Ist die denn schon 60?! An essay on *denn* (and *auch*) in questions

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1 Introduction

This essay explores some ideas about the pragmatic meanings of denn – and to a lesser extent auch – in German interrogative sentences. *Denn* in its most common use is a sentence initial connector meaning 'because' or 'since'. These uses are clearly distinguishable distributionally from the ones considered here, where *denn* occurs in a *Mittelfeld* position (i.e., after the finite verb or a subordinating complementizer), a position typical for German modal particles. I will assume for the time being that these two *denns* are distinct lexemes.

Auch is known first and foremost as a focus sensitive particle, most directly comparable to English *also*. The uses considered here, however, again have *auch* in a position typical of modal particles and with no obvious sensitivity to focus. Such uses are also found in declarative sentences, which, however, are of no importance in the present paper as we are interested in examples minimally contrasting *auch* with *denn*, which, as stated above, does not occur in declaratives. One can diagnose the *auch* in question by certain properties typical for German modal particles: they do not change truth conditions, they are not stressable, and they pretty much only occur right after the subject in a position following a complementizer in embedded clauses, or the finte verb in main declarative clauses. While this leaves some room for misdiagnosis in some cases, I am reasonably confident that the bulk of the examples to be discussed do *not* involves the additive particle *auch*, but the homophonous modal particle.

2 Denn and auch in polar questions

2.1 The idea

This essay explores the idea that *denn* and *auch* denote propositional operators with discourse oriented, non-at-issue meaning. Both require a contextually given proposition, which I refer to as THE CLAIM (with a captial 'C' whenever used in this technial sense), and mark the question they occur in as checking a (pre)condition for the Claim. *Denn* furthermore expresses that the Utterer (at least previously) expected a *negative* answer to the question. *Auch*, as opposed to that, expresses no such expectation and can therefore serve as a good minimal comparison point when it comes to pinpointing the exact pragmatic contribution of *denn*. The distribution and pragmatic effect of *denn* follow from just these assumptions, plus general pragmatic reasoning.

For a polar question like (1), we call the proposition that corresponds to the declarative version of the question – here: 'you are $18' - p_Q$.

(1) Bist du schon 18? are you already 18

Adding *denn*, according to our hypothesis, requires that there be a Claim (i.e., a contextually given proposition, as introduced above) for which the truth of p_Q -'you are 18' – is a precondition; furthermore, there needs to be a (previous) expectation on the part of U – the Utterer – that p_Q is false.

2.2 Museums, porn, and train tickets

An immediate consequence of the requirement that questions with *denn/auch* need to address a contextually given Claim is that such questions will not occur discourse initially. But that is not all. Consider scenario (2).

 (2) [at the museum ticket counter] A: One ticket please.
 U (the ticket sales person): Bist du (*denn/*auch) schon 18? are you *denn/*auch already 18

Without either particle, U's question is perfectly fine if, e.g., the price of admission is cheaper for minors than for adults. But as the only discernable Claim in the context is that A wants to buy a ticket, adding either particle makes U's response infelicitous, because the truth of the Claim is completely independent of the truth of p_Q , whereas *denn/auch* would require that p_Q is a prerequisite for it.

Things change if we move the exhange to the ticket booth of an adult film theater.

 (3) [at the adult film theater ticket booth] A: One ticket please.
 U (the ticket sales person): Bist du (denn/auch) schon 18? are you denn/auch already 18

Now both *denn* and *auch* sound natural in U's question. Why? Because by asking for a admission to a porn movie, A implicitly made the Claim that they are old enough to be allowed in; U is checking this claim by the question, since p_Q is a precondition for admission. According to our hypothesis above, using *denn* furthermore conveys a sense of scepticism (U doubts that A is 18), whereas *auch* is neutral in that regard. My judgement is indeed that the question with *denn* is more of a challenge, whereas with *auch* A is just checking what is required to be checked. In other words, A's chances of admission are better with an usher that uses *auch*. But that is subtle and subjective judgement; we will shortly see distributional differences between the two particles which makes the differences in their pragmatic meaning more discernable.

In (3), U could be in one of three states of mind regarding p_Q : They may be convinced that p_Q is true (A clearly looks older than 18); in that case, they probably wouldn't ask at all. They may think that A is *not* 18, because they look younger; in that case, they will ask, and may use *denn*, because they assumed that $\neg p_Q$. Or they may have no expectation regarding A's minor/adult status, in which case they have to ask anyway, which they may with or without *auch*.

Now let us change scenarios again.

 (4) [at train station ticket counter] A: One full price ticket please.
 U (the ticket sales person): Bist du (denn/#auch) schon 18? are you denn/#auch already 18

Here, *denn* sounds perfectly natural, but *auch* doesn't. The former datum is expected: By demanding a full price ticket, A implied the Claim that they are not eligible for any discounts, which among other things implies that they are not young enough to get a youth discount. If U knows that minors don't have to pay full price and suspects that A is under 18, it makes sense for them to ask (they're nice); suspecting that $\neg p_Q$ they can use *denn*. But if they have no expectation that $\neg p_Q$, there is also no need for them to ask, because, after all, there is nothing illegal about a minor riding with a full price ticket. In other words, unlike the porn scenario, the only reason to ask the question is if U suspects the answer to be 'no', in which case they'd use *denn* to signal that.

It is instructive to also consider the question without either particle in the full price scenario. According to what I just said, the plain questions 'Are you 18?' should be as odd as that with *auch* in this scenario. Unfortunately, I find it hard to ascertain the facts here. If I try the plain *Bist du schon 18*? in this

scenario, I immediately go for an incredulous intonation (a markedly low tone on *schon* before the high boundary typical of polar questions in general), with an effect very similar to the use of *denn*, i.e. signalling surprise or incredulity. A neutral version of the plain question, as would be perfectly natural in the museum scenario (where, recall, there was no reason to see an implied claim about A's age to begin with) does sound odd to me in the full price scenario. On the other hand, this judgement is certainly subtler than the one regarding the version with *auch*, which clearly conveys that, just as with the adult movie, it is a *condition* on paying full price to be 18, which, given that it is not, makes it sound very odd. So it may be that in fact *auch* is not as neutral as I assumed it to be, but rather conveys a *positive* expectation (i.e., that p_Q). In that case, it would be easier to predict that adding *auch* increases the oddness of the question in the full price scenario.

2.3 The sign on the train

We now have seen scenarios in which neither (museum), both (adult movie), or only one of the particles, *denn*, was possible (full price). For completeness we now consider a scenario that allows only *auch*. As first brought to my attention by András Báráni, Austrian trains often have a sign near the exit saying (5).

(5) Haben Sie auch nichts vergessen? have you auch nothing forgotten 'Do you have all your belongings?'

The purpose of this sign is to get passengers to check that they have collected all their belongings before disembarking the train. So the Claim here is 'passenger is ready to get off the train' (which the passenger made by going to where the sign is, i.e., the exit). A precondition for exiting (at least in the buletic sense) is that they have all their belongings, i.e., they didn't forget anything $(=p_Q)$. The use of *auch* (which, accorcing to my intuition, is not obligatory in this context) makes this connex explicit, and is furthermore compatible with (or perhaps even suggesting, see above) a positive answer. In comparison, using *denn* in the same context is clearly odd.

 (6) [sign on train] # Haben Sie denn nichts vergessen? have you denn nothing forgotten 'But do you have all your belongings?'

According to our story, this is expected: *denn* would signal an expected *negative* answer, that is: The passenger did forget something. But why should the author of the sign (say, the imaginary train conductor) have such an expectation?

3 Excursus: Relation to other pragmatic markers

3.1 Aber ('but')

The use of *denn* in interrogatives has a natural affinity to the use of *aber*, 'but'. For example, in the adult movie and full price scenarios, U could as felicitously have replied with (7).

(7)	A:	One	full	pric	e) ticket please	!
	U:	Aber	bis	du	(denn) schon	18?
		but	are	you	(denn) already	18

Likewise, if they were *sure* (not just suspecting) that A is a minor (i.e., that $\neg p_Q$) they could assert (8).

(8) Aber du bist noch nicht 18!
 but you are still not 18
 'But you're not 18 yet.'

On the other hand, in the museum scenario (age is relevant, but A made no Claim regarding that), *aber* is as odd as *denn/auch*. More instructively, it would also be completely misplaced on the train sign, where *auch* is perfectly natural.

(9) [museum] A: Admission for one, please. – # U: Aber bist du schon 18? but are you yet 18
[sign on train] Aber haben Sie (auch) nichts vergessen? but have you (auch) nothing forgotten

A plausible meaning for *aber* in declarative conjunctions is that *X aber Y* conveys that X and Y give (or suggest) different answers to the current question under discussion (QUD; Umbach 2004, 2005, see also Jordanoska 2020, ch.8,). This question under discussion can, for present purposes, be equated with the polar question version of our Claim, e.g., 'Should A be admitted to the adult movie?'; X in the above sense would be 'A wants to be admitted' (they asked), and Y 'A is not yet 18'. Clearly, these imply different answers to the QUD whether A should be admitted. Accordingly, (10) is, as expected, felicitous.

(10) Du willst ein (Vollpreis) Ticket aber du bist noch nicht 18. you want a (full price) ticket **but** you are yet not 18

As a next step, assume that A's asking for a ticket can go proxy for the first clause in (10), i.e., (8) is pragmatically equivalent to the second conjunct in (10); and, finally, in case *aber* introduces a question, assume that the questioner expects that the true answer to the question would be a proposition introducible

with *aber* in the context. That is, A in (7) expects the answer to the question 'are you 18 yet?' to be the one that would, in the context, suggest the negative answer to the QUD 'should you be admitted/pay full price?', namely 'no'; hence, it could, by the pragmatics for *aber* sketched above, be introduced by *aber* as in (8). If this chain of reasoning is by and large correct, we derive that the conditions on using *denn* in a polar question are very much the same as those for using *aber* for introducing a polar question or assertion.

3.2 Outer negation

Outer negation in polar question – like *denn* on the present proposal – signals a contrast between a previous expectation and a present open question (see Büring and Gunlogson 2000, Ladd 1981, Romero and Han 2004 a.o.). Thus, questions like those in (11) express a previous belief or expectation on the part of the questioner that the addressee *is*, indeed, a minor (whereas without *nicht* they can be neutral questions).

(11)	a.	Bist	du	nicht	(noch)	minderjährig?
		are	you	not	(still)	a minor
	b.	Bist	du	nicht	(erst)	17?
		are	you	not	(only)	17

And indeed, the questions in (11) could felicitously be used in the full price and adult theater scenarios above, but not in the, neutral, museum scenario. Likewise, a sign like (12) on a train seems as absurd as the one with *denn* in (6), suggesting, as it does, that the sign (or its author) somehow have reason to suspect that the passenger forgot something.

(12) #[sign on train] Haben Sie nicht etwas vergessen? have you not something forgotten 'Didn't you forget something?'

It should be noted that the propositions questioned in (11) and (12) are in effect the opposite of those questioned in the *denn* questions earlier (i.e., 'your **not** (yet) 18' and 'you did forget something'). This is predicted by the proposal explored here: With *denn*, the question itself is posed in such a way that the *positive* answer would confirm the Claim, while the previous expectation corresponds to the negative answer. The previous expectation in an outer negation question, on the other hand, is the content of the non-negated question (you're under 18), for which we now seek (dis)confirmation (I don't want to commit to what should be called the *positive* answer to an outer negation question; the important thing is that the previous expectation is the content of the question *without* the negation). Summing up, comparison with *aber* and outer negation gives us two tools to reaffirm the assumed pragmatic effect of *denn* in polar questions. At least to an approximation, we predict that a polar question can be introduced by *aber* in a given context if and only if it could felicitously host *denn* in the same context, and if and only if it could alternatively be asked as an outer negation question with the opposite propositional core in that context. As far as I can tell, these predictions seem to be born out.

4 Denn in constituent questions

4.1 Basic cases

Denn (unlike *auch*, see below) quite naturally occurs in constituent questions. As with polar questions, this always requires some prior context. Thus (13) is infelicitous if uttered out-of-the-blue to someone at the bus stop (though the question without *denn*, of course, is perfectly natural).

(13) Wie spät ist es denn? how late is it **denn** 'What time is it?'

A natural context for (13) would, e.g., be the one in (14).

(14) A: Gosh! We should really get going!' – U: Wie spät ist es denn?

So far, we have only treated the pragmatics of *denn* in polar questions, for which it was easy to determine p_Q , the proposition that should be true if the Claim is true, and which is being questioned. In order to extend this idea to constituent questions, I submit that we need to be able to pragmatically derive a polar-question-like meaning from the denotation of a constituent question; we need to cook down a set of many propositions (the possible answers to the constituent question) to a set of two (a polar question meaning).

Now, in scenario (14), the set of answers to the question 'What time is it?' *can* be partitioned into just two sub-sets: those times at which indeed we should get going, and those, earlier ones, at which we might as well linger; this partition corresponds to the meaning of the polar question 'Is it so late that we need to get going, or is it early enough to stay?'. The Claim, in our context, is it's already one of the former, whereas the previous expectation of the questioner U was that its one of the latter; thus *denn* is felicitous here. We may also observe that both replies in (15) would be pragmatically equivalent in scenario (14), as expected given the discussion in §3 above.

(15)	a.	Aber wie spät ist es?
		but how late is it
	b.	Ist es nicht noch zu früh?
		is it not still too early

So U's expectation is that the true answer to the question, namely the actual time, does *not* suggest the same as A's utterance: that it is time to go. At the same time, though, U concede the possibility that they were wrong and it is indeed time to get going, contrary to their previous belief. Else they wouldn't ask the question but simply say something like *Why? It's early still!*

A similar use is seen in (16).

(16) A: Paul hat mich beleidigt. – U: Was hat er denn gesagt?
P. has me insulted what has he denn said
'A: Paul insulted me. – U: Why, what did he say?'

The true answer to U's question is the content of what Paul said to A; the Claim is, of course, that Paul insulted A. Now, again, all the possible answers to the question of what Paul said can be partitioned into two relevant cells: Those that contain insults, thus confirming the Claim, and those that do not. By using *denn* in (16), U conveys that they did not previously expect Paul to insult A, or that they are still skeptical about that Claim.

4.2 Reflexion: Polar denn versus constituent question denn

What we have done in the previous subsection is, in effect, derive from the constituent question meaning (the set of its answers) a polar question meaning, a set of two propositions, one the disjunction of all answers that confirm the Claim, and one the disjunction of all answers that contradict it. Thereby we were able to assimilate the constituent question uses of *denn* to the polar question uses above. But one ingredient is missing: We assumed above that the form of a polar *denn* question (just like the parallel *auch* question) must be such that the *positive* answer to it confirms the claim (while the negative one doesn't, but is the one U previously suspected). But evidently, constituent questions do not have a positive answer, so where did that part of our pragmatics go? Put differently, how do we know which of the two pragmatically induced partition cells in the constituent question examples corresponds to the positive answer in the polar question examples?

The answer is that we don't need to know; all we need to distinguish for predicting when *denn* (or *auch*) can be used are those answers that confirm the Claim from those that don't, which we can in either case. The difference is that in polar questions, this distinction additionally influences the *form* of

the question, i.e. the choice of p_Q , the 'question radical', as it were, whereas in the constituent question case it doesn't. But, I submit, this is a *side effect* of the meaning of *denn* in polar questions; we do not need to write this form requirement (the positive answer to the polar *denn/auch* question must confirm the Claim) into the use conditions of *denn/auch* explicitly. For it has generally been observed that the form of a polar question is determined by the immediately contextually expected answer (if there is one), see, e.g., Büring and Gunlogson (2000).

That is to say, if I see that you have a full price ticket (or a ticket for the adult movie, for that matter), I will ask you *Are you 18 already*? rather than *Are you a minor*?, even though the two questions are semantically equivalent (i.e., they partition the set of possible worlds in the same way, assuming that minors are 17 and younger always), because the immediate contextual evidence suggests that you are at least 18, not younger. The Claim in our examples plays exactly the role of the immediate contextual evidence, so the fact that our polar questions are formed around the answer that confirms the Claim is simply a consequence of the general conditions that determine the form of a polar question (namely that p_Q is the proposition suggested by the immediate contextual evidence), regardless of whether the question contains *denn*, *aber* or neither of them. As no parallel correlation can be seen in those cases.

4.3 More on expectations

Returning, then, to our main discussion, one might think that (16) simply conveys the simpler meaning 'you know why I'm asking' as proposed, e.g., in Gutzmann (2008). However, contrast (16) with (17).

 (17) A: Ich habe mit Paul gesprochen. – U: Was hat er (#denn) gesagt. I have with P. spoken what has he **denn** said 'A: I spoke to Paul. – U: # Why, what did he say?'

Without further context (or accommodation thereof) inserting *denn* in U's reply in (17) is infelicitous. But why? A's utterance clearly begs the question of what Paul said to A, so A should know why U is asking. But, according to our story, using *denn* also signals that the true answer – what Paul said to A – confirms the contextually salient Claim. But all A claimed was that they talked to Paul, so it is unclear what answers to the question 'What did Paul say' could confirm or defy that Claim, and no other Claim is salient. Hence using *denn* here seems unmotivated. This shows that there is more to the meaning of *denn* than just 'You know why I'm asking'.

Furthermore, imagine a different scenario in which U for some reason is

not convinced that A actually spoke to Paul. Against that background, the use of *denn* in (17) become much more natural, the # disappears. Our story explains this: Now A *is* targeting a Claim of A's, namely that they talked to Paul. The answers to the question, i.e., the content of what Paul said, can now be partitioned into those that consist of things Paul would actually say (according to U) and those that consist of things Paul *wouldn't* say. If A's response falls into the former class, the Claim is confirmed and U might believe that A talked to Paul; if it falls into the latter, U is reassured in their suspicion that the Claim is false, i.e., A and Paul did not talk.

Denn also frequently occurs in *why*-questions. For example, to console little children when they cry, one would prototypically use (18).

(18) [child crying] U: Warum weinst du denn?
 why cry you denn
 'There, there! Why are you crying?'

The effect of adding *denn* here is subtle: it suggests that things are not really as bad (which makes it great for consoling a child, but somewhat condescending when addressed at a crying adult). Here's how can we explain this: The Claim here, made implicitly by the fact that the child is crying, is that the trigger for crying (the 'why') is so bad as to justify crying; the questioner, on the other hand, conveys that they didn't think it was that bad, i.e., the answer to the 'why' question falls in the partition cell of 'not-cry-worthy' triggers; things aren't that bad.

One of my favorite uses of *denn* in a *why*-question occurs in Peter F. Bringmann's 1980 road movie *Theo gegen den Rest der Welt*, where the protagonists at some point believe that they have finally recovered Theo's stolen truck. Upon looking into the driver's compartment, however, Ines exclaims (19) (imagine a Swiss accent if you don't recall the scene).

(19) Ines: Warum hat der denn das Steuer rechts?
 why has that **denn** the steering right
 'But why is the steering wheel on the right side?'

Analysis: The Claim, clearly, is that the truck is Theo's. The answers to the question can again be partitioned into those that contradict that Claim, among them the true one that the truck they found is a British one, and therefore not Theo's; and those that are compatile with the Claim, which is either the empty set, or consists of such far fetched propositions as 'someone moved the steering wheel in Theo's truck'. Naturally, Ines suspects that the former contains the true answer, as signalled by *denn*; the fact that she even poses the question,

rather than asserting *Aber der hat ja das Steuer rechts!* ('but this one has the steering on the right!'), i.e., is still entertaining the option that the Claim might be true after all, aptly reflects the well-meaning naïveté of the character.

4.4 Auch in constituent questions

For completeness' sake I will mention that while *auch* does appear in some constituent questions (though much more selectively than *denn*), I don't see how an extension of *auch*'s use in polar questions, parallel to the one sketched above for *denn*, could be developed for those cases.

The contribution of *auch* in constituent questions can pretty consistently be described as *Selber Schuld!*, 'X brought that onto themselves', where X is the subject of the sentence. Pertinent examples are given in (20).

(20)	a.	Warum hast du das auch gekauft?
		why have you that auch bought
		'Why would you buy this in the first place?'
	b.	Wer geht auch auf so eine Party?
		who goes auch to such a party
		'Who would go to that kind of party anyway?'

In case the subject is inanimate, the effect becomes slightly comical, or one has to assume that the people who constructed the subject referent brought it upon themselves. Thus (21), parallel to (19) above, wouldn't seem to make much sense in the scene described.

(21) #Warum hat der auch das Steuer rechtswhy has it auch the steering right'Why does it have the steering wheel on the right anyway?!'

When pondering (21) longer, I finally imagined a scenario in which Ines drives the truck and slightly brushes oncoming vehicles on her left. In her defense, she would utter (21), suggesting that the damage isn't her fault, but the fault of whoever constructed the truck with the steering wheel on the right.

If we follow the receipe used for *denn* above, we should expect that, e.g., in (20-b), there should be those answers to 'who goes to this kind of party?' that confirm the Claim (whatever the Claim is), and those that don't. Of course one could set the Claim to be something like 'I should feels sorry for those that went to the party', and the two answer propositions 'people I feel for go to this kind of the party' vis-à-vis 'only idiots go to this kind of party', with the latter being the true answer. But I fail to see why only such a specific kind of question should be available for this example. Why, for example, couldn't the Claim be 'this would be a fun party to go to' and the two answers 'charming and beautiful

people go to this party' (corroborating the claim) vis-á-vis 'idiots go to this kind of party' (undermining it)? In the light of this, I will refrain from trying to expand our analysis in this way, and assume instead that these occurrences of *auch* in constituent questions involve a different (though hopefully somehow related) lexeme *auch* than in the polar question cases.¹

5 Directions for further research (a.k.a. your 70th birthday)

5.1 Exclamative polar questions

In what we may call *exclamative polar questions*, addition of *denn* seems to mainly add emphasis or incredulity; *auch* on the other hand is simply infelicitous.

(22)	a.	Hast du (denn/#auch) den Verstand verloren?!				
		have you denn/#auch the mind lost				
	b.	Bin ich (denn/#auch) bescheuert?!				
		am I denn/#auch mad				
	c.	Bist du (denn/#auch) wahnsinnig?!				
		are you denn/#auch crazy				
		'Are you/am I out of your mind?				

It seems reasonably clear why *denn* is good in these cases: Clearly, the Utterer would not have previously expected that they or the addresse are out of their minds. But something in the context must have provided the Claim that they are, or at least appear to be, leading to the question. The oddness of *auch* could be explained if *auch*, by its lexical meaning or by scalar implicature in comparison with *denn*, implied that the positive answer (they are out of their mind) was the expected one, because clearly in that case an exclamative (which usually signals surprise) would be inappropriate.

5.2 Denn in declaratives

While *denn* is not usually grammatical in declarative sentences (unless used as an initial connector meaning 'because'), a web search did bring up some natu-

¹Iva Kocač (p.c. October 2023) points out to me that the uses of *auch* in polar questions discussed here may correspond directly to the uses of *eh* in Austrian German (e.g., *Bist (du) eh 18?*, 'are you **eh** 18?', in the adult movie scenario), whereas a parallel substituion in the constituent question cases is impossible (*#Warum hat der eh das Steuer rechts?*, 'why does it **eh** have the steering wheel on the right side?'). Systematic confirmation of this has to await another occasion; but in case there is a contrast, this could be seen as supporting the claim that the two *auchs* in the German German examples are indeed different lexems.

rally sounding examples with our *denn* in environments other than questions, for example (23).

(23) 'Die Aachener werden, so das bei einem frommen the A. will, insofar that with a pious Kirchenmann denn statthaft ist, die Statuten verfluchen.' church man denn proper is, the bylaws curse 'The people from Aachen/Aix-la-Chapelle will curse the bylaws, if that is proper in the presence of a pious man.'

In essence, *denn* in (23) is embedded in an *if* clause, which – not coincidentally I would claim – has a meaning close to a polar question ('is this proper in the presence of a pious man?'). One could indeed argue that there is a prior (or general) expectation that it is *not* proper to curse thusly in the presence of a man of the church, but that now one sees evidence for the claim that the people of Aachen nevertheless will. Similar examples are readily constructed, e.g., (24).

(24) Wenn sie es denn will, werde ich eine Rede halten.if she it **denn** wants will I a speech hold'I will give a speech, if that's indeed what she wants.'

As indicated by the inclusion of *indeed* in the English translation, what *denn* adds to the conditional in (24) is that the speaker is or was doubtful that she *would* want it, but no concedes that possibility and its consequences (they then would give that speech). Again, this does not seem too different from the use of *denn* in polar questions discussed in the main part of this paper. It raises the question what exactly the conditionals, but unhappy in declaratives and similar constructions.

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