On the difference between demonstratives and the definite article[*]

Ion Giurgea & Mara Panaitescu

1. The data

1.1 Contexts that allow both DEM and THE

1.1.1 Anaphoric
(1)   a. There is <u>a boy</u> and a girl sitting in the classroom. I met **that/the boy** yesterday
           / The girl met the boy yesterday
        b. There were <u>a boy</u> and a girl sitting in the classroom. **The/?That boy** had long hair.
           (ex. a: different situation => dem. not dispreferred; see Dayal & Jiang 2021)
→ including covariant readings:
- bound variable readings:
(2)   Mary talked to <u>no senator</u> before **that/(?)the senator** was lobbied (Elbourne 2005)
- donkey anaphora:
(3)   <u>If</u> a man owns <u>a donkey</u> (and some sheep), he beats **the donkey/that donkey**
        <u>Everyone</u> who bought <u>a sageplant</u> here bought eight others along with **that sageplant**. (Abbott 2002)
- including anaphora in modal subordination:
(4)   Scott will pick a number. **That/The number** could be odd (modified after ex.71 in Wolter 06:94)

1.1.2 Exophoric (referent present in the immediate situation, perceivable) + salient referent
(5)   [context: unique bucket in the immediate situation, visible for the discourse participants]
        That/This/The bucket is full of water.   (Wolter 2006:72)
        Wolter (2006:70): *that* suggests that the speaker is not assuming that the addressee has noticed
        that there is a bucket.
(6)   [context: one dog, or more than one dog but one is salient]
        That/The dog is black   (Dayal 2024:ex.7b)

1.1.3 'Recognitional' (new in the current discourse, antecedent from long-term memory; sometimes
called 'evocative'; in French - 'emploi mémoriel'):
- link to previous conversations
(7)   [context: out-of-the-blue, but the disturbing neighbor's dog mentioned in conversations held one
        or several days before]
        I couldn't sleep last night. **That/The dog (next door)** kept me awake.   (Gundel et al. 1993:278)

- link to previously shared experiences between Speaker-Hearer
(8)   I'm wondering what happened to **that/the internal phone we used to have** (Himmelman 1996)

1.2 Contexts that allow DEM but not THE:

1.2.1 Exophoric (presence in the immediate situation, perceivable) + several potential referents, pointing
used to establish reference (*deictic* proper; some authors oppose 'deictic', where the speech act/gesture

makes the referent salient, to 'exophoric', where the referent is already salient, like for anaphorics, see Cornish 1999, 2010, Grosz 2019):

(9) I like {**that/#the**} **painting** [pointing at a painting] but not {**that/#the**} **painting** [pointing at another painting]. (Wolter 2006:71)

1.2.2 Exophoric + less evident referent
(10) [In a crowded restaurant. One diner is talking loudly on his cellphone; no pointing or other attention-driving gesture]
That/This/#The man is annoying. (Roberts 2002)
(11) [immediate situation: a single book, but hidden under papers; an attention-driving gesture is needed]
I have to review **that/#the book** (modeled after Wolter 2006:70)

1.2.3 Anaphoric link not obvious (usually, when a different description is used in the anaphoric DP)
(12) One valuable outcome of these organizational studies was the refinement of our notions of three different approaches that could be incorporated in an automated message filtering system. We refer to {**these/?those/#the**} **techniques** as the cognitive, social, and economic approaches to information filtering. (Hertzenberg 2013:54, modeled after Gundel et al. 1993:ex.66)
See also (23)-(24) below (1.3.1 exceptions, (ii)-(iii))

As the demonstrative ensures the identification of the referent via anaphora, the NP material can be used to provide new information about the referent (see De Mulder 2021). This description may not be uniquely referring => the anaphoric link is crucial for identifying the referent:
(13) Depuis qu'il s'est lancé en politique, G. K. ne sort plus sans ses gardes du corps. À 44 ans,
cet ancien champion du monde d'échecs est aujourd'hui le principal opposant du président P.
'Since he entered politics, G. K. no longer goes out without his bodyguards. At 44, **this former chess world champion** is now the main opponent of President P.' (De Mulder 2021: ex. 50a)

1.2.4 Recognitional DEMs when the Speaker is incapable of providing the right description of the referent and instead offers a vague description, inviting the Hearer to retrieve the intended description from his/her general world knowledge
In some cases, as in (14), the richness of the description makes the use of THE possible, but the pragmatic effect of using DEM is lost; when the descriptive material is minimal, as in (15), THE does not seem to be felicitous
(14) [context: about paddle balls]
those wooden things that you hit with a ball. (Himmelmann 1996:234)
(15) A: was hast n(dann) gelesn 'What did you read then?' (Ge., ibid. 231 < Auer 1984)
B: (ja) **diesen Aufsatz von dem Olson** 'well **that paper by Olson**'

1.3 Contexts that allow THE but not DEM:
1.3.1 Inherent uniques (in spite of anaphora):
(16) a. The paper analyzed the recent activity of the sun. It used data from a satellite that observed {**the/#that/#this**} **sun** for a couple of years.
b. The sun and the moon are part of our solar system. The earth revolves around {**the/#that**} **sun** (Dayal & Jiang 2021:ex.9b)

Also in contextually restricted situations (Hawkins 1978: 'larger situations'):
(17) Maria went to see the mayor and the county executive. She received a warm welcome from {**the/#that/#this**} **mayor** (modeled after Dayal 2024, who cites Schwarz 2009 for #the$_{anaph}$ in German)

For 'inherent uniques', a more appropriate term would be 'description-based maximality' (see also Löbner's (1985, 2011) 'semantic uniqueness'): the descriptive material in the complement of D provides

the domain on which maximality is computed, without the need of a further contextual restriction (that would be provided by a situation argument introduced by D)

(18)   Since **{the/#that/#this} beginning of the war**, 21 journalists were killed.
        (contextual domain restrictions apply *inside* the complement of D, here, to the internal argument *the war*; once the reference of the internal argument is settled, no other domain restrictions apply)

Hawkins (1978) provides many ex. of inherent uniques, but does not say whether the impossibility of DEM is preserved under anaphora; this issue does not arise where the description itself provides the anaphoric or cataphoric link, see (19)e-i (we would like to reserve 'cataphora' for items pointing to the immediately subsequent discourse unit, as in (19)i; sentence-internal cataphora can be treated under anaphora, as the complete interpretation is only achieved at the sentence level):

(19)   a. *This/*That only girl at the party was drunk. (Hawkins 1978, 5.152)
        b. *This/*That prettiest girl at the party was Sarah   (Hawkins 1978, 5.157)
        c. *My wife and I share these/those same secrets (Hawkins 1978, 3.156)
        d. *This/*That first person to sail to America was an Icelander (Hawkins 1978, 3.157)
        e. *This/*That aforementioned reference will come in useful.   (Hawkins 1978, 5.180)
        f. *This/*That said individual is guilty. (Hawkins 1978, 5.181)
        g. *This/*That student in question is lazy. (Hawkins 1978, 5.179)
        h. *This/*That present reviewer dislikes this book. (Hawkins 1978, 5.182)
        i. *This/*That following person is elected: Harry Smith. (Hawkins 1978, 5.183)

Exceptions:
(i) emotive Dem:
(20)   a. **That mother of John Smith** is quite a woman!   (Wolter 2006: 4, ex. 5)
        b. How is **that nose of yours**?   (Lakoff 1974): solidarity between discourse participants

Obs.: familiarity is required; non-specific readings impossible:

(21)   A: Who is John Smith?
        B: #That John Smith is a really great guy!   (Wolter 2006:83, ex. 54)
(22)   [John is adopted. The speaker and addressee have just encountered John's highly eccentric adoptive mother.]
        If circumstances had been different,
        a. *that mother of John might have been someone else.
        b. John's mother might have been someone else.   (Wolter 2006:43, ex. 93)

(ii) DEM used to highlight the anaphoric link (without DEM, the Hearer could assume 2 referents: the 36th international forum and the largest annual debate forum in Romanian)

(23)   [context: the association of primary school teachers organized their 36th international forum]
        1500 de dascăli au   participat   la Suceava, Cernăuţi, Chişinău şi   Eforie Sud la a
        1500 of teachers have participated in Suceava Cernăuţi Chişinău and Eforie Sud at *al*
        XXXVI-a ediţie a   {**acestui cel mai mare forum anual de dezbatere din**
        26-ORD edition GEN this.GEN SUP more large forum annual of debate   from
        învăţământul   românesc / **#? celui   mai mare forum anual de**....}   (Ro.)
        education-system Romanian   the/SUP.GEN more large forum annual of...
        '1500 teachers participated in Suceava, Cernăuţi, Chişinău and Eforie Sud in {**this/#the} largest annual debate forum in the Romanian education system**'
        (https://www.glsa.ro/asociatia-invatatorilor-organizat-cel-de-al-xxxvi-forum-international/...)

(iii) DEM used to identify the referent of the inherently unique def. with a deictically identifiable referent:

(24)　　[context: footage of a tennis match]
　　　　Răsturnări de situație în **acest cel mai lung game de până acum al meciului**　　(Ro.)
　　　　upheavals of situation in this SUP more long game of until now GEN match-the.GEN
　　　　'upheavals in **{this/#the} longest game so far of the match**'
　　　　(https://www.dcnews.ro/simona-halep-julia-goerges-live-text-in-turul-trei-
　　　　de-la-miami-sambata-de-la-ora-21-00_501110.html

(iv) Anaphoric, complex description, even without necessary highlighting of the anaphoric link:

(25)　　I once met <u>the author of Waverley</u>. **That author of Waverley** also wrote Ivanhoe.
　　　　　　　　　　　　　　　　　　　　　　(Ahn 2022:1352, ex.22)
Our intuitions (at least for Romanian): this use seems to imply that the Addressee was not familiar with the referent (not aware of its existence), this is why it is impossible with well-established concepts such as *the moon, the sun*; cf. also Bombi (2023: ex.(46)) for Spanish:

(26)　　A: Para convertir el hielo en agua, lo tienes que poner a <u>su temperatura de fusión</u>.
　　　　B: ¿Entonces, si pongo el hielo a **la temperatura esa de fusión**, se derrite?
　　　　'A: To turn ice into water, you have to set it to <u>its melting temperature</u>.
　　　　 B: 'So, if I set the ice at **that melting temperature**, it will melt?'
　　　　Informants' comments: 'I get that someone doesn't know what melting temperature is'; 'The person is less knowledgeable. I don't think a chemist would say *la temperatura esa*'; 'It's perfect: because of the lack of knowledge on the topic'

1.3.2 New referent: **no previous mention**, referent **not salient/perceivable or familiar to the hearer**

(27)　　a. [context: the Speaker sees someone – an unknown person – walking up his neighbor's drive; no visible dog]
　　　　Don't go in there, chum. **{The/#That/#This} dog** will bite you　　(Hawkins 1978:3.24)
　　　　b. [context: the hearer, Harry, is blind and is for the first time in the speaker's house]
　　　　　Harry, mind **{the/#that} table**　　(Hawkins 1978:3.52-53)
(28)　　[Context: the speaker knows the hearer cannot see a certain post]
　　　　Watch out for **the/#that post**　　　　　　　(Nowak 2014:ex.20)
(29)　　[Context: the addressee is not assumed to know that the speaker's neighbor has a dog]
　　　　I couldn't sleep last night. **{The/#That} dog (next door)** kept me awake (Gundel et al. 1993)
　　　　(N.B.: Gundel et al. (1993) note that the same holds for demonstratives in Spanish, Russian, and Japanese, but Mandarin may use the distal demonstrative *nèi* in this context)

We might include here the fact that inferables (associative anaphoras) normally disallow DEM:
(30)　　a. A car drove by. **{The/#That} horn** was honking loudly. (Wolter 2006:51, ex. 116)
　　　　b. I got into the car and turned on **{the/*this/*that} engine**　(Lyons 1999/2003:20, ex.65-66)
The only difference wrt (26)-(28): although the hearer has no previous knowledge of the referent, its existence in the context is already known/presupposed by virtue of the preceding material (hence the names *associative/indirect anaphora, bridging, inferable*) => the referent is *weakly familiar* to the hearer

Exceptions? They concern associative anaphora, where maybe some level of salience can be assumed:

- Wolter (2006): DEM in bridging may appear under contrast (situations with more than one referent satisfying the NP-description):
(31)　　Gentian jerked the plug out of the drain and climbed out of the tub.
　　　　[The cat] leapt into the sink and began biting at **that plug**.
　　　　　(Pamela Dean, *Juniper, Gentian and Rosemary*, Tor, 1998: p. 300, in Wolter, 2006:51, ex.117)

- Authorship bridging:

(32)   De câte   ori   lui Ion îi   place deosebit **un tablou** într-un muzeu,
        of how-many times dat Ion CL.DAT likes especially a painting in   a museum
        cumpără după aceea o biografie a   **acelui pictor**.   (Ro.)
        buys   after that   a biography GEN that.GEN painter
        '<u>Every time</u> Ion very much <u>a painting</u> in a museum very much, he buys a biography **of the/that
        painter** afterwards.' (modeled after Schwarz 2009:ex.279, which shows *the*_{anaph} in German)

In the following example, from Gundel et al. (1993), it appears that the reason for using DEM instead of
THE is to indicate contrast (with other performances/directors), as in (31):

(33)   We went to hear the Minnesota Orchestra last night. **That conductor** was very good
                                                    (Gundel et al. 1993: 282, ex.15)

Note that in all these examples ((31)-(33)), there is weak familiarity (unlike in (27)-(29))

- **Special DEM licensed by relative clauses – 'bleached use', in which DEM=DEF** (this is an
exception to both 1.3.1 and to 1.3.2):
(34)   [context: not anaphoric or recognitional]
        a. **That person who invented the computer** was a genius.
          (= Whoever invented the computer was a genius) (Wolter, 2006:115)
        b. # That inventor of the computer was a genius

Hertzenberg (2015:60): DEMs in this use lack the +DEMONSTRATIVE feature
Diessel (1999:135-137) briefly discusses this use, proposing the term *determinative*
Simonenko (forthc.): attempt to subsume this use to the anaphoric one, based on a raising analysis of
relative clauses:
(35)   [DP D [RP [RP R NP] [CP which_i ... [VP λ**i**.[V [DP D [RP *i* [RP ~~R NP~~]]]]]]]]]

Giurgea (2024): this type might be language-specific and construction-specific:
Romanian:
- only with prenominal DEM_{distal}, which is a high-register form:
(36)   a. Pentru mine, prieteni sunt **acele persoane cărora   le   pasă de**
           for   me   friends are   those persons   who.PL.DAT CL.DAT cares of
          mine, şi invers – îmi   trezesc   sentimente de bucurie, compătimire, durere
           me   and conversely me.DAT arouse.3P feelings   of joy   compassion pain
          'For me, friends are those people who care about me and, vice versa, make me feel joy,
           compassion, pain' (http://confluente.ro/paul_leibovici_1440321839.html)
        b. #Pentru mine, prieteni sunt **persoanele alea/acelea   cărora le pasă de mine**.....
                                   persons-the those(COLLOQUIAL)/those

- not with reduced relatives
(37)   a. We catalogued those stars visible (Wolter, 2006:143, ex.65)
        b. # Am   catalogat   acele stele vizibile / stelele   a(ce)lea vizibile
            have.1 catalogued those stars visible   stars-the those   visible

Note also that this use is not mentioned in De Mulder's (2021) description of demonstratives in French
Giurgea (2024): as opposed to THE+N+Relative Clause, the bleached demonstrative highlights the fact
that the relative is used to restrict the domain of the NP => for this use, Simonenko's (2014) and Nowak's
(2021) proposals that the relative (which is syntactically licensed by Dem) is 'properly' restrictive
(⟦NP⟧∩⟦CP⟧)⊂⟦NP⟧) seems to be appropriate.

If this type is language-specific, we don't need to provide the same semantics for the bleached use and the other uses

The analysis proposed in Giurgea (2024) and discussed in section 3 below only applies to the *general use*, leaving the bleached use aside.

2. Analyses:

The most widespread view: DEM = THE + an additional piece of meaning (and structure)

2.1 Analyses with an additional argument
- King (2001):
(38)   That(F)(O)(G) = 'F and O have a unique common instance, which is G'

$$G(\iota x.F(x) \wedge O(x))$$

F= the NP

O – when the Speaker has a *perceptual* intention whose object is *b* (for the exophoric use) or
a *past perceptual* intention whose object is *b* (for the recognitional use?):
O is 'be identical with *b*': $\lambda x.x=b$
– when the Speaker has a *descriptive* intention (see the bleached use): O simply repeats the NP
G=the main predicate

- Simonenko (2014) (for German *the*_strong but also for Dem):
(39) $[_{DP} D_{def} [_{RP} i/CP_{Rel} [R NP]]]$
$[\![R]\!]= \lambda P: |P| >1.\lambda Q.\lambda y.P(y) \wedge Q(y)$
- an additional layer (R) introduces the additional argument, which can be an index or a relative clause
- the index, interpreted via Partee's IDENT: $\lambda x.x=g(i)$
- anti-uniqueness presupposition: the property introduced by the additional argument must be properly restrictive (narrowing down the restriction of D_{def} so as to achieve uniqueness)

- Nowak (2021):
(40) $[\![that]\!] = \lambda f \lambda g: \{x:f(x)\} \cap \{x:g(x)\} \subset \{x:f(x)\}.\iota x.f(x) \wedge g(x)$

- *f* is the denotation of the NP
- *g* is - the property of being identical to an *index*, for the anaphoric and exophoric uses
- a relative clause, for the bleached use (the relative is not inside NP but is a second argument of Dem)
- anti-uniqueness is a presupposition (see the red part in (40))

- Dayal (2024) – likewise, an extra-argument (an index) + presupposition of anti-uniqueness:

(41) $[\![DEM]\!] = \lambda i \lambda P: \exists j [j \neq i \wedge \iota x[P(x) \wedge f(i, x)] \neq \iota x[P(x) \wedge f(j, x)]].\iota x[P(x) \wedge f(i,x)]$
The *f* relation between indices and the denotatum of the DP can be identity but can also be another contextual relation, see §4 on Nunberg's 'deferred ostension' and Elbourne's (2008) implementation

- Dayal & Jiang (2021): non-uniqueness in a larger situation + a free variable (index)

(42) $[\![Dem]\!]=\lambda s \lambda P: \exists s' s \leq s' |P_{s'}| > 1. \iota x[P_s(x) \wedge x=y]$ (Dayal & Jiang 2021:158, 19a)

- Blumberg (2020) and Ahn (2022) argue **against an anti-uniqueness presupposition**:
see exceptions to DEM with inherently uniques in 1.3.1 above, in particular (23)-(25)
Blumberg: assuming the additional argument analysis => DEM have a more complex structure, with an additional restrictor => the anti-uniqueness effects follow from Schlenker's (2005) principle 'Minimize Restrictors!':

(43) Relative to a context set C, a definite description *the A B* is deviant if *A* is redundant, i.e. if:
(i) *the B* is grammatical and *B* denotes a singleton at every world in C, and
(ii) *A* does not serve another purpose, i.e. it is pragmatically irrelevant.
(44) ?? John's blond father has arrived

Note indeed that we found exceptions to anti-uniqueness when the additional argument of DEM served other purposes:
- to indicate identity with a referent accessible to the hearer (see ex. with superlatives (23)-(24))
- emotive DEMs: DEM anchors the referent to the <u>shared personal experience</u> of the discourse participants (see the recognitional use) – 'the x we know about'; when the reference to shared knowledge is not useful for identifying the referent (i.e., is redundant), it may function to recall the existence of <u>shared feelings about the referent</u> => the emotive use (cf. Wolter 2006)

- Ahn (2019, 2022):
(45) [$_{DP}$ [[$_D$bin-sup] NP] R]   (modeled after Ahn, 2022:1359, tree (36))
$[\![$bin-sup$]\!] = \lambda P.\lambda R.\iota x.\forall y\ [(P(y) \wedge R(y)) \leftrightarrow y \sqsubseteq x]$ (Ahn, 2022:1359, (37))
a. deictic use: the R slot is occupied by a phrase that contains a pointing gesture and a location
[$_{DP}$ [[$_D$bin-sup] NP] [$\rightarrow$ A]]
$[\![\rightarrow A]\!] = \lambda x.x$ is at A at w_0
$[\![\rightarrow]\!] = \lambda a.\lambda x.\ x$ is at a at w_0 (Ahn, 2022:1367, (57))
$[\![$[that linguist][[$\rightarrow$ A]$]\!] =$ the maximal entity that is a linguist and at A
b. anaphoric use: the R slot is occupied by an index
[$_{DP}$ [[$_D$bin-sup] NP] [$_{IdxP}$ Idx n]]
$[\![$Idx$]\!] = \lambda n\ \lambda x.x=g(n)$ (Ahn, 2022:1368, (59))
$[\![$[$_{IdxP}$ Idx n]$]\!] = \lambda x.x=g(n)$
c. bleached use: R is occupied by a relative clause

- Elbourne (2008) – special analysis with an index and a relation established between the index and the denotatum of the DP, to account for Nunberg's (1993) examples of 'deferred ostension' – see section 4
(46) [$_{DP}$ [that i [R]] NP]   (Elbourne 2008: 83)

2.2 The non-default situation analysis – Wolter (2006):
- general assumption: D binds the situation argument of the NP (see also Büring 2004, Schwarz 2009)

(47) a. $[\![$the$_n]\!] = \lambda P:P(s_n)$ is a singleton set. $\iota x.P(x)(s_n)$ (modeled after Wolter 2006:64)

b. $[\![$this$_n]\!] = \lambda P:P(s_n)$ is a singleton set and s_n is non-default. $\iota x.P(x)(s_n)$
- default situations = - those associated with main (clausal) predicates:
- situations bound by operators
- the situation corresponding to the discourse context (topic situation)
- the entire world of the context

Markedness hierarchy:
(48) [unique]: the
[unique] [non-default]: that
[unique] [non-default] [proximal]: this

Problems
- between the situation described in the main predicate and the entire world there are other possible intermediary levels at which a definite can be interpreted, which include the main predicate situation but are smaller than the entire world:
(49) a. We met yesterday at the Red Pub. We discussed the war.
b. Everybody$_{s1}$/The$_{s1}$ people had$_{(s1')}$ the same opinion about the$_{s2}$ war.

'the war' is not included in the pub-situation but is included in a larger restricted situation (e.g. Europe 2024); in (49)b we see that the main predicate is interpreted relative to a different situation than *the* – an extension of s_1 (which is bound by *every*) which is in the past (cf. the tense of the verb)

- ex. of THE relativized to salient contextual situations which do not even extend the main predicate situation:

(50)   [Context: Suppose that we have a university department whose members consist of linguists and philosophers. In one particular year two people are coming up for tenure, a linguist and a philosopher, but the department is only allowed to recommend one of them. To the shame of this department...]
        Every$_{s1}$ linguist voted$_{s1'}$ for **the$_{s2}$ linguist** and every$_{s1}$ philosopher for **the$_{s3}$ philosopher**.
            (Cooper 1995 ex. 19, in Schwarz 2009:114, ex. 136)
(51)   a. Yesterday two people played$_{s1}$ chess. Today they played$_{s2}$ again. **The$_{s1}$ winner** lost$_{s2}$.
        b. **The$_{s1}$ fugitives** are$_{s2}$ now in jail.   (Wolter 2006:91, ex. 67-68, < Enç 1981, Musan 1995)

3. A refined situation-based analysis (Giurgea 2024)
Starting points:
- indices are assumed to be related to referents based on salience, but this is not represented in the analyses
- non-default situations also require salience; we have seen that Wolter's definition of 'default situations' does not cover all cases of THE
- salience for deictics is adequately represented in Ahn's (2022) analysis which includes gestures and locations; but the similarity between deictic and anaphoric + recognitional uses is lost
➤ As we have seen, recognitional uses also require the addressee's participation in establishing reference, but the cognitive mechanism is memory, rather than perception
➤ Moreover, the proximal/distal features, which arguably characterize the pointed location in the deictic use (see Ahn 2019, 2022), are also semantically interpreted in the anaphoric and recognitional uses:
- anaphoric: the distal may be used for a referent mentioned earlier in the preceding discourse, as opposed to the proximal
- recognitional: only the distal is used (because the evoked situation is distant in the past)

Proposal:
(52)   DEM adds a second situation argument, in which the referent is located; this situation is
        (i) a part of the situation argument bound by D
        (ii) accessible to the Addressee via a cognitive relation R

(i) accounts for the use of DEM in contrastive environments, where several entities satisfying the NP property are available
(ii) accounts for the addressee-oriented component of meaning – the request to focus his attention on an indicated part of the environment, for the deictic use, or to access situations from the past experience, for the recognitional use and distant anaphoric use (for the idea that demonstratives involve attention manipulation, see also Diessel (2012)); for same-sentence anaphoric use and bound variable uses, short-term memory is sufficient.

Instead of an additional argument of D, Giurgea (2024) adopts a 2-layered DP analysis, as proposed by Simonenko (2014) (see also Hanink (2017) for German THE$_{strong}$). This accounts for languages which allow Dem to occur below THE (Romanian, Spanish). When DEM is in D, we may assume raising of Dem to D or an additional argument of D (like in Ahn's or Nowak's analyses) – see (56)-(57) below.

(53) $[[s_1\ THE]\ [\ [s_2\ [R\text{-}Dem]]\ [NP]]]$
(54) $[\![DEM]\!]^c = \lambda R.\lambda s'.\lambda P.\lambda x.\lambda s:\ s' \leq s \wedge R(s')(Addressee(c))(w^0).\ (x=\sigma y.P(y)(s'))(s)$
(55) $[\![[s_1\ THE]\ [\ [s_2\ [R\text{-}Dem]]\ [NP]]]\!] = \iota x.(x=\sigma y.P(y)(s_2))(s_1)$
                        defined iff $s_2 \leq s_1 \wedge R(s_2)(Addressee(c))(w^0)$

here s_1 is whatever situation a definite D may take in the context

the salience condition applies to a sub-situation of s_1, notated with s_2

- variant of the analysis, with DEM in D:

(56) $[[s_1 [[s_2 [\text{R-Dem}]] [\text{NP}]]]$

(57) $[\![\text{DEM}]\!]^c = \lambda R.\lambda s'.\lambda P.\lambda x.\lambda s: s' \leq s \wedge R(s')(\text{Addressee}(c))(w^0). \sigma y.P(y)(s')$

- the relation R for the various types of DEMs:

(58)   (i) deictic use: $R = \lambda s.\lambda x.\lambda w.$ x can perceive s at w

(ii) recognitional and long-distance anaphora: $R = \lambda s.\lambda x.\lambda w.$ x can recall s at w

(iii) short-distance anaphora: $R = \lambda s.\lambda x.\lambda w.$ s is in x's short memory at w

These variants of R can be syntactically represented as features of Dem => we predict the existence of forms specialized for certain uses, such as deictic or recognitional, which are attested in some languages, according to Diessel (1999)

- the proximity feature locates the situation introduced by Dem (see (59)-(60), which rely on the version of the analysis with Dem in D, given in (57)):

(59) $[\![\text{this}]\!]^c = \lambda R.\lambda s'.\lambda P.\lambda x.\lambda s: s' \leq s \wedge R(s')(\text{Addressee}(c))(w^0) \wedge \text{close}(\text{Deictic-center}(c),s').$
$\sigma y.P(y)(s')$

(60) $[\![\text{that}]\!]^c = \lambda R.\lambda s'.\lambda P.\lambda x.\lambda s: s' \leq s \wedge R(s')(\text{Addressee}(c))(w^0) \wedge \text{far}(\text{Deictic-center}(c),s').$
$\sigma y.P(y)(s')$

(alternatively/in some languages, *that* may be a default, not marked for proximity, see Wolter 2006)

N.B.: the presuppositions associated to THE follow from the use of the σ operator in these formulae

- The ban on DEM for inherently uniques (description-based maximality) and its exceptions: accounted for as in Blumberg (2020), by economy, see (43) above
- Reference to an <u>accessible situation</u> may account for <u>the emotive</u> use (as suggested by Wolter): this situation can <u>contain the discourse participants and an attitude/feeling towards the referent</u>

- Covariant readings are treated as anaphoric; discourse referents are created and activated during processing (see Bruening 2014)

(61)   Mary talked to <u>no senator</u> before **that senator** was lobbied
- the *before*-clause introduces a situation s_2 that extends the situation s_1 bound by the negated existential introduced by *no*:

(62)   no senator $[\lambda 1.$ Mary talked$_{s1}$ to the$_{s1}$ senator before $\lambda 2.$ [that senator was$_{s2}$ lobbied]]
- in *that senator*, the contextually salient sub-situation is s_1, which counts as accessible at the time of processing of the *before*-clause; s_1 is included in the current discourse situation involving Mary, the senators and a specific past time interval => the entire DP *that senator* can be evaluated at this larger situation, the inclusion relation introduced by Dem signaling the evaluation of *senator* at the bound sub-situation

(63) $\lambda s.$ no senator $[\lambda 1.$ Mary talked$_{s1}$ to the$_{s1}$ senator before $\lambda 2.$ [that$_{s1<s}$ senator was$_{s2}$ lobbied]]

- Note that this analysis does not require an already introduced referent for the non-exophoric uses (we do not use indices presupposed to be set to old discourse referents) => we may account for the cases of inferables with DEM – see (31)-(32), repeated below

(31)   Gentian jerked the plug out of the drain and climbed out of the tub.
[The cat] leapt into the sink and began biting at **that plug**.
 (Pamela Dean, *Juniper, Gentian and Rosemary*, Tor, 1998: p. 300, in Wolter, 2006:51, ex.117)

(32)   De câte   ori   lui Ion îi   place deosebit   **un tablou** într-un muzeu,
of how-many times dat Ion cl.dat likes especially a painting in   a museum

cumpără după aceea o biografie a **acelui pictor**.   (Ro.)
buys   after that   a biography gen that.gen painter
'Every time Ion very much a painting in a museum very much, he buys a biography **of the/that painter** afterwards.' (modeled after Schwarz 2009:ex.279, which shows *the*~anaph~ in German)

4. The issue of deferred ostension / descriptive indexicals

Nunberg (1993): various situations in which the entity pointed at is not the referent of the DP
This concerns indexicals more generally: *I, we, yesterday*

Ex. with Participant pronouns:
(64)   [context: a member of the American Supreme Court is speaking; this member is a Republican, as the majority of the members are, due to political circumstances]
    We might have been liberals   (Nunberg 1993: (18))
    - the standard indexical reading: **the individuals that compose the Supreme Court** <u>might</u> have been liberals
    - the descriptive indexical reading: **the Supreme Court** <u>might</u> have been composed of liberals
    (*the Supreme Court* is interpreted relative to possible worlds w′; the Speaker does not belong to the group *the Supreme Court* in w′)

Ex. with DEM:
- token for type/kind (index=token, denotation=type/kind):
(65)   [a salesman pointing, in sequence, at two sample plates in his china shop, the first sitting in front of him, the second on a table across the room:]
    These are over at the warehouse, but **those** I have in stock (Nunberg 1993: ex. 43)
    = *plates like this/that, of this/that sort*
Nunberg uses pronouns, but an overt NP is equally acceptable:
(65)′   **These plates** are over at the warehouse, but **those plates** I have in stock

(66)   [Scenario: We are in the offices of a very hierarchical company that prescribes different kinds of office furniture for employees of different ranks, with low-quality accoutrements being prescribed for low-ranked workers. Pointing at the desk of a particularly lowly employee, I say:]
    a. According to the regulations, **that** must always be made of metal (Nunberg 1993: ex. 53-55)
    b. **That** used to be made of metal
    c. **That** has grown more ornate with every promotion
Here, with an overt N, the examples seem to require the plural or a kind-construction such as *tip de* 'type/kind of' (we report our intuitions => we use Romanian):
(67)   **Aceste birouri** erau făcute din metal / **Acest tip de birou** era făcut din metal/   (Ro.)
    these desks   were made of metal   this   type of desk was made of metal
    ?? **Acest birou** era făcut din metal
       this   desk   was made of metal

- other relations? Only in Elbourne (2008), less natural in our opinion:
(68)   [Scenario: Field A is in front of us, field B is beyond it, quite far. We know that one donkey is kept in A and another donkey is kept in B, but it so happens that neither donkey is in its field today.]
    This donkey [GESTURE AT FIELD A] is healthier than **that donkey** [GESTURE AT FIELD B]. (Elbourne 2008:ex.84)

- in examples where reference relies on reported information rather than direct acquaintance, we do not think we are dealing with deferred reference (*contra* Elbourne 2008), but rather with a standard anaphoric or recognitional use:
(69)   a. [Scenario: We heard a while ago that exactly one student scored 100 on the exam, but we do not know who it is.] **That student who scored 100 on the exam** is a genius.

b. [Scenario: We heard a few seconds ago that exactly one student scored 100 on the exam, but we do not know who it is.] **This student who scored 100 on the exam** is a genius. (ex. 113)

Elbourne (2008): - the index (pointed object) = the utterance in which we heard about the student,
    - the relational component = the function mapping utterances to the property of having one's existence announced in them.

Our view: here, the hearer is invited to access a situation whose existence was registered in memory upon hearing that utterance. It is that situation that is treated as accessible; accessibility does not need to be perceptual.

Elbourne (2008):
(70)   [$_{DP}$ [that i [R]] NP]   (Elbourne 2008: 83)
(71) $[\![$that$]\!]$ $^{w,h,a,t}=$ $\lambda x.\lambda f_{<e,<se,st>>}.\lambda g_{<se,st>}.\lambda s.\iota z.[$ $f(x)(\lambda s'.z)(s) \wedge g(\lambda s'.z)(s) \wedge$ distal(x,w,a,t)]
(72) $[\![$this$]\!]$ $^{w,h,a,t}=$ $\lambda x.\lambda f_{<e,<se,st>>}.\lambda g_{<se,st>}.\lambda s.\iota z.[$ $f(x)(\lambda s'.z)(s) \wedge g(\lambda s'.z)(s) \wedge$ proximal(x,w,a,t)]
N.B. certain complexities are due to the fact that Elbourne assumes predicates to be properties/relations of individual concepts rather than of individuals (see the highlighted parts in (71)-(72)) => the $\lambda s'$ that does not bind anything in (71)-(72)
For simplicity's sake, we will disregard this aspect in what follows
Elbourne proposes various relations
- by default: identity
        it is only when the index does not satisfy the NP-property that a different choice of R is made
- for (66) (the Supreme Court example):
  R = $\lambda x. \lambda u_{<s,e>}.\lambda s.$ u(s) is characterized in s by the actual function and hierarchical status of x
- for (69): R = the function mapping utterances to the property of having one's existence announced in them
- In discussing examples of dependent (covariant) demonstratives due to King (2001), Elbourne proposes other relations:
(73)   [Context of: the speaker nods in the direction of a screen showing a scene
        from a film in which a professor is fondly perusing his finest piece of published work]
        Every professor cherishes **that publication of his**   (< King 2001:74)
        : the index is the scene (s) towards which the speaker gestures; R = x has the qualities depicted in s

(74)   a. Every man eagerly looks forward to **that day when he retires**.
        b. Every father dreads **that moment when his eldest child leaves home**
        index = the concept or idea of retiring, or having one's eldest child leave home
        R = x exemplifies s

This way of establishing relations seems to be too unrestricted

Our proposal: it is only **the token-type/kind relation** that needs to be included in the analysis

(75)   I have **those plates** in stock.
        = I have that kind of plates in stock = I have plates of that kind in stock
        (see Carlson 1977, Wilkinson 1991, 1995 on existential readings of kind-terms)
        Am   **farfuriile alea** în stoc   (Ro.)
        have.1 plates-the those in stock

(76)   [pointing to a dog from a particular violent breed]
        Aceşti câini muşcă/sunt periculoşi   (Ro.)
        These dogs bite / are dangerous.
(77)   [pointing to a classical telephone]

Acest aparat a fost inventat de Alexander Graham Bell   (Ro.)
This device was invented by Alexander Graham Bell.

Account:
- the referent is kind-level => the NP is a kind-property ($<e_k,t>$ or, equivalently, $<k,t>$)
- the accessible situation contains an instantiation of the kind
=> the entry in (78), where $\Re$ notates the instantiation/*realization* relation; here is the version for Dem below D_{def} (blue = differences wrt the entry proposed in (54) for entity-level Dem):

(78) $[\![Dem_k]\!]^c = \lambda R.\lambda s'.\lambda P_{<k,t>}.\lambda x_{<k>}.\lambda s: s' \leq s \wedge R(s')(\text{Addressee}(c))(w^0) \wedge \exists y\ \Re(x_k)(y)(s').\ P(x)(s)$
The whole DP will refer to a specific kind:

(79) $[\![s_1\text{-}D_{def}\ [[s_2[R\text{-}Dem_k]]\ NP]]\!] = \sigma x_k: s_2 \leq s_1 \wedge R(s_2)(\text{Addressee}(c))(w^0) \wedge \exists y\ \Re(x_k)(y)(s_2).[\![NP]\!](x_k)(s_1)$

N.B.: attested ex. of an existential reading based on sub-kinds with an anaphoric Dem: the plural *aceste animale* 'these animals' is used in order to avoid the repetition of the word *cai* 'horses':

(80)   [Context: heard on TV, in a broadcast about the Polish painter Tadeusz Ajdukiewicz]
        era   un mare iubitor de <u>cai</u> (...) Era   şi   crescător de <u>cai</u>.   Avea o fermă lângă Cracovia
        was.3s a great lover of <u>horses</u>   was.3s also breeder of <u>horses</u> had.3s a farm near   Krakow
        unde   creştea **aceste animale**.   (Ro.)
        where grew.3s these animals
        'He was a great lover of horses. He was also a horse breeder. He had a farm near Krakow where
        he bred these animals.'
Here Dem_k is not needed, because the antecedent is arguably generic (=> the cognitive accessible situation includes kinds). But we can modify (80) so that the antecedent is a particular, e.g.

(81)   A: Am auzit că a primit cadou <u>un cal</u>   'I heard he received <u>a horse</u> as a present'
        B: Da, are o fermă lângă Braşov unde creşte **aceste animale** 'He has a farm near Braşov where he
        breeds **these animals**' / E foarte interesat de **acest animal** 'He is very interested in **this animal**'

Other examples in Elbourne (2008)
- **Examples with type > entity**:
(74)   a. Every man eagerly looks forward to **that day when he retires**.
        b. Every father dreads **that moment when his eldest child leaves home**
according to Elbourne and King, these examples convey familiarity with the type of situation (=> this is not a bleached use in which DEM is perfectly equivalent to THE)
Possible solution:
- We are dealing with a recognitional reading relying on a type of situation being registered in long-time memory. This is an abstract object of the type {s:∃x.x retires in x} or {s:∃x.x's eldest child leaves x's home}.
- Assumption: if a set of situations is cognitively accessible, the individual members of the set are cognitively accessible => *the situation s=[z a day, x retires in z]* is accessible for any x

- **The example with usual location > entity**:
The example with donkeys and fields (ex. (68)) feels unnatural, much more marked than the others. Note that the example is not in Nunberg (1993), and even Elbourne does not formulate an interpretation of R for this case.
Our hypothesis: the example resorts to imagination; based on the regular association of fields with donkeys, the hearer is invited to picture himself the regular image of the field, which contains the relevant donkey.

References

Abbott, Barbara. 2002. Donkey demonstratives. *Natural Language Semantics* 10:285–298.

Ahn, D., 2019, *The Determinacy Scale: A competition Mechanism for Anaphoric Expressions*. Doctoral dissertation, Harvard University. http://nrs.harvard.edu/urn-3:HUL.InstRepos:42029564.

Ahn, D., 2022. Indirectly direct: An account of demonstratives and pointing. *Linguistics and Philosophy* 45, 1345–1393.

Blumberg, K., 2020. Demonstratives, definite descriptions and non-redundancy. *Philosophical Studies* 177, 39–64.

Bombi, Carla. 2023. Decomposing demonstratives: pre- and postnominal that in Spanish. Hand-out of a talk given at the *Workshop on Definiteness*, Bucharest, December 8–9.

Büring, Daniel. 2004. Crossover situations. *Natural Language Semantics* 12, 1, 23-62.

Carlson, Gregory. N. 1977. *Reference to Kinds in English*. Doctoral dissertation, University of Massachusetts at Amherst.

Cornish, F., 1999, *Anaphora, discourse and understanding. Evidence from English and French*, Oxford, Clarendon Press.

Cornish, F., 2010, "Anaphora: Text-based or discourse-dependent? Functionalist vs. formalist accounts", *Functions of Language* 17, 207–241.

Dayal, V. and L. J. Jiang. 2021. The puzzle of anaphoric bare nouns in Mandarin: A counterpoint to Index! *Linguistic Inquiry* 54, 147–167.

Dayal, V. 2024. Demonstratives to Definites: What Changes and What Stays the Same. Handout of a talk given at Randolf Quirk Fellow Workshop, Queen Mary University of London, May 20.

De Mulder, Walter. 2021. L'interprétation du déterminant démonstratif. In Anne Abeillé & Danièle Godard (eds.), *La Grande Grammaire du Français*, Arles, Actes Sud, 550-556.

Diessel, Holger. 1999. *Demonstratives: form, function, and grammaticalization*. Amsterdam, Philadelphia: John Benjamins.

Diessel, Holger. 2012. Deixis and demonstratives. In C. Maienborn, K. von Heusinger, and P. Portner (Eds.), *Semantics*, 2407-2432. Berlin: Mouton.

Elbourne, P., 2005. Situations and Individuals. MIT Press, Cambridge, MA.

Elbourne, P., 2008. Demonstratives as individual concepts. *Linguistics and Philosophy* 31 (4), 409–466.

Enc, M. 1981. *Tense without Scope: An Analysis of Nouns as Indexicals*. Doctoral dissertation, University of Wisconsin-Madison.

Giurgea, Ion. 2024. Romanian double definites: The view from demonstratives. *Lingua* 307, August, https://doi.org/10.1016/j.lingua.2024.103728.

Grosz, P. G., 2019, "Pronominal Typology and Reference to the External World", in: J. Schlöder, D. McHugh, F. Roelofsen (eds.), *Proceedings of the 22nd Amsterdam Colloquium*, 563-573, https://archive.illc.uva.nl/AC/AC2019/uploaded_files/inlineitem/1AC2019_Proceedings.pdf.

Gundel, J. K., Hedberg, N., Zacharski, R. 1993 Cognitive status and the form of referring expressions in discourse. *Language* 69, 274–307.

Hanink, E. 2017. The German definite article and the 'sameness' of indices. *Penn Working Papers in Linguistics* 23, 1, 63-72.

Hawkins, J. A. 1978. *Definiteness and indefiniteness*. Croom Helm, London.

Hertzenberg, M. J. B. 2015, *Third person reference in Late Latin: Demonstratives, definite articles and personal pronouns in the Itinerarium Egeriae*, Berlin, Walter de Gruyter.

Himmelmann, N. 1996. Demonstratives in Narrative Discourse: A Taxonomy of Universal Uses. In: Fox, B. (Ed.), Studies in Anaphora. John Benjamins, Amsterdam, pp. 205–254.

King, J., 2001. *Complex demonstratives: A quantificational account*. MIT Press, Cambridge, MA.

Lakoff, Robin. 1974. Remarks on *this* and *that*. *Chicago Linguistic Society* 10, 345–356.

Löbner, Sebastian. 1985. Definites. *Journal of Semantics* 4, 279–326.

Löbner, Sebastian. 2011. Concept Types and Determination. *Journal of Semantics* 28, 279–333.

Lyons, Christopher. 1999/2003. *Definiteness*. Cambridge, Cambridge University Press.

Musan, R. 1995. *On the Temporal Interpretation of Noun Phrases*. Doctoral dissertation, MIT.

Nowak, Ethan. 2014. Demonstratives without rigidity or ambiguity. *Linguistics and Philosophy* 37, 409–436.

Nowak, Ethan. 2021. Complex demonstratives, hidden arguments, and presupposition. *Synthese* 198, 2865–2900.

Nunberg, Geoffrey. 1993. Indexicality and Deixis. *Linguistics and Philosophy* 16, 1-43.

Roberts, C., 2002. Demonstratives as definites. In: van Deemter, K., Kibble, R. (Eds.), *Information sharing: Reference and presupposition in language generation and interpretation*. CSLI Publications, Stanford, CA, 89–196.

Schlenker, P., 2005. Minimize restrictors! (Notes on definite descriptions, condition C and epithets). In: Maier, E., Bary, C., Huitink, J. (Eds.) *Proceedings of Sinn und Bedeutung 9*, pp. 385–416.

Schwarz, F., 2009. *Two types of definites in natural language*. Doctoral dissertation, University of Massachusetts at Amherst.

Simonenko, A., 2014. *Grammatical ingredients of definiteness*. Doctoral dissertation, McGill University, Montreal.

Simonenko, A., forthc. Full vs. clitic vs. bound determiners. To appear in: Wiltschko, M., Armoskaite, S. (Eds.), *Oxford Handbook of Determiners*, Oxford University Press, Oxford. Draft available at https://ling.auf.net/lingbuzz/004519.

Wilkinson, Karina. 1991. Studies in the Semantics of Generic Noun Phrases. Doctoral dissertation, University of Massachusetts at Amherst.

Wilkinson, Karina. 1995. The semantics of the common noun kind. In G. N. Carlson and F. J. Pelletier (eds.), *The Generic Book*, Chicago, London, University of Chicago Press, 383–397.

Wolter, L. K. 2006. That's that: The Semantics and Pragmatics of Demonstrative Noun Phrases. Doctoral dissertation, University of California, Santa Cruz.