



SEÇÃO EPISTEMOLOGIA E FILOSOFIA DA LINGUAGEM

What we do and presuppose when we demonstrate: from semantics to meta-pragmatics

O que fazemos e pressupomos quando demonstramos: da semântica à meta-pragmática

Lo que hacemos y presuponemos cuando demostramos: de la semántica a la meta-pragmática

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Abstract: In this paper, we defend that demonstratives are expressions of joint attention. Though this idea is not exactly new in the philosophical or linguistic literature, we argue here that their proponents have not yet shown how to incorporate these observations into more traditional theories of demonstratives. Our purpose is then to attempt to fill this gap. We argue that coordinated attentional activities are better integrated into a full account of demonstratives as meta-pragmatic information. Our claim is twofold. First, we claim that pragmatically presupposing salience is a fundamental aspect of using demonstratives (predicted by their semantics and meta-semantics). Secondly, we hold that the pragmatics of demonstrating can only be properly understood in relation to meta-pragmatic conditions that have to do with joint attention. We use tests of truth-value gap as evidence for our claim. Our proposal provides us with a complete view of what speakers do and presuppose when engaging in acts of demonstrative reference through language.

Keywords: Demonstrative; Salience; Joint Attention; Presupposition; Meta-pragmatics.

Resumo: Neste artigo, defendemos que demonstrativos são expressões de atenção conjunta. Apesar de esta ideia não ser exatamente nova na literatura filosófica ou linguística, argumentaremos aqui que seus defensores ainda não mostraram como combinar tais observações com teorias mais tradicionais de demonstrativos. Nosso propósito é, então, preencher essa lacuna. Nós argumentaremos que atividades de atenção coordenada são mais bem integradas a uma teoria de demonstrativos como informação meta-pragmática. Defenderemos dois pontos. Primeiramente, que pressupor pragmaticamente a saliência do referente é um aspecto fundamental de se usar demonstrativos (algo previsto por sua semântica e meta-semântica). Em segundo lugar, sustentaremos que a pragmática de demonstrar só pode ser apropriadamente entendida em relação a condições meta-pragmáticas que têm a ver com a atenção conjunta. Nós usaremos testes de intuições de "gaps" de valor de verdade como evidência para tal alegação. Nossa proposta nos provê com uma visão completa do que os falantes fazem e pressupõem quando se engajam em atos de referência demonstrativa através da linguagem.

Palavras-chave: Demonstrativos; Saliência; Atenção conjunta; Pressuposição; Meta-pragmática

Resumen: En este artículo, defendemos que demostrativos son expresiones de atención conjunta. Aunque dicha idea no sea precisamente novedosa en la literatura filosófica o lingüística, sostendremos aquí que sus defensores todavía no nos han mostrado como incluir esa observación en las teorías más tradicionales de demostrativos. Nuestro propósito por lo tanto es llenar ese vacío. Argumentaremos que actividades de atención coordinada deben ser incorporadas a una teoría de demostrativos cómo información metapragmática. Defenderemos dos puntos. Primero que presuponer pragmáticamente la saliencia del referente es un aspecto fundamental del uso de demostrativos (algo previsto por su semántica y por su metasemántica). Segundo, sostendremos que la pragmática de demostrar solo puede ser entendida adecuadamente en su relación con las condiciones



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metapragmáticas provenientes de la atención conjunta. Usaremos intuiciones de 'gaps' de valor de verdad como evidencia para tal afirmación. Creemos que nuestra propuesta ofrece una visión completa de lo que los hablantes hacen y presuponen cuando realizan actos de referencia demostrativa a través del lenguaje.

Palabras clave: Demostrativos; Saliencia; Atención conjunta; Presuposición; Metapragmática.

Introduction

Asserting and presupposing are two things that *speakers do*. This assumption was at the heart of prominent theories of assertion since the 1950s. Grice (1969; 1989), Strawson (1950, 1952, 1964) and Austin (1979), in their attempts to account for assertion-making, developed influential notions that helped elaborate the current theoretical vocabulary concerning presupposition and implied content. It is fair to say then that although they did not treat these subjects as linguists and philosophers of language do today, their early views paved the ground for future inquiries.

Strawson contributed to one of the earliest analysis of the existential presupposition associated with uses of referential terms. In this proposal, speakers using sentences with referential terms (definite descriptions in particular) presuppose the existence of the referent of the term in question. When this presupposition is false, the utterance elicits intuitions of truth-value gap.

The so-called Fregean-Strawsonian presupposition theories that followed (HORN, 2007) have taken this insight to be fundamentally correct: the truth of the presupposition is a condition on the semantic evaluation of sentences with referring expressions, not only definite descriptions or proper names, but potentially also indexicals and demonstratives. In the particular case of demonstrative reference, since reference-fixing is anchored in the shared perceptual context and dependent on attentional behavior, it seems plausible to suppose that reference is associated with presuppositions other than existence.

To see what else is at stake in demonstrative reference, imagine a conversational interaction in which a young woman named Jane utters (1) while strolling through an art gallery with her friend Jim.:

(1) That painting is so beautiful!

There are lots of paintings in their shared perceptual environment, so when Jane chooses to use a demonstrative to refer to a particular painting, she must presuppose the painting is somehow salient in that context – perhaps they had been just talking about a particular painting, or it is the only painting in the particular room they happen to be in – otherwise, she must make it salient through an ostensive act such as pointing or looking. If Jane somehow fails to make the object salient, the sentence cannot be evaluated, and more information will be requested to complete the proposition, typically with a question like "which one do you mean?". This strongly suggests that when making a demonstrative reference, speakers must presuppose the object is salient to the hearer, either because it is already salient in a context, or because an ostensive act unambiguously makes it salient. With these observations in mind, we can posit the following presupposition for successful demonstrative reference:

Saliency – for an act of demonstrative reference to be successful, the speaker should do what is required, given the circumstances, to make the referent salient to the hearer

As we have seen before, the truth of the presupposition is a condition for the semantic evaluation of sentences containing demonstratives. But what conditions must be satisfied for 'saliency' above to be true? We have said that either the object is already salient in the context, or the speaker's ostensive act unambiguously makes it salient, but this cannot be the whole story. This characterization makes it seem as if the hearer is but a passive spectator in the process, who merely waits for the speaker's efforts to make the object salient, but this is not true. As we shall argue, demonstrative reference is a coordinated activity where both speaker and hearer are actively engaged in the task of making an object salient in a context. In fact, without the hearer's active participation, demonstrative

reference would not be successful. Hence, the presupposition of salience is not made true just by having the speaker ensure that the object is salient or can be made salient. Rather, the presupposition is satisfied when both participants engage in a coordinated activity of joint attention.

The main goal of this paper will be to argue that demonstratives are expressions of joint attention, which function as clues for speaker and hearer to coordinate their attentional behavior in relation to a particular object in their shared perceptual environment. Although other philosophers and linguists have already made that claim, it was not yet clear how to incorporate these observations into traditional semantic theories of demonstratives. In this paper we will attempt to fill this gap.

In order to do so, we will distinguish between different levels of analysis. 'Salience' above is a condition on successful uses of demonstrative expressions, and hence belongs to the domain of pragmatics. But the fact that speaker and hearer need to coordinate their attentional activities is a condition that needs to be satisfied for 'salience' to hold and is therefore a meta-pragmatic observation. In this manner, all levels of analysis (semantic, meta-semantic, pragmatic and meta-pragmatic) will appear as mutually connected and related to one another in a systematic way, as we shall argue throughout this paper.

The structure of the paper is the following. In section 1 we will offer a general characterization of what demonstratives are, concerning their mode of designation, their grammatical characteristics, and their context-dependent semantics. In order to explain the latter we will resort to a Kaplanian theory of demonstratives, which will propose that demonstratives need to be associated with demonstrations – as visual presentations of objects – in order to acquire a content in a context. These visual presentations, however, pertain to the domain of meta-semantics, as information that helps fix the reference of demonstrative expressions in a perceptual-relational manner.

But when we talk of visual presentations as reference-fixing mechanisms, we cannot consider the speaker in isolation but must take into account the hearer's perspective – after all, it is not enough that the object is salient to the speaker – it needs to be salient to the hearer as well. This will lead us to a pragmatic analysis of demonstratives, where salience will be proposed as a presupposition in the Fregean-Strawsonian sense. However, we will argue that complementing it with a meta-pragmatic analysis is a beneficial move that permits the identification of requisites for successful uses of demonstratives that are absent from merely pragmatic approaches. This meta-pragmatic analysis lays out conditions that need to be met for the presupposition of salience to be true and involve coordinated activities of joint attention. We hope to show that such an addition unveils new topics and possibilities of treatment of demonstrative reference, making a strong case for its inclusion in a full account of demonstratives.

1. A general characterization of demonstratives

In this section, we will present a brief characterization of demonstratives concerning their mechanism of designation, their grammatical profile, and the role of context in their interpretation. We will attempt to show that demonstratives designate by means of metalinguistic attributes. We will also distinguish the syntactic, semantic, and pragmatic functions of these expressions, emphasizing what Diessel (1999) calls their exophoric uses². We will end up with two claims: one that is rather uncontroversial, namely, a) that the reference-fixing mechanism of demonstratives is perceptually-relational and, therefore, anchored in contexts of utterances; and b) that a more complete characterization of demonstratives require both a pragmatic and a meta-pragmatic understanding of elements that are relevant for the interpretation of demonstratives, such as the presupposition of salience and coordinated attentional behavior.

² In this section, we will talk about 'pragmatics' in terms of linguistic function. For example, the demonstrative 'that' can be used to refer to a discursively salient referent or to a perceptually salient object. In the following sections, though, 'pragmatics' will not refer to a linguistic function, but to what speakers do in contexts of conversation.

1.1. The demonstrative mode of designation

According to Perry (2001), there are two mechanisms of designation: *referring* and *denoting*. While referring is essentially direct, denoting is mediated. An individual is denoted by a singular term if it either satisfies the identifying conditions contained in the meaning of the expression (in the case of demonstratives, for example) or if it satisfies a descriptive condition of identification (in the case of definite descriptions used attributively³). For example, an individual will be the *denotatum* of the definite description 'the present queen of England' used attributively if she is the only individual that instantiates the property of being the queen of England.

Following Martí (1995), Perry differentiates between the semantic *contribution* of referential singular terms – namely, individuals – and the mechanisms of designation involved in using and interpreting them: *conventions* or *descriptions*. While the individual Elizabeth II is what 'the present queen of England' contributes to the truth-conditions of utterances containing it, the mechanism of designation in question is descriptive.

Mechanisms of designation, in turn, determine *modes of designation*, such as naming, demonstrating, and describing⁴. Evidently, our focus here will be on demonstrating as a mode of designating individuals. It is well-known that the semantic values of uses of demonstratives, such as 'that' and 'this', are given in context and depend on mutual coordination, spatial orientation, and perception. In the successful cases of demonstration, a salient individual becomes a *demonstratum* when it satisfies certain conditions that are built in the demonstrative's conventional meaning. For instance, the semantic value of a demonstrative will be given by a condition such as: *the individual made salient by d (where d is the act of demonstration) and that is in position x relatively to the agent in context C*⁵.

Because the designational relation between the demonstrative and the *demonstratum* is mediated by the demonstrative's conventional meaning, we say that demonstrating involves *metalinguistic attributes*. Therefore, it is both conventional and denotative, in Perry's and Martí's sense. We can conclude from this that the demonstrative mode shares the conventional character of the nominative mode of designation (see footnote 3) and the denotative character of the descriptive mode. Yet, because it refers by means of linguistic conventional rules that are encoded in meaning, it is compatible with the semantic thesis of direct reference as well as with the causal theory of reference⁶.

1.2. Demonstrative expressions

Demonstratives, such as 'this', 'these', 'that' and 'those', are deictic expressions with specific syntactic, semantic, and pragmatic functions that are compatible with the above-mentioned characterization of their mode of designation. Syntactically, they function as pronouns or noun modifiers – such as in (2) and (3).

(2) This pen is blue.

(3) That is my father.

Semantically, they indicate distance relatively to the deictic center, typically the speaker, marking points on a distance scale. Almost universally, they are marked for sex and number; other less frequent features include information about animality, humanness visibility, height, etc. (DIESEL 1999). Though demonstratives in English are only marked for distance and number, in Brazilian Portuguese, for instance, they are also marked for gender:

(4) *Esta é minha caneta.* (This is my pen)

(5) *Este é meu caderno.* (This is my notebook).

³ See Donellan (1966).

⁴ Though Naming is often considered the paradigm of referring, it shares with demonstrating the semantic feature of being a conventional mode of designation that does not depend on the non-linguistic, contingent attributes of their *designata* (like describing does).

⁵ If the spatial relation to other participants is encoded in the meaning of the expression, this description would also include a parameter for the position 'x' ('x', 'x''') relative to other conversational participants. It can also include information regarding number and gender (see section 1.2).

⁶ According to the theory of direct reference, referential expressions, such as proper names, demonstratives and indexicals, refer non-satisfactionally, that is, without the mediation of descriptive condition that the referent happens to satisfy. As for the causal theory of reference, it proposes that referential expressions refer by means of chains of co-reference causally connected to the referent. Of course, these are brief and incomplete definitions of both theories. For more on the subject, see Michaelson & Reimer (2019).

Roughly put, these grammatically marked features serve to orient the identification of the referent, by "telling" the hearer what the referent or referents are like – one or many, male or female, distant or close to the agent or the audience.

Furthermore, demonstrative expressions have different *uses* (DIESEL, 1999; 2006). They can either be used to recuperate previously mentioned referents or propositions, in anaphora⁷ (internally to discourse) or to refer to perceptual objects⁸. In the first case, we say that they are being used endophorically and, in the second one, exophorically. Endophoric uses direct attention towards the informational flow of the ongoing discourse, as in (6).

(6) My father is coming today. *That* means that we will have company.

Exophoric uses, for their part, are typically directed towards the deictic space, prototypically accompanied by pointing. We will accept that exophoric uses are the paradigm of the demonstrative mode of designation,⁹ and proceed to focus solely on examples of two syntactic functions of demonstratives used exophorically, specifically, as pronouns in copula – as in (3) – and as determiners, modifying a noun – as in (2). In both cases, context will play a crucial role in interpretation¹⁰.

1.3. The role of meta-semantic information in the interpretation of demonstratives

The philosophical works of David Kaplan are a landmark for contemporary semantic theories. Kaplan (1989) thought that contexts, understood as theoretical representations of concrete situations, were necessary for his project of developing a logic of demonstratives. He introduces contexts, firstly, based on the idea that the semantics of indexicals (or simply deictic expressions) should be accounted for by a bi-dimensional semantics

in which contexts determine content (or the proposition expressed/what is said), while truth-values are determined by the circumstances in which the contents expressed are evaluated (actual or counterfactual).

Secondly, his project is motivated by the acknowledgment that contents can be represented as intensions, allowing intentional operators for time and possible world to shift parameters for truth-evaluation. In this bi-dimensional approach, temporal and modal operators act on content to determine extensions and orient the hearer to evaluate the content expressed relatively to the appropriate time and state of the world (KAPLAN, 1989, p. 502).

Kaplan is thus explicitly open about the addition of features to the circumstances: "The amount of information we require from a circumstance is linked to the degree of specificity of contents, and thus to the kinds of operators in the language" (*ibid.*, p. 502). In the case of demonstratives, though, he sustains that contexts and not circumstances of evaluation are to be enriched for an adequate semantic interpretation. This is so because Kaplan takes the conventional meaning of demonstratives to be incomplete, in a sense that shall shortly be explained.

It is important to remark that he makes a famous distinction between a context-dependent expression's conventional meaning, which he calls *character*, and its *content*, which corresponds basically to its referent. According to Kaplan, the character of an expression is a fixed component that carries the same information in every context, and content, at least for indexical expressions, is context-variant. This is the case for pure indexical, for example. Consider the word 'I': though it means something like *the utterer of S* (where S is a sentence containing a token of 'I') as a matter of convention, 'I' will express different contents depending on who

⁷ In Text Linguistics, anaphora is the relation between two linguistic elements in which the semantic value of one term can only be ascertained by interpreting its antecedent. Pronouns are the most emblematic anaphors, but anaphora is a pervasive phenomenon of discourse preservation. It is a challenging topic for interface studies in syntax and semantics – for example, inquiries on the (structural) constraints on interpretation in Government and Binding theory. For more, see the classic work of Chomsky (1984).

⁸ They may, however, not involve concrete objects. For example, we can talk about habits, institutions, and feelings with demonstratives. Additionally, we can project this mode of designation to objects that are not at the situation, as things that are imagined. But we will not discuss such cases here.

⁹ Diessel (1999) argues that Endophoric uses are the result of a process of grammaticalization that exophoric uses underwent.

¹⁰ It is also important to remark that we will focus on examples of visual perception.

the utterer is. When Jane utters 'I' in a context, the very fact of the utterance makes her instantiate the property of being the utterer, which determines Jane as the referent of 'I' in that context.

Demonstratives, on the other hand, present a special problem to this theory, because the utterance of the expression is not sufficient to establish the appropriate relation between the referent and the conditions of reference encoded in the expression's linguistic meaning. The referent of a demonstrative cannot be determined by its conventional meaning alone but requires a perceptual relation in order for the expression to acquire a content in a context. To go back to an earlier example, when Jane utters "that painting is very beautiful" in an art gallery filled with paintings, the particular painting she refers to is the picture which she perceives and demonstrates in that context. The challenge, then, is to understand how facts about perception and bodily acts can combine with linguistic meaning in a complete analysis of demonstrative expressions.

Kaplan's solution was to suggest that demonstratives possess an incomplete character, which must be completed by a demonstration, an extra-linguistic element described as "a visual presentation of the object discriminated by pointing" (1989, p. 490), or as "a picture with a little arrow pointing at the relevant subject" (*ibid.*, p. 526). Following Kaplan's lead, the resulting combination would take the form of something like 'that ($\rightarrow\blacklozenge$)', which fulfills the role of the character of the demonstrative, which is to determine, in a context, the content that is to be evaluated across different circumstances. When demonstrative and demonstration are thus mounted in a context, the demonstrated object is selected as the referent of the demonstrative expression. But once the object is selected this visual presentation drops out of the picture, leaving only the object as the singular content of the proposition expressed.

In this picture, the visual presentation is not properly speaking a part of the conventional meaning of demonstratives, but an extra-linguistic, perceptual association that is *predicted* by the expression's linguistic meaning (*ibid.*, p. 490). We

will here follow Joseph Levine and refer to factors in virtue of which an expression acquires a certain content as *meta-semantic* information (LEVINE, 2010, p. 172). In this picture, visual presentations of objects, as extra-linguistic material that contribute to the conditions of reference that select an object in a context, will be considered as part of the meta-semantics of demonstratives, in Levine's sense.

To conclude, in Kaplan's picture, demonstratives contribute only *demonstrata* to propositional content, but we need the meta-semantic information in the composite character to tell us how *demonstrata* are selected in a context. This meta-semantic information is supplied by demonstrations, as visual presentations of salient objects which combine with utterances of demonstrative expressions in order to select objects in different contexts.

This is an important move, as it allowed Kaplan to incorporate in a semantic theory the important insight that demonstratives, differently from other indexicals, exploit particular perceptual relations to referents, relations that are better conceived as meta-semantic information that helps determine reference in a context, but that are not part of conventional meaning *per se*. Nevertheless, we cannot help but feel this is not the whole story when it comes to demonstrative reference. For starters, Kaplan considers only the speaker's point of view, and says nothing about how two (or more) participants in a conversation converge on the right object when a demonstrative reference is made. To be sure, according to Kaplan the speaker must demonstrate the object when making a demonstrative reference; but how does the hearer exploit the speaker's perceptual relation to the object in order to understand what is being referred to?

Our point here is that there are certain norms that govern correct uses of demonstratives, such that the object should be visible to the hearer, that the demonstration should unambiguously make the object salient, and so on. These norms, however, are conditions that govern correct uses of demonstrative expressions and the appropriateness of the demonstrative mode of designation; thus, they pertain to the domain

of pragmatics. When we talk of the semantics of demonstratives, therefore, we are naturally led to their meta-semantics, as extra-linguistic information will be needed to fix their reference in a context of utterance. But when we talk of their meta-semantics, as visual presentations that make an object salient in a context, we are naturally led to their pragmatics, such as what speakers presuppose when they utter a demonstrative expression. This will be the main topic of section 2.

2. The pragmatic analysis of demonstratives

Let us start with another example. Suppose now that Jane arrives at a friend's wedding reception and stops by a window outside the building, as she waits for her sister who is trying to park the car. Her old friend Jim, who is inside the building, sees Jane through the open window and comes closer to say hi. Jane and Jim have not seen each other in a while and when Jim tells Jane that he has a new girlfriend, she asks him who the girl is. Jim, then, answers with an utterance of (7), pointing to a girl inside the building.

(7) That one over there.

The use of the demonstrative 'that', here, indicates that the referent stands out in the hearer's visual field as a consequence of the speaker's indication. By uttering (7), Jim implicitly conveys the information that the object that he is talking about can be identified perceptually. He indicates that he is committed to the truth of the assumption that the object must be salient to Jane.

As old friends, Jane and Jim share information from past experiences – what Clark and Shaefer (1990) call *personal common ground*. Things like, for instance, that they went to school together or that Jim knows Jane's sister and that they are both incredibly happy for the couple of friends whose wedding reception they are attending. They also share information regarding the concrete situation in which their conversation takes place: their position in space, the perceptually manifest environment, not to mention the *community common ground*, which includes

shared knowledge about the language they both speak. Finally, as participants in a linguistic *practice*, asserting (or making a statement), not unlike other kinds of speech acts, is something that ought to be performed in accordance with certain *rules* – or principles. If the rational practice of informational exchange through language is somehow jeopardized by procedural mistakes, collaboration is also jeopardized.

Imagine that Jim's girlfriend is outside of Jane's visual field. We would expect that Jane would react to Jim's assertion by recognizing that he did not proceed appropriately. Jane could reply:

(8) Jim, there is no one where you pointed.

Or suppose that Jim utters (7) while vaguely pointing in the direction where a large group of women are gathered. In this case, a natural reaction on the part of Jane would be to ask for more information, thus replying:

(9) Jim, which one do you mean?

Both (8) and (9) are pragmatic reactions to Jim's conversational contributions, but they are elicited by the fact that in both contexts Jane cannot interpret the token of 'that' in (7). The acts of uttering (8) or (9) are reactions that put the conversational context itself at the heart of the conversational context.

Roughly speaking, a conversational context will correspond to the common ground of assumptions that conversational participants take as true at a moment *t* of the interaction (STALNAKER, 1974; 1978). Unlike the Kaplanian context, the conversational context encompasses all information that speakers hold as mutually manifest in the dynamic course of a linguistic exchange, and not just a collection of semantically relevant parameters. In an additional sense still, this type of context represents what is non-conventional, i.e. what concerns the speakers' attitudes towards how expressions are used.

In the case of demonstratives, we have seen with Kaplan that a complete speech act must associate a demonstrative with a visual presentation of the object. But it is clear from the

examples above that a mere visual presentation is not enough; the object needs to be salient not only to the speaker but to the hearer as well. That is to say, even if, from Jim's perspective, his pointing gesture to the group of women is in fact directed to the particular woman he intends to single out, the utterance fails to convey referential information to Jane because he does not consider her point of view upon the scene, and so fails to make the object salient in that context. For Jim's utterance to convey information about his girlfriend, more information will need to be supplied to better situate Jane spatially upon the scene. Thus, in response to (9), Jim could utter for example:

(10) See that large window on the left side of the room? See the girl who's leaning on it, in a green dress holding a glass of champagne? That one.

These examples make clear that coordination and the manipulation of attentional behavior will be important factors for interpretation. Jim, a competent speaker of English, chooses to exchange information about an individual with his interlocutor (also a competent speaker of English) by means of the demonstrative mode of designation. Thus, Jim commits himself to a plan of referring (KORTA & PERRY, 2011) in which the individual he is talking about will be identified by means of a perceptual criterion. In knowing the meaning of 'that' and consequently in knowing how to use the word in utterances, a cooperative interlocutor (Jane, in the example) will have certain expectations concerning the information that Jim provides in order to properly collaborate with the execution of his plan of referring. These expectations were captured with the presupposition of salience stated in the introduction. When Jane hears the word 'that', she presupposes that a certain object is salient in that context and will make use of Jim's verbal and non-verbal behavior in order to grasp which object Jim is talking about.

This is essentially a joint and coordinated activity. Jane will only identify Jim's girlfriend as

the referent of 'that' if she collaborates with Jim's reference-making (CLARK & WILKES-GIBBS, 1986) following his deictic gesturing, and if Jim is attentive to Jane's position in space relatively to him (the deictic center). Thus, in order for the presupposition of salience to be true, certain conditions on coordinated attentional activity need to be met. These conditions, however, pertain to the domain of meta-pragmatics since they are *about* the pragmatic notion of salience.

These observations will lead us to conclude, following Diessel (1999), that demonstratives are essentially expressions of joint attention, a claim we will argue for in the next section. Moreover, we will defend that coordinated attentional activities are better incorporated into a full account of demonstratives as meta-pragmatic information, which complements their semantics, meta-semantics and pragmatics. But first we need to define joint attention.

2.1. Joint attention

When two agents are engaged in joint attention, they take part in a triadic relation constituted by both conversational participants and a perceptual object that is the common focus of attention. In typical instances, the speaker manipulates the hearer's attentional behavior by intentionally making the object visually salient. This capacity of engaging in joint attention, as evidence in psychological development show, appears early in human ontogeny, before the second year of life, following the chronology below:

- a. eye contact detection begins during the first 3 months of life (BERTENTHAL AND BOYER, 2015)¹¹;
- b. gaze angle detection with fixation on first salient object encountered and imperative pointing (that is, drawing attention by requesting a salient object) appear at around 9 months of age (BUTTERWORTH AND JARRETT, 1991);
- c. between 12 and 13 months, children start to draw attention themselves to objects, by using declarative pointing

¹¹ Shifts in joint attention can be seen in an infant's gaze cueing, head orientation, body posture, and pointing.

(pointing at objects with the purpose of fixing reference to declare something about them) (MUNDY, 2006; TOMASELLO, 2003).

d. At 18 months approximately, they begin to use words to draw attention to individuals in their surroundings.

Tomasello (2004) points out that these early skills manifested by children reflect the beginning of their understanding of human agency and goal-oriented behavior.

[...] infants undergo a revolution in their understanding of persons at around their first birthday that is just as coherent and dramatic as the one they undergo at around their fourth birthday. [Just as 4-year-olds come to understand others as mental agents in terms of their thoughts and beliefs about reality, 1-year-olds come to understand others as intentional agents in terms of their concrete goals and the sensorimotor and attentional activities designed to achieve them. (TOMASELLO, 2004, p. 104)

When Tomasello talks about the revolution infants undergo, especially from the age of 18 to 24 months, he is referring to children's realization, at this moment, that agents have control over the process of attentional switching. Infants at that age begin to understand "that other persons can intentionally modulate their attention in response to linguistic and nonlinguistic means of communication" (*ibid*, p. 118).

Some critics of Tomasello's cognitive-functional approach to language question his strong emphasis on intentionality as a key-concept in understanding the socio-pragmatic aspects of linguistic development. For instance, more recent empirical findings – in Allan & Souza (2009) – challenge some of the data Tomasello uses. Allegedly, the main problem with his concept of intentionality resides in the threat of mentalism that underlies his theory of cognition.

Moreover, although many studies have indicated a positive relationship between joint attention and language development, since the early works of Tomasello and Faar (1986), there are still

many questions regarding its relevance to first language acquisition (as pointed by Morales et al., 2000). Linguists know today that word learning does not *require* joint attention because children with autism, for example, are able to learn words despite decreased levels of joint attentional capacity (AKHTAR & GERNSBACHER, 2007). But independently of an unrestricted endorsement of Tomasello's view, we can accept the positive evidence he presents that children go through a developmental timeline in which the prerequisites for singular reference are typically satisfied at around the same age as skills of attentional manipulation. This would suffice to associate the development of cognitive and symbolic capabilities that involve cooperation to the appearance of words involved in attentional manipulation – even if we do not have all the answers about how joint attention ultimately affects first language acquisition. Now, because our argument does not require an endorsement of any theory of mind – mentalist or not – we will refrain from discussing criticisms to Tomasello's theory here. We will simply accept his indication that at a young age, children acquire the ability to manipulate attentional behavior, with the purpose of achieving certain goals¹².

It is widely agreed, for instance, that demonstratives are among the earliest words learned by children, and that their use appears towards the end of the first year of life, *concomitantly* with extra-linguistic behavior related to activities of joint attention, such as eye-gazing and pointing. Until approximately the age of 6 months, children only interact either with objects or with adults, as they are incapable of coordinating their focus of attention towards objects with other agents. Abilities involved in intersubjective awareness, like showing by pointing and giving objects to adults, improve expressively between the ages of 6 to 14 months. For example, evidence by Butterworth & Cochran (1980) and Butterworth & Jarrett (1991) show that children at the age of 9 months can identify

¹² Because we are not committed to any specific theory of mind, our position is also compatible with Campbell's (2005), who defends that joint attention merely requires a common knowledge *experience*. This position has the advantage of not depending on intentionality as a key-concept, as in Tomasello's theory.

objects of attention (within their visual field) by following the adult's eye gaze.

At about 1 year old, infants have evolved from attending to objects in their immediate visual field to attending to objects outside their immediate surroundings, by following the caretaker's spatial indications. Significantly, it is by the age of 18 months (in average) that children start engaging in triadic interactions that also involve language. At this point, they start to use demonstratives, typically in association with pointing (Clark, 1978), using gestures to improve their interlocutor's accuracy in identifying manifest referents (Goldin-Meadow, 2005), thus having more efficient results for their own goal-oriented behavior¹³.

All the above-mentioned data indicate that the use of demonstratives first emerges as a form of referring with the aid of extra-linguistic resources that facilitate singular reference-making, prior to the development of an elaborate vocabulary of linguistic conventions, reliable encyclopedic knowledge, or mastery of mature social-cognitive skills.

These data are used by influential theorists dedicated to the study of demonstratives, like Diessel (2006; 2011) and Levinson (2004), to sustain that demonstratives function primarily as linguistic expressions that integrate two or more agents through attentional behavior. Levinson comments particularly on the primal relevance of context and affordances in this early form of reference-making.

[...] indexicality crucially involves some kind of existential link between utterance and context so that the context can be used as an affordance to find the intended reference – and as we noted there, the crucial way in which deictic expressions and gestures do this, is by drawing the addressee's attention to some feature of the spatio-temporal environment (or some portion of the just spoken or about to be spoken utterance). (LEVINSON, 2004, p. 29)

Reflecting on these findings and conclusions, it seems plausible to suppose that demonstratives used exophorically are just one more resource for

attracting and manipulating attentional behavior, among others. What seems to be distinctive and primary of demonstratives is their function in joint attentional activities and the part they play in allowing speakers to talk about individuals with the aid of perceptual clues. They share the same function of coordinating focuses of attention as deictic gestures, representing the class of referential expressions that is most closely tied to the speaker's body¹⁴.

But although the idea of taking demonstratives to be expressions of joint attention is not new, it was not yet clear how to incorporate these observations into a full account of demonstratives. In the next section we will fill this gap, showing how joint attentional activity relates to the presupposition of salience.

3. The pragmatics and meta-pragmatics of demonstratives: on presupposed requisites

Let us recapitulate. When a speaker uses a demonstrative expression to refer to an object, she is engaging in a coordinated activity with the hearer in relation to an object in their shared perceptual environment. When choosing this particular mode of designation – instead of naming, for example – the speaker presupposes the object is or can be made perceptually salient to the hearer in their context of interaction. This can be captured in terms of the presupposition of salience, or as pragmatic requisite A:

Requisite A: the speaker must ensure the referent is salient to the hearer. the speaker should do what is required, given the circumstances, to make the referent salient to the hearer

If requisite A is not met, the speaker's choice of mode of designation will be inappropriate, and the hearer will not know which object is being referred to. A reliable indication that requisite A is not met is that the hearer will ask for more

¹³ As Clark (2009) affirms, however, demonstratives at first are used to request objects (working as imperatives), not to refer to them with the purpose of exchanging information (as when they are used to make statements).

¹⁴ To sustain this claim, Diessel (2011) uses evidence from grammatical typology and linguistic history to look for parallels between demonstratives and other expressions used to manipulate attentional behavior, such as definite articles, third person pronouns and focus markers.

information, typically with a question like “which one do you mean?”, or comment on the speaker's presuppositional violation (“there's nothing there” / “there are too many things there” / “I can't see the thing you want me to look at”).

But as we have been arguing, salience is a social and intersubjective notion that only makes sense in contexts of coordinated attentional activity between two (or more) partners. Therefore, in order for requisite A to hold, other conditions will need to hold, such as:

Requisite B: the speaker and the hearer must share the same perceptual environment¹⁵;

Requisite C: both speaker and hearer must be able to recognize goal-oriented behavior.

Requisite D: the hearer needs to have the ability to recognize the linguistic meaning of demonstrative expressions, indicative gesturing and eye-gazing as clues to coordinate her attentional behavior with the speaker.

From all that we have said so far, it should be clear that satisfying requisites B to D, in addition to A, is an important part of using demonstratives in a coordinated way. But as we have been arguing throughout this paper too, they belong to different levels of analysis. Requisite A is a pragmatic condition, as what competent speakers presuppose when they use demonstrative expressions and engage in the demonstrative mode of designation. Requisites B to D, in turn, are conditions that need to hold in order for requisite A to hold. If any one of requisites B, C or D are not fulfilled, the speaker will not be able to make the object salient to the hearer, and reference will not be successful. These conditions, therefore, are meta-pragmatic in the sense of being *about* pragmatic requisite A, which explicates how salience is established in a context. When we talk of pragmatic presuppositions in the case of demonstratives, therefore, we are naturally

led to their meta-pragmatic analysis in terms of joint attentional requirements.

One way to diagnose the linkage between pragmatic requisite A and the other requisites is through tests of truth-value gap, that is, by testing intuitions of truth or falsehood in cases in which the speaker fails in making the referent salient.

As the example of the conversation between Jim and Jane at the wedding reception purported to show, a plan of referring to an individual by means of the demonstrative mode involves the commitments and communicative expectations presented in items B to D. Nonetheless, they are not included in the semantic analysis of the demonstrative ‘that’ simply because they are not lexically encoded – or at least we have no strong linguistic motivation to assume that they are. In a theory of its use in terms only of common ground (its pragmatic analysis), it is also absent or at best merely implicit¹⁶. Yet, we do have reason to suppose that these socio-cognitive skills that characterize demonstrating are linked to its the pragmatics.

We will work with the hypothesis that Requisite A, for example, is a condition on the realization of any assertoric conversational contribution containing a demonstrative. Take (7) again¹⁷. As seen before, in choosing to use the demonstrative mode of designation, Jim makes it manifest that he is committed to provide all the necessary information that allows his interlocutor to cognize the referent in terms of Jim's choice of words. To do that, he will need to attend to what information Jane has and if/what new information he needs to supply.

This is predicted by the *pragmatic principle of retrievability*, which aims at two things: warranting coordination and preventing that conversational contributions are either too informative or not informative enough. viz.: ‘in order for an utterance to be a rational, cooperative act in a discourse interaction D, it must be reasonable for the speaker to expect that the addressee can grasp the speaker's intended meaning in so-uttering in D’ (Roberts, 2012, p. 75).

¹⁵ That is, the mutually manifest environment for the speaker and her co-present interlocutor at the time of the utterance.

¹⁶ Even though, as we will argue, it can and must be.

¹⁷ Ignore, for argument sake, that (7) is an answer to a question and, as such, does not express a complete proposition. Also, it is important to bear in mind that the example is a case of exophoric use based on visual perception and does not exemplify satisfactorily other uses and other sense modalities.

That way, the putative referent is being presented to Jane as the *demonstratum* of the use of 'that', made in (7). The information Jim will have to provide is thereupon constrained by his choice of mode of designation and all the requisites it entails. Manipulating attentional behavior is one of such requisites. It is a condition on the successful performance of the speech act. But, what does it mean for a speech act, an assertion in the example of (7), to be successfully made?

As previously stated, according to Stalnaker (2002; 2014), the performance of new assertions can be defined as requests to *update* what is being taken for granted by conversational participants at a moment *t*. That is, from a pragmatic perspective such as Stalnaker's, to make a new assertion is to make a proposal to add new information to the common ground. Each new assertion then must satisfy certain conditions, such as expressing a content that is neither contrary nor contradictory with respect to propositions that are already in the common ground.

This general understanding of what assertions are can also be found in Lewis (1979). For the author, each move or contribution in a conversation has an abstract normative dimension. Talking to other people is not simply a matter of informational exchange but it requires constant attention to rules, placing the participant in an evaluative function, manifested in the *attitudes of acceptance or rejection* that participants are mutually authorized to display. These attitudes will serve to maintain collaboration insofar as new contributions to the context are made.

Let us return to (7) once again. Remember that Jane may reply to (7) with an utterance either of (8) or (9), indicating an attitude of rejection to Jim's assertion. Uttering (8) or (9) is precisely what Lewis and Stalnaker had in mind in talking about accepting or rejecting conversational contributions. Moreover, (8) and (9) are acceptable reactions precisely because Jim violated what we named above the pragmatic Requisite A.

There are two ways to assess the effects of this violation to the use of a demonstrative. First, a reply like (8) or (9) indicates a rejection by soliciting a

revision of what is considered as shared information. The other is by rejecting the assertion all together as a consequence of an expressive gap. If Jane is not able to identify what was said by Jim, she will not be able to evaluate if his utterance satisfies the assertoric condition of expressing truth-evaluable content. So, she will have the two options mentioned above: to continue the conversation by soliciting more information (the most common follow-up) or to end the conversation.

Truth-value gaps of this sort are common methods for diagnosing implicit content (Roberts et al., 2009). In the philosophical literature, as we affirmed in the beginning of this paper, they appear in Strawson (1950) – as before in Frege (1892) – as a strategy to explain the interpretation of utterances containing singular terms that fail to refer. Strawson's theory predicted that when a hearer intuitively that an utterance presupposes an information that is not made available, the resulting phenomenon will be a truth-value gap. In the example of (7), Jane's intuition of truth-value gap is caused by the violation of pragmatic requisite A.

This suggests that if requisite A fails to hold, it will be because both partners in the conversation somehow failed to coordinate their attention, something that shows up in the meta-pragmatic level of analysis. As a result, the asserted content will not be truth-evaluable. Our argument, therefore, is that the presupposition of salience, which is a fundamental aspect of demonstrative reference, can only be properly understood in relation to its meta-pragmatic conditions, by assuming that demonstratives are expressions of joint attention.

We thus conclude that Requisite A is a pragmatic presupposition, associated with items B to D (as the truth-value gap diagnosis indicates) that arises in the context of an enrichment of the traditional semantic and pragmatic analysis with meta-levels, that are compatible with a description of demonstrative designation and grammatical profile such as the one we presented in this paper.

4. Conclusion

Any communicative exchange involving referential terms will rely on coordinated activity

between speaker and hearer, as they attempt to converge on the right referent in order for communication to be successful. Demonstrative reference is especially interesting in this respect because it is anchored in the speaker and hearer's shared perceptual context, involving joint visuospatial attentional abilities in addition to the recognition of goal-oriented behavior.

Traditional theorists such as David Kaplan attempted to make sense of the relation between demonstratives and perceptual context in terms of the notion of *demonstrations*, as visual presentations of objects that become associated with demonstrative expressions in contexts of utterances. These visual presentations appear in the theory as meta-semantic information, in Levine's sense, that helps fix the reference of the demonstrative in different contexts.

Other authors, like Diessel and Levinson, have argued that demonstratives are essentially expressions of joint attention, as linguistic expressions that integrate two agents in a coordinated activity in relation to an object in their shared perceptual environment. It emerges early in human ontogeny as a form of singular reference-making, prior to the development of a more elaborate vocabulary of linguistic conventions. In this picture, hearing a demonstrative expression is a clue to coordinate attentional behavior with the speaker, and reference will be successful only if speaker and hearer are able to coordinate in this manner.

In this paper we presented important insights offered by these two different traditions to a theory of demonstratives, that includes not only their semantic and meta-semantic analysis, but also the norms that govern their uses and the socio-cognitive skills they mobilize. In addition, we have argued that these insights may be properly combined as contributions pertaining to different levels of analysis, as follows. Semantically, the conventional meaning of demonstratives predicts an association with extra-linguistic, perceptual material, such as the visual presentation of an object. This material belongs to the meta-semantics of demonstratives, as a reference-fixing mechanism.

But visual salience, in relation to demonstrative

reference, cannot be understood only in relation to the speaker. It must involve the hearer as well, as the speaker needs to ensure the object is salient to the hearer in a context of utterance. The notion of salience, therefore, which first appeared as meta-semantic information, leads us to the pragmatics of demonstratives, as norms that govern the correct uses of demonstrative expressions and the appropriateness of demonstrative modes of designation, in the form of presuppositions.

But that is not all. When a speaker presupposes that an object is, or can be made salient to the hearer, this presupposition will hold only if certain conditions are met, which concern the coordination of visuospatial attention and the recognition of goal-oriented behavior. These observations, which conform to Diessel's and Levinson's claim that demonstratives are expressions of joint attention, are here incorporated into the theory as meta-pragmatic information, as conditions that must obtain for the presupposition of salience to hold. In this manner, we are able to connect all four levels of analysis and valuable insights by two different theoretical traditions. No level is independent of the other, and all are needed in a full account of what speakers do and presuppose when they engage in particular activities of demonstrative reference.

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