Response Particles
and Discourse Particles:
ja, doch (and *eben*)

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1. Overview

Response particles: Particles that serve as standard responses to assertions, polar questions, and perhaps other speech acts like imperatives, exclamatives etc.

➢ Examples for English: *yes, no*;
examples for German: *ja, nein, doch (eben)*
➢ There are other types of reactions that are not particles:
e.g. English *right, wrong, okay, uh-huh, uh-uh, exactly, probably*
➢ German *stimmt, genau, m-hm, m-m* that are not particles

Goal of this talk:

➢ Introduce a theory of response particles that analyzes them as clausal anaphors (Krifka 2013, to appear).
➢ Explore the possible connection to the use of *ja* and *doch* (but not *nein*) as modal particles (or discourse particles).

2. Response particles
2.1 The phenomenon, illustrated with *yes* and *no*

The use of *yes* and *no* is clear after non-negated antecedents,
but not so after negated antecedents.

(1) A: *You stole the cookie.*   B: *Yes.*
     Did you steal the cookie?   *No.*

(2) A: *You did not steal the cookie.*   B: *Yes.*   B: *No, I didn't.*   *No, I DID.*
     Did you not steal the cookie?   *No.*   *Yes, I didn't.*   *Yes, I DID.*

First experimental evidence for responses like *Yes, I didn't* – e.g. Braseovanu e.a. 2013.

Recent approaches to response particles:

Ginburg & Sag (2000), Holmberg (2012, 2013);
commented here: Kramer & Rawlins (2009), Farkas & Roelofsen (2012).

2.2   Syntactic approaches: Kramer & Rawlins (2009)

Proposal: *Yes* and *no* are adverbials corresponding to the heads of ellipsis clauses (called pre-jacent), which correspond to contextually salient propositions.

(3)   A: *Ede stole the cookie.*
       B: [$_{ΣP}$ *Yes* [$_{ΣP}$ Σ [$_{TP}$ ~~*he did*~~ [t$_{he}$ ~~*steal the cookie*~~]]]]

Ellipsis phrase ΣP with head Σ, adverbial *yes*.

(4)   A: *Ede did not steal the cookie.*
       B: [$_{ΣP}$ *No*$_{[u\ NEG]}$ [$_{ΣP}$ Σ$_{[u\ NEG]}$ [$_{TP}$ ~~*he didn't*~~ $_{[i\ NEG]}$ [t$_{he}$ ~~*steal the cookies*~~]]]]

No double negation interpretation: *n't* has an interpretable NEG feature that agrees with an un-interpretable NEG feature provided by *no* (Zeijlstra 2004).

(5)   A: *Ede did not steal the cookie.*
       B: [$_{ΣP}$ *Yes* [$_{ΣP}$ Σ$_{[u\ NEG]}$ [$_{TP}$ *he didn't* $_{[i\ NEG]}$ [t$_{he}$ ~~*steal the cookies*~~]]]]

Yes is featureless, compatible with [u NEG] head of ellipsis clause.

➢   Why is (6) not possible, as *yes* is featureless, compatible with negation?

(6)   A: *Ede stole the cookie.*
       B: #*Yes, he didn't steal the cookie.*

➢   Distribution of elliptical clauses and response particles do not match:

(7)   *Did Ede steal the cookies?*
       a. *If he did, he must pay them back*.   b. **If yes, he did, he must pay them back.*
       c. *If* $^{??}$*yes / so, he must pay them back.*

2.3 Semantic approach: Farkas & Roelofsen (ms., 2012)

Response particles pick out contextually salient propositions (couched in communication theory of Farkas & Bruce 2010, neglected here).

(8) A: *Ede stole the cookie.* Contextually salient proposition: φ = 'Ede stole the cookie'
    B: *Yes.*   Confirms φ.
      No.   Rejects φ.

With polarity questions, two propositions are introduced, one the negation of the other (cf. Hamblin 1973; F&R use inquisitive semantics, neglected here).

(9) A: *Did Ede steal the cookie?*   Interpretation: $\{\varphi, \neg\varphi\}$

This is not sufficient to explain the usage of *yes* and *no*. F&R assume in addition that the proposition that is "explicitly mentioned" is highlighted, and hence made salient.

(10) A: *Did Ede steal the cookie?* $\{\boldsymbol{\varphi}, \neg\varphi\}$; contextually salient: φ, due to highlighting.
     B: *Yes.*   a. Confirms highlighted proposition, here φ.
       No.   b. Reverses highlighted proposition, i.e. asserts $\neg\varphi$.

This is still not sufficient to explain the usage of *yes* and *no* in negated questions. F&R assume that propositions are marked as non-negated or negated, refining the conditions for *yes* and *no*:

(11) A: *Did Ede not steal the cookie?* $\{\varphi, \boldsymbol{\neg\varphi}\}$, where $\neg\varphi$ is identifiable as negated proposition.
     B: *Yes.*   a. Confirms highlighted proposition, here $\neg\varphi$.
                               a′. Reverses highlighted negative proposition, i.e. asserts φ.
       No.   b. Reverses highlighted proposition, i.e. asserts φ.
                               b′. Confirms highlighted negative proposition, here $\neg\varphi$.

Theory expressed in a feature system:

➢ Assumes that *yes, no* are heads of clauses that can be elided (similar to Kramer & Rawlins)
➢ Features:[+/–]: This clause has positive / negative polarity.
   [SAME / REVERSE]: This clause has same / reversed polarity of antecedent clause.
➢ Particles:*yes* realizes [+] or [SAME], *no* realizes [–] or [REVERSE]
➢ Markedness: [+] < [–], [SAME] < [REVERSE],
   leading to   [SAME, +] < [REVERSE, –] < [SAME, –] < [REVERSE, +]
➢ Realization options: *yes*   *no*   {*yes, no*}   {*no, yes*}
➢ Examples: (1) *yes, I did*   *no, I didn't*   (2) *no, I didn't*   *no, I DID*
                                                              yes, I didn't   *yes, I DID*

As for German *doch*, Farkas & Roelofsen propose that it marks [REVERSE, +].

(12) A: *Du hast den Keks gestohlen.*   B: *Ja.*   'I did steal the cookie'
          Hast du den Keks gestohlen?   *Nein.*   'I didn't steal the cookie'

(13) A: *Du hast den Keks nicht gestohlen.*   B: *Ja.*   'I did not steal the cookie' (str. preferred)
          Hast du den Keks nicht gestohlen?   *Nein.*   'I did not steal the cookie' (preferred)
                                                              Doch.   'I did steal the cookie' (only option)

Problems:

➢ Highlighting of propositions an extraneous semantic feature in Hamblin / Inquisitive Semantics
➢ Marking of proposition as negated is also an extraneous feature in truth-conditional semantics; requires representational theory (e.g. Situation Semantics: Ginzburg & Sag 2000)
➢ Complex disjunctive feature system
➢ No distinction between (2): *no, I didn't* and *yes, I didn't*.

3. Response Particles as Anaphora
3.1 Propositional discourse referents (DRs)

DRs for entities, introduced by DP (cf. Karttunen 1969, Kamp 1981, Heim 1982).

(14) [$_{DP}$ *A man*] *came in. He stole* [$_{DP}$ *a cookie*].
    ↪ d$_{entity}$ ↑d

DRs for events, introduced by tenseless vP: (Hinrichs 1981, Partee 1984).

(15) [$_{TP}$ *He steal*-PAST [$_{vP}$ t$_{he}$ t$_{steal}$ *a cookie*]]. *Bill saw it.*
           ↪d$_{event}$ ↑d

DRs for propositions (propDRs), introduced by tensed TP,
e.g. Webber (1978), Asher (1986), Cornish (1992), Frank (1996).

(16) [$_{TP}$ *He stole a cookie*]. *Bill knows it.*
    ↪ d$_{prop}$ ↑d

Speech act DRs (actDRs), introduced by ForcePs, e.g. Webber (1978)

(17) A: [$_{ForceP}$ ASSERT *He stole a cookie.*] B: *That's a lie!*
    ↪d$_{act}$ ↑d

Complete analysis for assertion and question (excluding entity DRs:

(18) [$_{ForceP}$ ASSERT [$_{TP}$ he *steal*-PAST [$_{vP}$ t$_{he}$ t$_{steal}$ *a cookie*]]]
    ↪ d$_{speech\ act}$ ↪ d′$_{prop}$ ↪ d″$_{event}$

(19) [$_{ForceP}$ *did*-QUEST [$_{TP}$ *he* t$_{did}$-PAST [$_{vP}$ t$_{he}$ t$_{steal}$ *a cookie*]]]
    ↪ d$_{speech\ act}$ ↪ d′$_{prop}$ ↪ d″$_{event}$

3.2 Negation and propositional discourse referents

Negation also creates a propositional syntactic category (NegP); introduction of **two** propDRs.

(20) [$_{NegP}$ *he did-n't* [$_{TP}$ t$_{he}$ t$_{did}$ *steal the cookie*]]
      ↪d′$_{prop}$ ↪d$_{prop}$

Evidence for introduction of two propDRs with negation:

(21) *Two plus two isn't five.*   a. *Everyone knows that.*
      [$_{NegP}$ 2+2 *is-n't* [$_{TP}$ t$_{2+2}$ t$_{is}$ 5]]   ↑d′$_{¬[2+2=5]}$
      ↪d′$_{¬[2+2=5]}$ ↪d$_{[2+2=5]}$ b. *That would be a contradiction.*
                                                    ↑d$_{[2+2=5]}$

The negated propDR is introduced with syntactic negation, not with negative predicates:

(22) *Two plus two is unequal to five.* a. *Everyone knows that.*
      [$_{TP}$ 2+2 *is unequal* 5]   b. #*That would be a contradiction.*
      ↪d$_{[2+2≠5]}$

Cf. also

(23) a. A: *Peter findet, dass Paul doof ist.*   b: A: *Peter findet Paul doof.*
         B: *Das stimmt.*   B: *Das stimmt.*
            i) 'Peter thinks Paul is stupid'   i) 'Peter thinks that Paul is stupid'
            ii) 'Paul is stupid'   ii) ??'Paul is stupid'

3.3 The information content of propositional discourse referents

Previous assumptions for propDRs:

➢ anchored to propositions (e.g. Heim 1992)
➢ anchored to world-sequence pairs (Geurts 1996, Frank 1996)
➢ anchored to DRSes: Asher (1986, 1993)

Assumptions here:

➢ PropDRs refer to variable assignments and a proposition.
➢ They are marked as [neg] when introduced by a NegP phrase.
  (DRs are representational entities, cf. gender marking in gender languages).

(24) $[_{NegP}$ *he did-n't* $[_{TP}$ t$_{Ede}$ t$_{did}$ *steal a cookie*$]]$
  ↪ d′$_{prop}$[neg]   ↪d$_{prop}$

3.4 Syntactic categories of propositional anaphors

English:

➢ *it* and *that*: DP
➢ *so, not*: TP (pace Cornish 1992, who considers them adverbials)
➢ *yes* and *no*: ForceP (pace Ginzburg & Sag 2000 – "propositional lexemes", "adverbials")

(25) a. *Did he steal a cookie? If *it / so / $^{??}$yes, he must be punished.*
    [*if* [$_{TP}$ α]], hence α ≠ [$_{DP}$ *it*], α ≠ [$_{ForceP}$ *yes*]

(26) b. *Did he steal a cookie? Bill believes it / so / $^{??}$yes.*
    believe [$_{DP}$ α], cf. *I believe <u>this</u>*, or *believe* [$_{CP}$ α], cf. *I believe <u>(that) he did it</u>*;
    hence α ≠ [$_{ForceP}$ *yes*]

German:

➢ *es* und *das*: DP
➢ *ja, nein, doch*: TPs

(27) a. *Hat er einen Keks gestohlen? Wenn ja, muss er bestraft werden.*
    b. *Er hat wahrscheinlich keinen Keks gestohlen. Falls doch, muss er bestraft werden.*
    c. *Hat er einen Keks gestohlen? Ich glaube(,) ja / nein.*
    d. *Du meinst, er hat den Keks nicht gestohlen. Ich glaube(,), doch.*

A further difference:

(28) A: *Trinkt er viel?* B: *Manchmal ja. / Ja, manchmal.*

(29) A: *Does he drink a lot?* B: **Sometimes yes. / Yes, sometimes.*

3.5 Interpretation of response particles

English:

➢ *yes* is anaphoric to a salient propDR d and asserts it: $\llbracket [_{\text{ForceP}} \; yes_d] \rrbracket$ = ASSERT(d)
➢ *no* is anaphoric to a salient propDR d and asserts its negation: $\llbracket [_{\text{ForceP}} \; no_d] \rrbracket$ = ASSERT(¬d)

Remarks:

➢ *yes* and *no* are propositional anaphora with extra material (assertion),
  cf. German complex anaphora: *da-von* 'about that'
➢ Response particles with elliptical clauses are appositives, contra Kramer & Rawlins 2009
  [_{\text{ForceP}} *yes*], [_{\text{ForceP}} *he did* [~~steal a cookie~~]]

German:

➢ *ja* is anaphoric to a salient propDR d: $\llbracket ja_d \rrbracket$ = d;
  this can be asserted: $\llbracket [_{\text{ForceP}} \; \text{ASSERT} \; [_{\text{TP}} \; ja_d]] \rrbracket$ = ASSERT(d)
➢ *no* is anaphoric to a salient propDR d and denotes its negation: $\llbracket nein_d \rrbracket$ = ¬d;
  this can be asserted: $\llbracket [_{\text{ForceP}} \; \text{ASSERT} \; [_{\text{TP}} \; nein_d]] \rrbracket$ = ASSERT(¬d)

3.6 Interpretation of reponses with negated antecedents: English

(30) [ForceP ASSERT [NegP *he did-n't* [TP t*he* t*did* *steal a cookie*]]]
                    ↪d'[neg]   ↪d

Four possibilities of interpretation in this context.

(31) a. *Yes.*   ASSERT(d)   'Yes, he DID!'   Requires rejecting accent, with clause.
      b. *Yes.*   ASSERT(d')   'Yes, he didn't.'   Natural answer, preferably with clause.
      c. *No.*   ASSERT(¬d)   'No (, he didn't).'   Natural answer, clause not necessary.
      d. *No.*   ASSERT(¬d') 'No, he DID!'   Requires rejecting accent, with clause.

These judgements arise due to certain preferences:

➢ Pick up the more salient DR, where typically the non-negated DR is more salient;
    reason: Negated clauses are typically constructed when a proposition corresponding to the
    non-negated part is discourse salient.
➢ Disagreement with the other speaker is disfavored; agreement is the default case.

	expression	reference	resulting meaning	Disagreement	Salient DR: d	Favorite
a	*yes*	d	'He did.'	*		((☞))
b	*yes*	d'	'He didn't.'		*	(☞)
c	*no*	d	'He didn't.'			☞
d	*no*	d'	'He did.'	*	*	

3.7 Factors that influence constraint rankings: Saliency of negated propDR

There are cases where the non-negated DR is not salient, and the preferences are different:

(32) B: *Which of the mountains on this list did Reinhold Messner not climb?*
     A: *Well, let's see... He did not climb Mount Cotopaxi in Ecuador.*
     B: a. *Yes.* (= He did not climb it.)
        b. *No.* (= He did climb it.)

	expression	reference	resulting meaning	Disagreement	Salient DR: d′	Favorite
a	*yes*	d	'He did.'	*	*	
b	*yes*	d′	'He didn't.'			☜
c	*no*	d	'He didn't.'		*	(☜)
d	*no*	d′	'He did.'	*		((☜))

3.8 Factors that influence constraint ranking: Question vs. assertion

With non-biased questions as antecedents, disagreement should rank lower.
However, questions with propositional negation are never quite non-biased – otherwise, a question without negation would be asked.
But by re-ranking Disagreement below Salient DR we get a different preference.

(33) [$_{ForceP}$ *did* QUEST [$_{NegP}$ *he not* [$_{TP}$ t$_{he}$ *steal the cookie*]]]?
$\hookrightarrow$d$'_{prop}$ $\hookrightarrow$d$_{prop}$

Four possibilities of interpretation in this context; judgements (a)/(b) cf. Holmberg (2012).

(34) a. *Yes.*   ASSERT(d)   'Yes, he did.'   Natural answer, preferably with clause.
     b. *Yes.*   ASSERT(d')   'Yes, he didn't.' Less natural, possible with clause.
     c. *No.*   ASSERT(¬d)   'No (,he didn't.)' Natural answer, clause not necessary.
     d. *No.*   ASSERT(¬d') 'No, he did.'   Quite bad, even with clause.

	expression	reference	resulting meaning	Salient DR	Disagreement	Favorite
a	*yes*	d	'He did.'		*	(☞)
b	*yes*	d'	'He didn't.'	*		((☞))
c	*no*	d	'He didn't.'			☞
d	*no*	d'	'He did.'	*	*	

3.9 Interpretation of responses to negated antecedents: German.

Basic observations concerning *doch*:

(35) A: *Er hat einen Keks gestohlen.*   B: *Ja. / Nein. / *Doch.*

(36) A: *Er hat keinen Keks gestohlen.*   B: *Ja. / Nein. / Doch.*

(37) A: *Es fehlt ein Keks.*   B: *Ja. / Nein. /*Doch.*

Like *ja / nein*, the particle *doch* is of the syntactic category TP:

(38) *Er hat wahrscheinlich keinen Keks gestohlen. Falls <u>doch</u>, muss er bestraft werden.*
       'He probably did not steal a cookie. But if he did, he must be punished.'

Assumption for *doch*:

➢   doch is anaphoric to to a salient propDR d
     and presupposes another salient propDR d′ with feature [neg] such that d′ = ¬d;
     $\llbracket$ doch$_{d′[neg],d}$$\rrbracket$ defined iff d′ = ¬d; if defined: denotes d
     this can be asserted: $\llbracket$[$_{ForceP}$ ASSERT [$_{TP}$ doch$_{d′[neg],d}$]]$\rrbracket$ = ASSERT(d)
➢   Presupposes that two propDRs are introduced, one the negation of the other: d, d′ = ¬d
➢   Picks up the non-negated discourse referent, d.

The presupposition of *doch* blocks the use of other particles in certain cases.

One implementation of blocking, following Beaver (2004): Meta-constraint B<small>LOCK</small> that is marked by the presence of an expression for which the indicated interpretation is strongly preferred.

Calculation of optimal forms in an OT tableau; negated antecedent clause in German; D<small>IS</small>A<small>GR</small> is irrelevant if ordered under B<small>LOCK</small>.

	expression	reference	resulting meaning	*PRES	BLOCK	SalientDR	Favorite
a	*ja*	d	'He did.'		*		
b	*ja*	d′	'He didn't.'			*	(☞)
c	*nein*	d	'He didn't.'				☞
d	*nein*	d′	'He did.'			*	(☞)
e	*doch*	d	'He did.'				☞; blocking of a
f	*doch*	d′	'He didn't.'	*		*	

Predicted answer patterns:

(39) A: *Er hat den Keks nicht gestohlen.*
   B: a. ^{???}*Ja, er hat ihn gestohlen.*   b. [?]*Ja, er hat ihn nicht gestohlen.*
      c. *Nein (er hat ihn nicht gestohlen).*   d. [?]*Nein, er hat ihn gestohlen.*
      e. *Doch (er hat ihn gestohlen).*   f. **Doch (er hat ihn nicht gestohlen).*

The presence of a third particle, *doch*, creates a more expressive system of response particles, obviating the need to add full or elliptical clauses as in English
(where the reliance on the clausal strategy is a Celtic feature, cf. Vennemann 2009).

4. Response particles and discourse particles

The particles *ja* and *doch* but not *nein* occur as discourse particles (modal particles);
is there a connection to their use as response particles?

4.1 Basic intutions about *ja* and *doch* as discourse particles

ja occur in V2 declarative clauses (i.e., in assertions) (Doherty 1985, Hentschel 1986, Ormelius-Sandblom 1997, Kwon 2005, Kratzer & Matthewson 2009, Grosz 2012, Thurmair 2013).

Thurmair (2013) summarizes recent approaches of the assertive modal particles *ja, doch, eben*
as expressing relations of the proposition that is currently asserted
to shared knowledge in the common ground.

(40) a. *(Heute gibts Gemüseauflauf.) Ina isst ja kein Fleisch.*
   b. *(Du kannst keinen Gänsebraten machen.) Ina isst doch kein Fleisch.*
   c. *(Klar, dass sie den Teller nicht leer isst.) Ina isst eben kein Fleisch*

Basic assumptions:

➢ *ja* connects to shared knowledge in the common ground.
➢ *doch* relates to shared knowledge that might not be present to the addressee momentarily.
➢ *eben* marks the proposition as evidently true

Grosz (2012) states that $[\![ja \; p]\!]^c$ and $[\![doch \; p]\!]^c$ are only defined iff

➢ for *ja* and *doch*: speaker in c takes p to be firmly established in the world w_c of c.
➢ for *doch*: There is a contextually salient proposition p′ such that
   – p′ is a focus alternative of p
   – the current utterance context c entails $\neg[p \wedge p']$

4.2 Some usage scenarios of discourse particles *ja* and *doch*

Examples by Grosz (2012)

(41) *Jan muss nicht kochen. Er hat ja / doch abgewaschen.*
    a. speaker takes 'Jan did he dishes' to be firmly established in the common ground.
    b. (for *doch*): There is a salient alternative, here 'Jan needs to do the dishes',
       and the context entails ¬['John washed up' ∧ 'John needs to do the dishes']

Speaker can also contradict the addressee:

(42) A: *Schau mal, die Blumen sind hässlich.*
    B: *Was hast du denn? Die Blumen sind* [??]*ja / doch schön!*
    a. B takes 'the flowers are beautiful' to be firmly established in the common ground
       (as both A and B can see them and presumably have shared value judgements)
    b. There is a salient alternative 'the flowers are ugly',
       and the context entails ¬['the flowers are beautiful' ∧ 'the flowers are ugly']

4.3 Relation *ja / doch* as response particles and as discourse particles

Recall interpretation of response particles *ja, doch*:

➤ *ja* is a propositional anaphor that takes up a salient propDR d anchored to a proposition p
   and asserts it: ASSERT(p)
➤ *doch* is a propositional anaphor that presupposes two salient propDRs d, d′ anchored to p, p′
   where d′ has a neg feature, and p′ = ¬p,
   and asserts p: ASSERT(p)

Obvious connections to discourse particle use:

➤ Both *ja, doch* presuppose a contextually given proposition p;
   – for discourse particles: p is given by **adjacent** sentence that identifies an established proposition
   – for response particles: p is given by **antecedent** sentence, as a propDR,
     not necessarily established as true (e.g. use of answer to questions)
➤ In addition, *doch* presupposes another contextually salient proposition p′
   such that p′ is a focus alternative to p, and ¬[p ∧ p′]
   – for discourse particles: p′ is constructed as a focus alternative of p
   – for response particles: p′ is given by the antecedent sentence as well, as a propDR,
     this happens if the antecedent clause contains a negation such that p′ is the negation of p,
     the condition ¬[p ∧ p′] is trivially satisfied, as p′ = ¬p

Anaphoric properties of *ja* (and first condition for *doch*) in both uses:

➤ discourse particle: proposition p is given by adjacent clause, but is connected to context;
   similar to full definite DPs: *the baby*
➤ response particle: proposition p is given by salient DR,
   similar to pronoun: *she*

4.4   Additional meaning components?

For *doch*, it has been claimed that there is an adversative meaning component
both for the response particle use and for the discourse particle use.

However, this is appears just as one prominent usage scenario:

➢ Recall: *doch* denotes proposition p,
   presupposes alternative proposition p′ and that ¬[p ∧ p′] part of common ground
➢ Hence p′ can be seen as the proposition that *doch* expresses an adversative attitude to,
➢ But there are clearly non-adversative uses, e.g. after negated questions:

(43) A: *Hat er keinen Keks gestohlen?*
       B: *Doch.*

For *ja*, possible interpretations like mirativity have been suggested.

(44) Du blutest ja an deiner Stirn!

➢ the proposition 'you are bleeding at your forehead' is not presupposed to be be already established in the preceding context,
➢ but nevertheless, it is treated as uncontrovertibly true.
➢ Mirative interpretation presumably resides in expressive prosody of the example.

4.5   Two more points concerning the response / discourse particle use of *ja/doch*

1. We have seen a categorial difference between English and German:

➢   English *yes* (and *no*) are speech acts (ForceP)
➢   German *ja, doch* (and *nein*) are propositions (TPs)

It is plausible to assume that this categorial difference (that German response particles are not ForcePs in their own right) is a crucial precondition for the use as discourse particles.

2. Concerning the theories about response particles

➢   Feature theory / ellipsis theory (Farkas & Roelofsen 2012)
➢   Anaphoric theory (Krifka 2013)

we notice that the anaphoric theory seems to lend itself to an explanation why *ja, doch* can also be used as discourse particles.

4.6   Historical developments

The history of *ja* and *doch* support the anaphoric theory for these particles:

Ja:

➢ from ie. pronominal *i-* leading to 3rd person demonstratives (cf. *jener* 'that one'),
   in Gothic: confirming particle, sentence equivalent (cf. Brugmann 1911, Hentschel 1986)
   "So, wie die Sprache nicht unterscheiden muß, ob ein Demonstrativum auf einen außersprachlichen oder einen
   rein sprachlichen Bezugspunkt verweist, kann das anaphorische *ja* sich ebenfalls sowohl auf sprachlich
   (Antwort-*ja*) als auch auf außersprachlich Vorgegebenes beziehen." (Hentschel p. 40)
➢ Use as response particle apparently ancient,
   but more closely related to today's discourse particle use:
   in Old High German: Answer to rhetorical questions, the answer is assumed to be part of
   contextual knowledge, that is, more related to discourse particle use.

Doch:

➢ from ie. pronominal *te-/to-* + emphatic clitic *-uh* (cf. Latin *-que*),
   emphatic meaning suggests contrastive / adversative interpretation of response particle,
   but in this case: discourse particle is older (some uses already in Gothic),
   response particle use starting only in 18th century (Hentschel p. 44).

4.7 What about *eben*?

Can be used as response to assertions, not to questions.

(45) A: (*Wir haben zuwenig Geld.*) *Wir können uns das Haus nicht leisten.*
        B: *Eben.*

Relation to discourse particle use:

(46) (*Wir haben zuwenig Geld.*) *Wir können uns das Haus eben nicht leisten*.

Proposal:

➢ *eben* picks up the antecedent proposition as a propositional discourse referent,
    or refers to the host proposition p.
➢ Presupposes that p follows from the knowledge of the common ground,
    i.e. it does not enrich the information content of the common ground.

Contrast to *also*:

(47) *Wir haben zu wenig Geld. Wir können uns das Haus also nicht leisten.*

➢ *also* refers to a particular antecedent proposition (or set of such propositions)
    and states that the host proposition p does follow from them.
➢ it follows that *also* cannot be used as a response particle,
    as its anaphoric component refers to the proposition from which the consequence is drawn.

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Remark: The assumption that *doch* presupposes two salient propositional discourse referents, d, ¬d is probably too strict.

(52) A: *Hat Ede denn (etwa) einen Keks gestohlen?*
 B: *Ja. / Doch.* (= he stole a cookie)
  Nein. (= he didn't steal a cookie)

A's question introduces only one discourse referent, d = 'Ede stole a cookie'. yet *doch* is possible. Perhaps the requirement is that a propositional discourse referent d is salient, but the context entails that ¬d might be possible; *doch* then picks up the discourse referent d. This allows, but does not require, that a discourse referent ¬d was introduced.

(53) A: *Hat Ede denn etwa keinen Keks gestohlen?*
 B: *Ja.* (= he stole a cookie)
  Nein. (= he didn't steal a cookie)
  Doch. (interpretation??)