not wearing a mask is objectively appropriate.

The beliefs of Self will actually be more complicated than suggested in this simplified representation. Systematically, Self entertains beliefs with regard to the danger of the virus (how contagious is it in fact?), with regard to the role of wearing facemasks vis-à-vis the virus (who do they actually protect and to what extent?), with regard to the specific situation (is the ventilation in this room sufficient to weaken the aerosol effect?), and with regard to the epidemic as such (is it worth fighting, and what is the best way of fighting it?). In the description above, I concentrated on the first factor, but Self's conviction about the virus may combine with different positions with regard to the other factors. For instance, Self may or may not believe that wearing a mask actually provides protection: at least in many European countries, the first months of the pandemic were characterized by continuing public debate about the usefulness of such face-protecting measures. Or Self may or may not consider the situation at hand as requiring action. If the

expert opinion or official measures advise to socially distance at 1.5 meters, does that apply in the same way in open air, in well-ventilated rooms, in large spaces like churches or concert halls? Similarly, concerning the evaluation of the pandemic as such, Self might be a non-believer adhering to one of the many conspiracy theories that go round, or he might consider that the spontaneous spread of the virus is the best way to achieve herd immunity (taking excess mortality in the bargain), or he might judge the virus is the wrath of God, or Nature – and so on. (In passing, let it be noted that the masculine form of the pronoun is used in this paper in its traditional function as an unmarked, generic form that neither excludes nor privileges any specific gender or gender identity.)

However, in all configurations of assumptions, Self can take an objective stance with regard to Other's actions. If you harbor inimical feelings with regard to the United States, you may observe how president Trump's consistent downplaying of the importance of face-protecting gear promotes the virus and undermines the nation, but you may do so without considering whether Trump behaves with deliberate intent or not. And if you are a libertarian conspiracy theorist who assumes that facemasks are strictly speaking useless from a medical point of view but are being imposed primarily to strengthen the deep state's dominion over the population, you may be happy to see people not wearing a mask, regardless of the subjective motivations that those people may have for not complying with the requirements.

But then of course, taking such a subjective perspective is also an actual possibility, and one that opens up the road towards a further set of possible interpretations. If Self considers the action of Other from that other person's point of view, Self's beliefs about the virus and the mask and the pandemic are backgrounded in favor of Other's beliefs. But clearly, these beliefs are only available to Self through Self's subjective perspective. What matters here, in other words, is what Self believes that Other believes. Again simplifying the range of possible beliefs (in this case, as attributed by Self to Other) the four possible configurations that emerge are the following. If Self thinks Other thinks that the virus is hypercontagious, Other's wearing a mask is subjectively appropriate, and Other's not wearing a mask is a mistake. There may be different causes why Other is not wearing it (maybe he forgot it at home, or he didn't think of putting it on, etc.), but regardless of these motivating factors, Other's behavior is objectively in contradiction with his own subjective beliefs – as presupposed by Self, needless to say. Conversely, if Self thinks Other thinks the virus is harmless, not wearing a mask is subjectively appropriate, and wearing a mask is unnecessary and thus to be considered an error such as might be due to negligence or oversight.

In the latter case, when Self characterizes Other's behavior as a mistake, an error, an oversight, an inaccuracy, Self assumes Other's behavior to be acciden-

tal, i.e. non-deliberate. But in the same configuration Other may act deliberately against his basic beliefs, for instance when Other considers that the situation requiring a mask would be short enough to justify taking a risk. Once Self recognizes that Other's behavior may have reasons and not just causes, a new area of interpretation opens up. Self may then assume that Other's deliberate behavior involves Self, and that Other is specifically addressing Self. One could say that it is only at this point that wearing a mask, or not, is seen as a genuine communicative act, because it is only under this perspective that Other is thought of as sending a message. The message need not be directed at Self in particular, because Other may be seen as 'showing to the world' how he thinks about the whole affair. But not to complicate the analysis, I will describe the interpretative options in terms of a direct interaction between Self and Other. Importantly, the interpretations will now rest not just on what Self believes that Other believes, but also on what Self believes that Other believes about what Self believes – because Other's behavior will be understood as a response to what Self thinks about the situation. That is why we can talk of an embedded or second-order form of empathy: if empathy involves taking into account the Other person's point of view, then it should be granted that that other person may have an empathic perspective of Self.

But clearly, this will double the possibilities for interpretation. If Self looking first-order empathically at Other engenders four basic interpretative configurations (as shown above), then a second-order perspective (in which Other is treated as a Self in his own right looking at Self) will cross-classify those four configurations with Self's views of what Other believes about Self's beliefs. There are two conditions here (Self believes Other believes Self believes the virus is hypercontagious, or Self believes Other believes Self does not believe that), so multiplying these two with the four configurations already mentioned yields eight configurations. As in the first-order situation, these come in pairs. In the first-order empathic group, two configurations are classified as errors, and two are classified as appropriate expressions of Other's beliefs. In the same way, the eight configurations in the second-order empathic group can be classified into four pairs. But let us first look systematically at the eight possibilities that arise when Self takes a reflective subjective point of view, and considers the perspective of Other as attributing a point of view to Self and taking that point of view into account when deliberately conveying a message to Self. (The four groups presented here will gradually fill out Table 1 below, which may be consulted as a schematic guideline to the following paragraphs.)

– If Self believes, first, that Other believes the virus is hypercontagious, and second, that Other believes that Self believes the opposite, then Other wearing a mask can be read by Self as conveying the message 'Other signals I should be

more careful. Other is doing things the way he thinks they should be done, and because he assumes that I am not convinced, he is sending me a signal that I am not doing it right'.

Conversely, Other not wearing a mask could be interpreted as deception, or in a milder form, accommodation: 'Other is not acting according to his convictions, but given that he thinks that I think differently, he may be doing this to deceive me, or perhaps, to politely come my way'. Admittedly, the latter interpretation is bound to remain a theoretical possibility: it would be rather contradictory for Other to show formal courtesy toward Self but at the same expose Self to the danger of contamination. Interpreting the absence of a mask on a first-order level as a mistake on Other's behalf is then likely to be the more realistic interpretation. But then again, asymmetric power relations between Self and Other may subvert this mechanism: Other's desire not to show a difference of opinion with regard to Self, his superior, may trump his wish to act responsibly. (We will have to come back later to the choice between a first-order and a second-order interpretation, because it is the major source of ambiguity in configurations like these.)

– If Self believes, first, that Other believes the virus is hypercontagious, and second, that Other believes that Self believes the same, then Other wearing a mask can be read by Self as conveying a message of agreement: 'Other is doing things the way he thinks they should be done, and because he assumes that I am convinced of the same, he is sending me a signal of confirmation and solidarity'.

  Conversely, Other not wearing a mask could be interpreted as a form of jocular pretense: 'Other is not acting according to his convictions, but because he knows that I share those convictions, he also assumes that I will recognize that he does not really mean it'. Other's behavior can then be regarded as play, a mock-denial of the severity of the situation which could be intended to boost the morale. As in the previous group of interpretations, if it is unlikely that the wish to perform such an uplifting gesture would overrule the urge to act safely, Self would resort to a first-order interpretation in which Other's behavior is recognized as an error.

– If Self believes, first, that Other believes the virus is benign, and second, that Other believes that Self believes the opposite, then Other wearing a mask can be read by Self as conveying a message of accommodation: 'Other is doing things that he thinks are superfluous, but because he assumes that I do think they are the right thing to do, he is deceiving me for some reason, or perhaps, politely signaling that he is willing to take into account my view'.

  Conversely, Other not wearing a mask could be interpreted as a provocative act of contradicting: 'Other is acting according to his convictions, but because

he knows that I do not share those convictions, he also signals that he doesn't care how I feel about the situation'. The absence of accommodation in Other's behavior can then be seen as a taunting repudiation, a confrontational challenge, an oppositional denial.

– If Self believes, first, that Other believes the virus is benign, and second, that Other believes that Self believes the same, then Other wearing a mask can be read by Self as play: 'Other pretends the situation is more dangerous than (he thinks) we both think it is'.
  Conversely, Other not wearing a mask could be interpreted as signaling agreement: 'Other is doing things the way he thinks they should be done, and because he assumes that I am convinced of the same, he is sending me a signal of confirmation and solidarity'.

So, in that order, we come across the following eight configurations of second-order empathic interpretations: disagreement, deception, agreement, pretense, deception, disagreement, pretense, agreement. The four classes showing up here may now be combined with the ones we identified earlier: objective appropriateness and ditto mistake, subjective appropriateness and ditto mistake. The dimensions underlying the combination will be clear: first, the distinction between non-empathic (or 'zero-order empathic'), a first-order empathic, and a second-order empathic interpretation; second, Self's beliefs in each of these conditions (including specifically, in the first-order condition, Self's beliefs concerning Other's beliefs, and in the second-order condition, the combination of the latter with Self's beliefs concerning Other's beliefs concerning Self's beliefs); and third, the real-world situation of Other wearing a mask or not. If we present the belief that the virus is hypercontagious as proposition *p*, the relationship between the sixteen conditions that we discussed can be charted as in Table 1. The sixteen conditions result from the combination of three perspectives just mentioned. First, most trivially, there is the distinction between the situation in which Other is wearing a mask or not. Second, crucially, Self may take one of three basic positions: a non-empathic one, a first-order empathic one, and a second-order empathic one. And third, each of these three basic positions needs to be subcategorized, but the subcategorization is specific to each position (in other words, it is not simply a third independent dimension). For a non-empathic position, the relevant distinction is whether Self believes *p* to be correct or not, regardless of Other. For a first-order empathic position, the relevant distinction is Self's assessment of Other's belief: does Self believe Other believes *p* or not? So, for the non-empathic and the first-order empathic position, two subcategories in each case are important. For the second-order empathic position, however, four subcategories need to be distinguished, depending on the interaction between Self's assessment

of Other's belief about *p*, and Self's assessment of Other's belief about Self's belief about *p*, in the manner illustrated above. (The picture could be further complicated by cross-classifying the non-empathic stance of Self with the empathic interpretations, but we may leave that for a next step in the analysis.)

Table 1. Alternative interpretations of face mask wearing

		+MASK	−MASK
non-empathic	S believes p	objectively appropriate act	objective mistake
	S believes ~p	objective mistake	objectively appropriate act
1st order empathic	S believes O believes p	subjectively appropriate act	subjective mistake
	S believes O believes ~p	subjective mistake	subjectively appropriate act
2nd order empathic	S believes O believes p and S believes O believes S believes p	agreement	irony, pretense
	S believes O believes p and S believes O believes S believes ~p	disagreement	deception, accommodation
	S believes O believes ~p and S believes O believes S believes ~p	irony, pretense	agreement
	S believes O believes ~p and S believes O believes S believes p	deception, accommodation	disagreement

The table illustrates that it is the addition of second order empathy in particular that increases the interpretative options, specifically because it interacts with a divergence/convergence of Self's and Other's beliefs. It is also the distinction between a first-order and a second-order empathic stance that complicates the interpretation process, or at least, there are in general two factors that make navigating the spectrum of interpretative options difficult for Self: first, Self does not have direct access to Other's beliefs, and second, Self does not know for cer-

tain whether a second-order perspective is called for or not, i.e. whether Other acted on a first-order empathic view of Self or not. It follows that the question 'What does it mean (for Other) to wear a mask?' is not resolved in an algorithmic fashion, by simply ticking off the dimensions that constitute Table 1. Rather, it is a type of guesswork in which circumstantial evidence leads Self towards the most plausible interpretation – or not. This is the process that we illustrated above. For instance, in the condition in which Self believes that Other believes that the virus is hypercontagious, but that Self believes the opposite, it could be interpreted as a form of accommodation when Other does not don a mask. But since this display of courtesy would simultaneously and paradoxically mean that Other exposes Self to the danger of infection, Self is more likely to assume that Other did not have Self's beliefs in mind when forgoing a mask, and a first-order empathic interpretation suggests itself: Other was oblivious about the necessity of putting on a mask, or was materially prevented from doing so. Or Self might start doubting his assumptions about Other's beliefs and whether they converge with Self's beliefs. Perhaps Other did indeed intend to make a point vis à vis Self, but the point was not a polite gesture of accommodation, but rather, for instance, signaling that Other does not share the belief in the harmfulness of the virus that he attributes to Self.

Seen like this, the possibility of second-order empathy does not only increase the ambiguity potential of the situation, it also introduces a fair amount of indeterminacy, because of the difficulty of deciding whether the act under consideration – putting on a facemask or not – is performed with a view of Self in mind or not. 'Is Other trying to tell me something about my behavior?' is a question that precedes the question 'What exactly is it that Other is trying to tell me?', but it is a question that can only be answered circumstantially.

3. The propositional pandemic

The indeterminacy introduced by the possibility of second-order empathy can now serve as a bridge to an exploration of empathy effects in verbal communication. Such effects are well-known in the realm of deixis. When standing in front of Self, Other would shout 'Watch out from the left!', Self would be faced with question whether Other is talking about his own left (that is a first-order empathic interpretation on behalf of Self) or whether Other has shifted his deictic center to Self, so that the left in question is indeed Self's left (and thinking this way would then obviously be a second-order empathic interpretation on behalf of Self). Such deictic shifts have however not been recognized as cases of the broader phenomenon of empathic ambiguity. In Geeraerts (2021), it is shown how a range

of semantic and pragmatic differences of interpretation can be explained in terms of that epistemological distinction, and it is particularly emphasized that if there is no contextual disambiguation, hearers face the possibility of a systematic interpretative ambiguity: does the speaker construe the objective situation in a non-empathic or in an empathic way? This is the same conundrum that we came across above: Self can choose between a first-order and a second-order empathic reading, but in the absence of disambiguating clues, how would Self determine that a second-order interpretation is intended by Other?

Not surprisingly, the open-ended nature of the empathic field of interpretation gives rise to communicative misunderstandings. Consider the domestic friction at the Levin-Sjtsjerbatski household in part 5, Chapter 6 of *Anna Karenina*. When Levin announces that he needs to go to Moscow because his brother is dying, his wife Kitty expresses the intention to accompany him. Assuming that she does so to escape the boredom of staying alone in the countryside, Levin reproaches her, but Kitty retorts that it is her duty to be with her husband in times of trouble. Levin's interpretation is a first-order one, based on an understanding of Kitty's position in which he does not play a particular role but in which she only thinks of herself. Kitty however makes clear that he should adopt a second-order perspective, in which her point of view includes an empathic concern for her husband. For an adequate understanding of second-order empathy, it is important to distinguish this reaction from a situation in which Kitty actually wishes to escape countryside boredom and nudges Levin to put himself in her shoes and view things sympathetically from her perspective. In such a context, the affective polarity of Levin's reaction would change: he would sympathize with her wish to leave rather than blame her for it. But Levin's reaction would still be first-order empathic, in the sense that he would not be interpreting Kitty's position as a response to his point of view (which of course would mean: to the view that he thinks she has of his point of view).

Similar conflicts can be envisaged with regard to mask wear. Consider the configuration in which Self believes that Other believes that the virus is harmless, and that face protection is useless as a health measure. When Self notices that Other is wearing a mask, the reaction – following a first-order empathic logic – might be to ask Other why he is so inconsistent as to wear a mask, or perhaps, to ask whether he has changed his mind. Other however might react that he was only trying to be polite, i.e., that Self should take a second-order perspective in which Self not only believes that Other believes that the virus is harmless but also believes that Other believes that Self believes the opposite, and that Other's behavior is taking into account Self's point of view. In such a scenario, Other is accommodating by putting aside his own convictions in favor of Self's, and Self needs to take a second-order perspective to recognize that.

Given that the ambiguity between a first-order and a second-order interpretation applies to verbal communication just as it does to the semiotics of facial protection, we can further show that the spectrum of interpretative possibilities charted in Table 1 is also valid for linguistic communication, and specifically, for representative speech acts. Table 2 gives an overview. The difference with Table 1 is primarily that the act of wearing a mask is substituted with an utterance that is concurrent or not with the belief *p* that lies at the basis of the structure of mutual beliefs. So instead of Other wearing a mask, Other either asserts or denies the proposition *p*.

Table 2. Alternative interpretations for representative speech acts

		O ASSERTS p	O ASSERTS ~p
non-empathic	S believes p	truth	falsehood
	S believes ~p	falsehood	truth
1st order empathic	S believes O believes p	assertion	mistake
	S believes O believes ~p	mistake	assertion
2nd order empathic	S believes O believes p and S believes O believes S believes p	agreement	irony, pretense
	S believes O believes p and S believes O believes S believes ~p	disagreement	lie, deception
	S believes O believes ~p and S believes O believes S believes ~p	irony, pretense	agreement
	S believes O believes ~p and S believes O believes S believes p	lie, deception	disagreement

On a zero-empathic level, statements are interpreted from a 'scientific' point of view, without attention for Other's state of mind, i.e. propositions are interpreted and evaluated from an impersonal perspective, not as expressions of any specific person's views. Depending on Self's beliefs, statements will then be considered truths or falsehoods. Such falsehoods could also be called 'untruths' or 'mistakes', but notice the polysemy of the word *mistake* in this context. As included in Table 1, a mistake is an error of Other detected by Self on the assumption that Other believes *p*. It is (as far as Self can tell) an involuntary error on the part of Other. As such, it is an error relative to Other's beliefs as assumed by Self, regardless of whether Self actually shares those beliefs. But in a zero-empathy framework, Self could take Other's utterances at face value and compare them to Self's own assumptions. Other's statement of *~p* is then a mistake of a different kind: a

factual mistake, an untruth, a falsehood, a proposition diverging from the reality that Self thinks to know.

But clearly, subjective mistakes also occur, and they get a place in Table 2 on the level of first-order interpretations, just as they did in Table 1. They can be contrasted with straightforward assertions, in which Other's utterance is taken by Self as a sincere expression of Other's beliefs, without any second-order twist to the interpretation.

On a second-order level of interpretation, Self needs to assess the relationship between what (Self thinks) Other believes and what (Self thinks) Other believes Self believes. Consider the following two cases.

Self: How do you like my recent paper?

Other: Amazing! Perfect!

Self: Are you serious or are you just trying to please me?

Self: How do you like my recent paper?

Other: Amazing! Awful!

Self: Are you serious or are you just trying to tease me?

In both exchanges, Self hesitates between a first-order interpretation in which Other expresses his honest opinion without taking into account Self, and a second-order interpretation in which Other's reply is interpreted as addressing Self's state of mind. In the first exchange, Self takes *amazing* in a positive sense ('remarkable for the right reasons'), and the second-order interpretation suspects Other of catering to Self's insecurity, i.e. Other is suspected of a white lie, a benevolent deception meant to comfort, satisfy, delight Self. That is to say:

S believes O believes ~p
S believes O believes S believes p
O utters p

In the second exchange, Self takes *amazing* in a negative sense ('remarkable for the wrong reasons'), and the second-order interpretation suspects Other of sending out an ironic warning to an overconfident, self-infatuated Self. That is to say:

S believes O believes p
S believes O believes S believes p
O utters ~p

The crucial difference between both second-order interpretations resides in Self's belief about Other's beliefs, and specifically, whether Self believes that Other believes that Other's beliefs and Self's beliefs are convergent. But also in the con-

texts in which Other is speaking seriously, a second-order interpretation adds an intersubjective value to the interaction. In the first exchange, assuming that Other is sincere in using *amazing* in a positive way, Other is not only expressing his view, but from a second-order perspective he is also expressing agreement with Self, and thus confirming Self in his view. That is to say:

S believes O believes p
S believes O believes S believes p
O utters p

But in the second exchange, assuming that Other is sincere in using *amazing* in a negative way, Other is not only expressing his view, but from a second-order perspective he is also expressing disagreement with Self, and thus challenging Self in his view. That is to say:

S believes O believes ~p
S believes O believes S believes p
O utters ~p

So, let us systematize this.

- When Self believes there is a divergence between what Other believes and what Other believes Self believes, a statement of Other contrary to his assumed belief is a lie. Whether it is a benevolent white lie or a malicious lie depends on Self's assessment of Other's affective stance, but regardless, it is experienced as a case of Other deceiving Self by not telling the truth: according to Self's reading of Other's mind (including Self's reading of Other's reading of Self's mind), Other is saying something that he does not adhere to.
- When Self believes there is a divergence between what Other believes and what Other believes Self believes, a statement of Other in accordance with his assumed belief may be perceived by Self as an endorsement, an act of approval, an expression of disagreement.
- When Self believes there is a convergence between what Other believes and what Other believes Self believes, a statement of Other contrary to that belief may be interpreted as irony. Again, in a first-order reading the utterance could be a straightforward mistake on Other's behalf, but in a second-order reading, Other is perceived as telling an untruth under the assumption that Self does not share, or would not be convinced to share, the untruth. Other's utterance may then be recognized as playful pretense.
- When Self believes there is a divergence between what Other believes and what Other believes Self believes, a statement of Other in accordance with his

assumed belief may be perceived by Self as an edorsement, an act of approval, an expression of agreement.

In Table 3, the sample of interpretative configurations that we discussed on the previous pages is plotted against the background of Table 2. The letters of the Greek alphabet refer to the order in which the four cases were discussed.

Table 3. Overview of examples discussed in detail

		O ASSERTS p	O ASSERTS ~p
non-empathic	S believes p	truth	falsehood
	S believes ~p	falsehood	truth
1st order empathic	S believes O believes p	assertion	mistake
	S believes O believes ~p	mistake	assertion
2nd order empathic	S believes O believes p and S believes O believes S believes p	[γ] agreement	[β] irony, pretense
	S believes O believes p and S believes O believes S believes ~p	disagreement	lie, deception
	S believes O believes ~p and S believes O believes S believes ~p	irony, pretense	agreement
	S believes O believes ~p and S believes O believes S believes p	[α] lie, deception	[δ] disagreement

4. Lifting the theoretical veil

At this point, we may now briefly situate the analysis in a wider context. The relevance of embedded mental states (a mental representation of another person's mental representation) is well established in the cognitive sciences, so how exactly does the present paper contribute to that line of research? Broadly speaking, two perspectives may be distinguished here, a psychological one and a linguistic one.

In the psychologically oriented literature, *mind-reading* refers to the ability to attribute a mental state to others, and to have a representation of that state. Next to *mind-reading* (Krebs & Dawkins, 1984), the concept appears as *theory of mind* (Premack & Woodruff 1978), *metarepresentation* (Pylyshyn, 1978), and *mentalizing* (Morton, 1986). When further levels of embedding are involved, terms such as *higher-order theory of mind* or *recursive mind-reading* (Dunbar 2000) are used. Two perspectives dominate. An evolutionary perspective (as in Sperber, 2000; Tomasello, 2008, 2014; Corballis, 2014) tackles the question whether metarepresentation is unique for the human species, and how the evolutionary emergence

of metacognitive abilities relates to the birth of language. A developmental perspective (as in Wimmer & Perner, 1983; Baron-Cohen et al., 1985; Wellman et al., 2001; Miller, 2012) studies the effects of age, impairments, or other speaker characteristics on metacognitive abilities and their neural correlates. Methodologically, three experimental paradigms play a dominant role: the Imposed Memory Task (see for instance Kinderman et al., 1998; O'Grady et al., 2015), the false-belief task (see for instance Valle et al., 2015; Arslan et al., 2017), and gaming tasks (see for instance Meijering et al., 2011; Grueneisen et al., 2015). Characteristically, these designs focus on what characters are assumed to know or do, rather than on what their utterances could mean. In addition, except for the game-based experiments, they typically exclude the participant from the embedded belief structure. Whereas a first-order study would look at what A (the experimental subject) believes about what B believes, a higher-order design typically looks at what A believes about what B believes about what C believes, i.e., the beliefs of the respondent are not part of the recursive embedding. By contrast, second-order empathy as meant in the present paper involves what A believes about what B believes about what A believes. So, what we have introduced as 'second-order empathy' could also appropriately be called *reflexive recursive mind-reading*.

In the linguistically oriented literature, the notion of second-order empathy may, to begin with, be connected with that of intersubjectivity and common ground (Clark, 1996; Zlatev, 2008; Verhagen, 2015). If A and B are paying attention to Z, the common ground is maximal if both A and B believe that the other focuses on Z, and if A and B both believe that the other is aware of the fact that they focus on Z. As such, common ground correlates with a high degree of mutual metarepresentation. Further, reflexive embedding of mental representations plays an important role in post-Gricean pragmatics. For instance, the position of irony in Table 2 is not unlike the analysis it receives in post-Gricean theories of irony. Both the Echo Theory of irony (Sperber & Wilson, 1981, 1995; Sperber, 1984) and the Pretense Theory (Clark & Gerrig, 1984; Barnden, 2017) assume, first, a contradiction between the content superficially expressed by Other (the speaker) and his underlying beliefs, second, a recognition on the part of Self (the hearer) of that contradiction, and third, the idea that that recognition is intended by Other. These three aspects are related to the dimensions that characterize an ironic interpretation in Table 2: Self's beliefs about Other's beliefs (including Other's beliefs about Self's beliefs) enable Self to recognize a contradiction between the expressed content and the underlying belief, and to interpret that contradiction as non-accidental. More generally, according to the central Gricean definition of meaning, a speaker not only intends to achieve a communicative effect in the hearer, but more particularly also intends to achieve that effect through the hearer's recognition of that intention: speaker A means something by x if "A

intended the utterance of x to produce some effect in an audience by means of the recognition of this intention" (Grice, 1957, p. 385). In other words, to the extent that successful communication involves a hearer's belief about the intention of the speaker (which also includes speaker's intention that his intention be recognized by the hearer), an empathic perspective is implicitly built into Gricean pragmatics – albeit with a focus on beliefs about intentions rather than beliefs about beliefs.

What the present paper adds to these existing perspectives on embedded mental states is *a focus on the ambiguity potential of embedded beliefs about beliefs* (rather than beliefs about intentions), *when these combine with the choice of a zero-order, first-order or second-order empathic stance*. In particular, the alternatives for interpretation form a systematic pattern in which Self's beliefs about Other's beliefs (and as the case may be, Self's beliefs about Other's beliefs about Self's beliefs) interact with Self's choice of a zero-empathic, first-order empathic or second-order empathic point of view. Crucially, Self may find it difficult to decide for which of these to opt. Compared to the original Gricean position, this involves a double shift of focus: from a predominant focus on the speaker to one that focalizes the hearer, and from a primary focus on what happens when speaker meaning is successfully communicated to a perspective that highlights the precariousness of communication, when it is seen as an underdetermined process of interpretation.

Situating the observations of the previous pages against a wider background of research into embedded mental states also allows us to briefly indicate areas for further research. The recognition of an empathic ambiguity potential as a fundamental pragmatic phenomenon could stimulate two strands of research. On the one hand, what are the mechanisms that languages offer to disambiguate messages (as in the simplest deictic cases, making point of view explicit with expressions like *to your left/right* instead of just *to the left/right*)? And how – for which functions, under which circumstances, with which preferences – do language users apply these mechanisms? On the other hand, in the absence of resolving cues, which factors influence the detection of empathic ambiguity? What are the objective or subjective factors that trigger a recognition of the ambiguity, or conversely, that let it pass unnoticed? And if the possibility of multiple interpretations is not perceived, which reading takes the upper hand? While the former type of research is primarily of an observational, descriptive linguistic kind, the latter ties in closely with the experimental work done in psycholinguistic and psychological investigations into social cognition. As such, the ambiguity potential of reflexive recursive mind-reading is relevant both for linguistic intersubjectivity research and post-Gricean pragmatics, and for the psychological theory of mind paradigm.

5. Language unmasked

Navigating social space in times of pandemic is challenging. The intrinsic risk of infection in social encounters is shadowed by difficulties of assessment: not only do you have to make up your mind with regard to the danger of the virus, with regard to the benefit of wearing facemasks, with regard to the hazards of the specific situation, and with regard to the epidemic as such, but you also have to gauge the position of the people you come across – including the view that they might have of your point of view. As I have tried to show, such a reflective empathic stance ('reflective' because your take on the other person's perspective bounces back the image that he may have of you) comes with specific uncertainties. You do not have direct access to the other person's beliefs, and you do not know for certain whether a second-order perspective is called for or not. These uncertainties are structural: they may be resolved contextually, but they do not emerge contextually; they do not arise accidentally, but they are inextricably ingrained in the meeting of minds.

This structural nature of empathic uncertainty is particularly relevant when we consider that it goes well beyond the semiotics of facemasks. The configuration of interpretative alternatives that we can derive with regard to mask-wearing applies in identical fashion to verbal communication, as we have seen specifically in the case of representative speech acts. This has interesting, perhaps even far-reaching, consequences for how we should think about language. Throughout the 20th century, linguists have tended to think of language as a system, a more or less self-contained architecture of signs. Since the 1960s, the rise of pragmatics has added a further layer to that view: after the linguistic system produces a message with an explicit meaning, pragmatics describes how implicit meanings are derived from that explicit semantic level through mechanisms like contextual specification and implicature. But since the 1980s, Cognitive Linguistics has questioned the neatness of that modular view. At the level of the individual sign, prototype theory emphasized that the demarcation of linguistic categories is not always clear, and that the distinction between linguistic and encyclopedic information (a corollary of the distinction between semantics and pragmatics) is underdetermined. What we see in the case of empathy-induced ambiguity, then, points to a similar form of underdetermination at the level of the message as a whole. How a hearer understands an utterance, even in the basic case of representational speech acts, is not straightforwardly given by the combination of the formulated message, the context, and general mechanisms of inference: it also depends on how the hearer construes the speaker's point of view and speaker's view of hearer – and that is very much a speculative process. As such, the tension between first-order and second-order empathic interpretations reminds us that the objectification of

thought in language does not completely bridge the gap between subjectivities: where minds meet, language only partially lifts the mask between them.

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