Corpus Pragmatics (2019) 3:49–66
https://doi.org/10.1007/s41701-018-0046-y

ORIGINAL PAPER

How Long Does it Take to Say 'Well'? Evidence from the Audio BNC

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Received: 11 June 2018 / Accepted: 28 August 2018 / Published online: 14 September 2018

Abstract

This paper reports on an acoustic analysis of 'well' in conversation, building on recent attempts at examining the vocal realization of the marker (e.g., Aijmer in Understanding pragmatic markers. A variational pragmatic approach. Edinburgh University Press, Edinburgh 2013; Romero-Trillo in Corpus Linguistics and Linguistic Theory, 2018). 'Well' is a prime example of a highly multi-functional item performing a large number of distinct pragmatic and syntactic functions. The aim of the study is to test what I call, following Hoey (Lexical priming. A new theory of words and language. Routledge, London/New York, 2005), the 'priming hypothesis' suggesting that the syntactic and the pragmatic functions of 'well' are distinguishable on acoustic grounds, specifically by the *duration* they have in conversational speaking turns. The data examined include a subset of 9-word turns extracted from the Audio BNC (Coleman et al. in Audio BNC: the audio edition of the Spoken British National Corpus. Phonetics Laboratory, University of Oxford, Oxford, 2012) of which the durations of more than 300 tokens of 'well' were measured in Praat, an acoustic analysis software (Boersma and Weenink in Praat: doing phonetics by computer [Computer program], http://www.praat.org/, 2012). The results mostly confirm the priming hypothesis: syntactic 'well' has significantly *longer* duration than pragmatic 'well'. In the concluding sections I discuss this result with a view to the larger question as to how discourse duration enters into the range of factors, including not only duration but also collocation and position in the turn, that hearers in conversation draw on in order to disambiguate the distinct uses of 'well'. The study also offers intriguing implications for the theory of priming (Hoey in Lexical priming. A new theory of words and language. Routledge, London/New York, 2005), suggesting the possibility that polysemous words are not only primed for certain verbal contexts but also for certain properties pertaining to the non-verbal modalities.

Keywords Pragmatic markers · Well · Duration · Praat · Disambiguation

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Introduction

Quite likely, no other pragmatic marker has "received more attention than any other English pragmatic marker" (Aijmer 2013: 20) than 'well', both diachronically (see Brinton 2010 for an overview) and synchronically (see Rühlemann & Hilpert 2017 for an overview).

The focus in most analyses has been on the marker's multiple functions in conversation spanning a wide range "from dispreferred response signal to face-threatening minimiser to qualifier or frame" (Brinton 2010: 297).[1] Researchers have been tempted to relate distinct functions to 'one core meaning'. For example, Jucker (1993) examining the marker in a perspective informed by Relevance Theory argues that the core meaning of pragmatic 'well' is to signal that "the context created by an utterance may not be the most relevant one for the interpretation of the next utterance" (Jucker 1993: 450). Moreover, as some analysts have noted in passing, like other markers such as 'like' (Rühlemann 2007) and 'anyway' (Wennerstrom 2001), 'well' also "has quite a range of syntactic functions" (Stein 1985: 299) (cf. also Jucker 1993; Aijmer 2013). These syntactic functions have attracted much less scholarly interest. With its multiple pragmatic and syntactic functions, 'well' is easily among the most highly multi-functional items of the English language.

Describing the full range of uses of pragmatic 'well' is far beyond the aims of the present investigation (for a recent comprehensive discussion of functions of 'well', see Aijmer 2013). This present analysis will be concerned with three pragmatic functions; they are widely recognized and also attested in the sample underlying the present analysis: 'well' marking restarts, constructed dialog ('quotes'), and dispreferreds. A special focus will be placed on the latter function.

The restart marker function counts among what Aijmer (2013) classifies as self-reflexive functions; this functional class is associated with the speaker's metalinguistic awareness "of what type of interaction they are involved in, if something goes wrong in the process, and what their attitudes are" (Aijmer 2013: 4). Obviously, speaker-internal processes cannot be observed from the outside; what pragmatic markers do is act as indexicals of mental activity, that is, "as overt indicators of (or windows on) ongoing metalinguistic activity in the speaker's mind" (Aijmer 2013: 4). To illustrate, in (1), 'well' occurs in the context of self-repair, indexing the speaker's recognition that the numerical information "fifteen" may be incorrect and the subsequent correction to "thirteen" minutes. In (2), Alan responds to his interlocutor's complaint "we've had this problem in the past with John makes you wo- [wary] and cautious". The response is replete with 'symptoms' of hesitation, such as lengthening ("I mea:n") and filled ("erm") and unfilled pauses, some unusually long. While pauses and delays are also typical of dispreferreds, that is, responses not (fully) in line with the social expectations set up in the previous turn (e.g., Levinson 1983), Alan's assertion in line 9 "you can't help being aware of past experiences" provides a justification for the previous speaker's being "wary and cautious" and is

[1] 'Well' performs a 'frame' function when it separates constructed dialog from the surrounding discourse (cf. Jucker 1993), a function here referred to as 'quote marker'.

thus clearly in agreement with the previous speaker's critical stance toward John. Thus the delays here index, not disagreement, but Alan's (self-reflexive) carefulness in conveying his agreement with the critical appraisal of a co-acquaintance:

(1) well we got fifteen, **well** thirteen minutes (BNC: KC9 668; corrected transcription)

(2)

1	UNK:	we've had this problem in the past with John
2		makes you wo- [wary]
3	Alan:	[mmm]
4	UNK:	and cautious.
5	Alan:	yes **well** (.) erm
6		(2.9)
7		I mea:n
8		(1.5)
9		you can't help being aware of past experiences.

(BNC: KB0 1405-1412; corrected transcription)

The quote marker function and the dispreferred marker function, by contrast, serve a contextualizing function. Contextualization relates closely to Schiffrin's definition of pragmatic markers as "sequentially dependent elements that bracket units of talk" (Schiffrin 1987: 31; cf. also Schiffrin 1985); similarly, Fraser (1990) refers to pragmatic markers as 'discourse glue'. Contextualizing pragmatic markers "typically mark off segments in the discourse thus helping the hearer to understand how the stream of talk is organised" (Aijmer 2013: 6).[2] Contextualization is accomplished by indexing how some (portion of) discourse relates to some other (portion of) discourse, for example, as a continuation, juxtaposition, justification, digression, and so forth. The discourse relationship sign-posted by quote-marker 'well' is a change in 'footing' (Goffman 1981), that is, the change from the speaker's own words, uttered in the role as 'author', to a reported speaker's words, uttered in the role as 'animator'. In fast-pitched conversation where multiple tokens of constructed dialog (for example, in storytelling) may follow each other in quick succession pointing out this transition is an effective service to the hearer since the transition fom author to animator involves 'deictic projection' (Lyons 1977: 579), that is, a deictic-system transition, from the speaker's deictic system to the animated speaker's deictic system each requiring different viewpoints ('origos') from which to resolve reference. Quote-marker 'well' alerts the hearer that footing is being changed and facilitates resolution of the deictic references according to that other system. To illustrate, in fragment (3), each of the four constructed dialog tokens, indicated by quotation marks, is introduced with 'well':

[2] This intrinsic orientation toward the hearer makes pragmatic markers key elements of 'recipient design' (Sacks 1992). Also, discussions of pragmatic markers often seem unaware that their capacity "to indicate, often in very complex ways, just how the utterance that contains them is a response to, or a continuation of, some portion of the prior discourse" (Levinson 1983: 88), a capacity which makes them resources of discourse deixis (cf. Levinson 1983: 87–88; Levinson 2004: 119).

(3)

1	UNK:	the other, the other day we was on about,
2		Nicola said about oh she goes like that to Luke.
3		I said "↑oh you can't do that otherwise he won't be able to have babies"
4		so Nicola said "but he doesn't have babies, women have babies."
5		I said "**well** (0.4) it comes from a man."
6		So (0.6) Luke said "**well** what are they like¿"
7		So I said "**well** they're like little tadpoles."
8		And he went (0.9) "**well** (.) I can't ↑feel any."

(BNC: KC5 2018-2026; corrected transcription)

Finally, the dispreferred-marker function of 'well', alternatively referred to as 'dissonance' marker (Fraser 1990: 387), 'insufficiency' marker (Jucker 1993), or 'warning particle' (Levinson 2013: 108), operates over a broad spectrum of subtly differentiated sub-functions. They share two properties: they signal that 'well' is "primarily addressed to the relationship between a prior and a current turn" (Heritage 2015: 88) and they indicate shades of "nonstraightforwardness in responding" (Schegloff & Lerner 2009: 91) as, for example, in partial or evasive responses or in other forms of disagreement; for detailed accounts of these sub-functions see Aijmer (2013) and Heritage (2015). The conversation-analytic notion of 'dispreferred' denotes a second turn in a two-turn sequence—referred to as 'adjacency pair'—that fails to (fully) align with (or agree with) the course of action implemented by the first turn. For example, a yes/no question incorporates a bias toward a straightforward response conveying affirmation ("yes") or negation ("no"); a response that does not conform to the yes/no bias is dispreferred. Dispreference shows up in the "extra conversational work" (Liddicoat 2007: 111) a dispreferred turn does, including its "various kinds of structural complexity" (Levinson 1983: 307); this additional effort may manifest in delays, hesitations, accounts, and also 'well', which figures "standardly" (Levinson 1983: 334) among that structurally more complex design.

Consider for illustration fragment (4) featuring an interaction rife with instances of 'well' and, subtle disagreements at the level of implicature. June and Geoffrey are a long-time couple. They are talking about a friend of theirs and the unhappy marriage she has been in for a long time. In line 1, June says she is "surprised" but leaves open what she is surprised about, instead noting "she isn't stuck for them children anymore". Since the couple are talking about the friend's marriage, we may infer that the friend isn't stuck *in the marriage*. Given the negative evaluative prosody of the phrase 'being stuck', it seems clear that June implicitly evaluates the marriage as an unhappy one. From that perspective a tentative interpretation of her 'surprisal' would be that June is surprised that her friend has not gotten a divorce yet to free her from the failed marriage now that the kids are grown up. While Geoffrey's "oh yeah." in line 3 seems to provide some confirmation it remains unclear what exactly he is confirming. In line 5, however, it becomes apparent that Geoffrey takes a rather different tack on the friend's situation than his wife. By saying "[Let's face it] she erm (.) I mean she was the one who bloody married him!" he puts the blame for the friend's being stuck in a failed marriage on the friend herself. In doing so he challenges June's

implicature that now the friend would be free to finally file for a divorce. Going one step further, the challenge also questions the friend's right to a divorce. A lapse of 1.8 s follows. Finally, June breaks the silence by an emotionally delivered "well she ↑HAtes him!". This 'outbreak' indexes June's empathy with the friend's predicament. Given the empathic identification, the statement amounts to an implicit *assessment* that the friend's marriage is unbearable. Second, June contradicts Geoffrey's implicated questioning the friend's right to a divorce: by strongly empathizing with their friend she implicitly asserts that the friend has every right to wish to terminate the unbearable situation. As is known from Conversation Analysis, assessments come in pairs: first assessments by a first speaker engender second assessments by a second speaker (cf. Pomerantz 1984); also, assessments are preference-organized: preferred second assessments *agree* with first assessments (Goodwin and Goodwin 1992: 170; Pomerantz 1984: 62 ff.; Pomerantz and Heritage 2013). The agreement offered by Geoffrey, however, is lacklustre at best, as indexed by the delay and a rather mumbled "°yeah°". The conversation stalls for 5.7 s. The silence is broken again by June's "she literally hates him!", where the intensifying "literally" is used to provide an *upgraded* assessment. Again, Geoffrey's subsequent "yeah" fails to provide the sought emphatic affiliation with June's assessment. In pursuit of that affiliative second assessment, she upgrades her assessment yet again by making it *explicit* by saying "well I think that's awful (.)" and reinforcing it by the 'tail' "I do.". Geoffrey, however, defies that course of action: his response in lines 15–16 has typical ingredients of the structurally more complex design of a dispreferred second assessment: (i) it is prefaced by "well" (which occurs twice), (ii) it is slightly delayed, and (iii), most importantly, he distances himself from June's emphatically negative stance on the friend's marriage encapsulated in the extended reference "that", by saying "well I suppose that's what she thinks", the implicature being here 'that's what she thinks but not (necesssarily) what I think'.

(4)

1	June:	I'm surprised (0.9) y' know, she isn't stuck for them children mo- any more
2		[(if he'd been)]
3	Geoffrey:	[oh yeah.]
4	June:	[( )]
5	Geoffrey:	[Let's face it] she erm (.) I mean she was the one who bloody married him!
6		(1.8)
7	June:	**well** she ↑HAtes him!
8		(0.7)
9	Geoffrey:	°yeah°
10		(5.7)
11	June:	she literally hates him!
12	Geoffrey:	yeah.
13		(1.9)
14	June:	**well** I think that's awful (.) I do.
15	Geoffrey:	**well** yeah ( ) (0.6) **well** I suppose that's what she thinks,
16		if she gonna go through the rest of her life with a bloke she hates.

(BNC: KCT 7746-7755; corrected transcription)

The syntactic functions of 'well' include the use of 'well' as an adverb, an adjective, and the 'additive subjunct' function (Quirk et al. 1985: 609) in 'as well' (the uses of 'well' as noun and verb are unrelated; cf. Aijmer [2013]). The three syntactic functions are illustrated in (5)–(7):

(5) Adjective:
you do n't look very **well** this morning ma (BNC: KB1 11)
(6) Adverb:
Nat said her envelopes do n't stick very **well** (BNC: KC5 2124)
(7) Additive subjunct:
I meant to put this one out as **well** (BNC: KB0 442)

Only recently have researchers made attempts to approach 'well' via its *vocal/acoustic* properties. For example, Aijmer (2013) examines prosodic features of a number of pragmatic markers; the features include pausing, tempo, intensity, and pronunciation (reduced or full form). Interestingly, she finds that 'well' serving as 'insufficency' marker—here referred to as 'dispreferred marker'—and as quote marker are typically reduced ('w'll'). Romero-Trillo (2018) investigates 'tone'[3] realizations of the markers 'well', 'I mean', and 'you know', finding that by far the most common tone the pragmatic marker 'well' is realized in is tone 0, that is, without any tonicity. Gravano et al. (2012) studying acoustic properties of some pragmatic markers (not including 'well') find function-related variation of intonation, intensity, pitch, and duration. Note that none of these analyses have examined the *durations* of 'well', neither in its pragmatic nor syntactic uses.

The goal of this paper is to address this neglect. Specifically, I aim to test the hypothesis that duration distinguishes the pragmatic and syntactic functions of 'well'. I take this hypothesis to be true based on the following grounds. First, talk-in-interaction is inherently multimodal: "human communication is a system of systems, where the burden of information can be *shifted* from one part to another" (Levinson and Holler 2014: 1; added emphasis). That 'shiftability', or 'cross-modality' (Arndt and Janney 1987), becomes particularly relevant when it comes to multi-functional items such as 'well' that attend to a large palette of pragmatic and syntactic functions: it would be surprising if the broad range of variation that its acoustic design affords were lying idle, as it were, and did not contribute to easing the communicative pressure for functional disambiguation of the item in context. Second, the syntactic and pragmatic uses of 'well' behave not dissimilar to two senses of a polysemous word. Following Hoey's (2005) lexical priming theory we know that "[w]here it can be shown that a common sense of a polysemous word is primed to favour certain collocations, semantic associations and/or colligations, the rarer senses of the word will avoid those collocations, semantic associations and colligations" (Hoey 2005: 82). Hoey's theory specifies only idiomatic patternings (such as collocations, semantic associations, and colligations) that pertain to the verbal modality;

[3] The notion of 'tone' concerns "the upward/downward/level movement of the voice pitch in the Tone Unit" (Romero-Trillo 2015: 6). Tones include, for example, falling, rising, and level tones.

the theory does not include non-verbal patternings related to the vocal or gestural modalities. However, collocations, semantic associations, and colligations are ultimately merely facets of the context in which a polysemous or multi-functional word is uttered. Now, context, in a wider sense, also includes multimodal resources such as tone, duration, intensity, gesture, facial expression and body posture accompanying it, to name only a few. It is, a priori, hard to discern a reason why these wider contextual aspects should not contribute their share to how a word is primed in a speaker's mind.

Data and Methods

This research is based on CABNC (Albert et al. 2015), a new corpus consisting of 59 files of the 'demographically-sampled' (conversational) subcorpus of the BNC available in audio (Coleman et al. 2012), together amounting to "about 164 hours of audio" (Albert, pc). The corpus contains more than 2 million words produced by more than 600 distinct speakers drawn randomly from a wide-ranging socio-demographic spread (Crowdy 1994: 225). The defining feature of the CABNC is the addition of measurements of the durations of the roughly 2 million words in the corpus; the durations are recorded as attribute values in XML structure and can thus be extracted and examined.

Using XQuery (cf. Rühlemann et al. 2015) a sample was extracted from CABNC consisting of all 9-word turns containing 'well' occurring in any position or performing any function. Why 9-word turns? First, the resulting 435 turns with 443 occurrences of 'well' represent a sample size that is manageable in terms of acoustic analysis (see below); second, the 9-word length represents the average turn length in conversation (Rayson et al. 1997).

Given the availibility of the CABNC data as audio recordings, the examples used for this paper were re-transcribed using Jeffersonian transcription conventions (e.g., Hepburn and Bolden 2017) and following a procedure outlined in Rühlemann and Gee (2017).

However, the CABNC provided only the initial textual data. The durational data provided by the corpus were considered unsatisfactory as the accuracy rate of the timings in CABNC is only 67% (Renwick et al. 2013). To arrive at reliable durational measurements, the word lengths of all words in the 435 9-word turns were re-analyzed in Praat, a sophisticated acoustic analysis software (Boersma and Weenink 2012). To measure durations of instances of 'well', relevant sound files were read into Praat and listened to repeatedly, the spectral waveforms ('sonograms') were inspected, the target word 'well' was marked zooming in on the target and using 'valleys' in the waveform, and the duration was read off from Praat, as shown in Fig. 1.

Obviously, given co-articulation, poor audio quality, background noises, distance from the microphone, etc. a large number of the instances of 'well' in the sample could not be measured reliably. Also, in seven instances, 'well' could not be ascribed to any function, syntactic or pragmatic, with confidence. Thus, the number of instances of 'well' in the 9-word-turn sample whose lengths could be measured, and

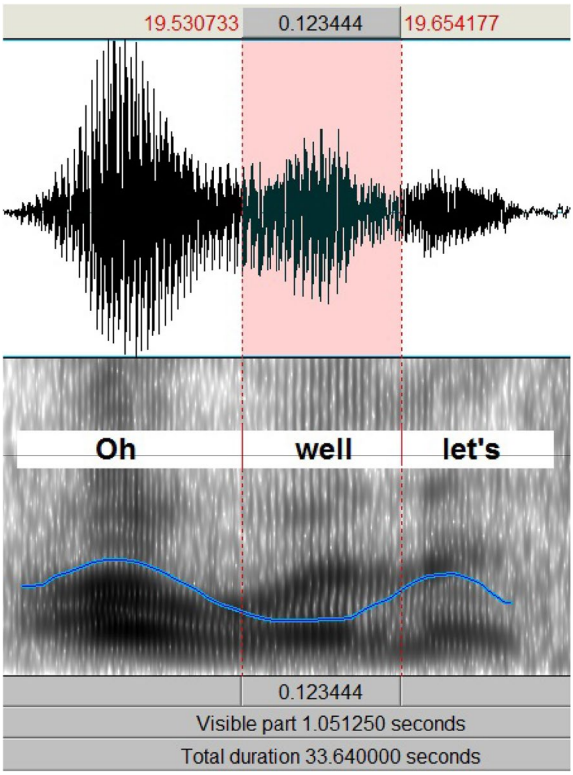

Fig. 1 Screen shot of the sonogram (upper panel) and pitch curve (blue) for "Oh well let's". (Color figure online)

Table 1 Counts of syntactic and pragmatic 'well' by subfunctions

Pragmatic function	Frequency	Syntactic function	Frequency
Dispreferred marker	215	Adjective	4
Quote marker	60	Adverb	13
Restart marker	5	Additive subjunct	29
Subtotal	280	*Subtotal*	46

whose functions could be determined, with confidence was 268 in 262 turns (thus, a small number occurred twice in a turn) by 159 distinct speakers. As expected, the quote-marker function that 'well' often performs in storytelling turns, which tend to be much longer than nine words (cf. Rühlemann 2013), was underrepresented in the sample. Therefore, an additional 58 durations of 'well' performing the quote-marker function in the Narrative Corpus (Rühlemann and O'Donnell 2012) were added to the sample, thus arriving at a total of 326 durations measured in Praat. The data were manually coded for whatever function 'well' realized in context. Table 1 gives the frequencies of 'well' in the six functional subsets.

As can be seen from the table, the pragmatic uses of 'well' account for the overwhelming majority of all uses, namely 86%, a proportion well in line with previous

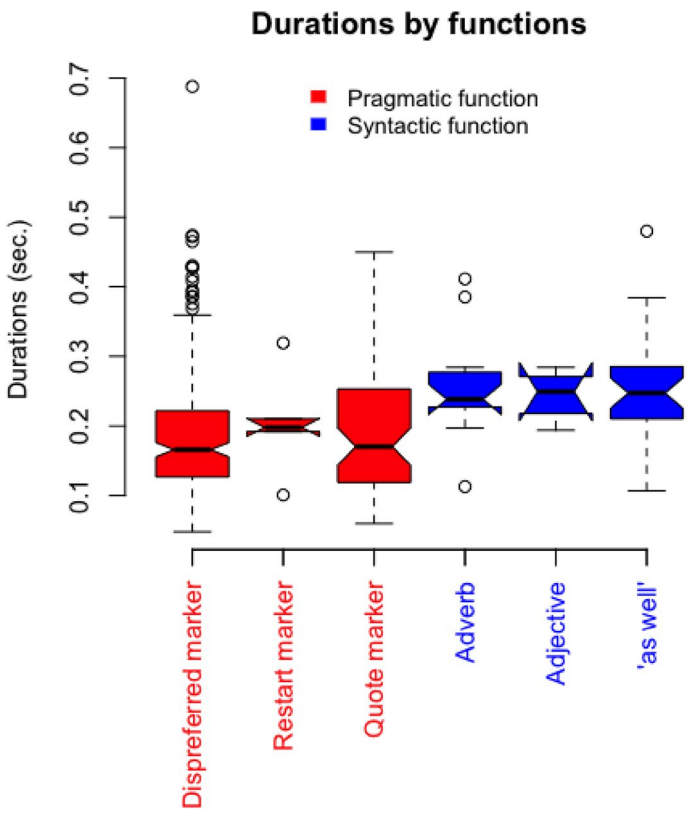

Fig. 2 Durations of 'well' by functions

reports, e.g., 86.5% in Aijmer (2013: 26), 87.4% in Romero-Trillo (2002: 777), and 88.0% in Romero-Trillo (2018).

The data were analyzed statistically in R (cf. Gries 2017). Given that the durations of the six functional subsets of 'well' were found to violate the normal distribution,[4] the durations for each of the six functions were compared using a Pairwise Wilcoxon rank sum test.

Results

The boxplots in Fig. 2 depict the durations for the three syntactic and the three pragmatic functions identified in the sample. The boxplot, while still infrequently used in linguistics, is in fact an unusually useful graphic in that it "summarizes a great deal of information quite clearly" (Crawley 2007: 155). The interpretation of the boxplot

[4] As is standard practice, a Shapiro–Wilk test was used to determine whether normality was violated.

Table 2 *p* values of Pairwise Wilcoxon rank sum test

	Dispreferred marker	Restart marker	Quote marker	Adjective	Adverb
Restart marker	ns	–	–	–	–
Quote marker	ns	ns	–	–	–
Adjective	ns	ns	ns	–	–
Adverb	$p < 0.5$	ns	ns	ns	–
Additive subjunct	$p < 0.001$	ns	$p < 0.5$	ns	ns

depends on its 'syntax', i.e., its main graphical elements: the empty circles indicate outliers, that is, "data points with values that are surprisingly large or small given all data points considered jointly" (Baayen 2008: 27); the bold horizontal lines cutting across the hinges represent the medians, and the notches show the width of the 95% confidence intervals; if the notches of different boxes do not cover the same range on the y-axis, this is strong indication that the medians will be significantly different (cf. Crawley 2007: 157).

First, note that the number of outliers (values considered untypical given the rest of the data) is far greatest for dispreferred 'well'. This indicates that, occasionally, dispreferred 'well' is stretched out and may gain quite some length (up to almost 0.7 s in the present data) but this is rather untypical of 'well' as a dispreferred marker. *Typically*, it is quite short, with a median duration of just 0.166 s. Further, the medians of 'well' as dispreferred and quote marker are almost identical; the same be can be said of the medians of adjective 'well' and additive subjunct 'well'. Also, the notches of the pragmatic subfunctions of 'well' overlap, as do the notches of the syntactic subfunctions but none of the notches of the syntactic subfunctions overlap with the notches of the pragmatic subfunctions. This is very clear indication that the median durations of pragmatic and, respectively, syntactic 'well' are function-internally the same but significantly distinct when compared to one another. This visual indication, however, needs to be put to the test. As noted, given non-normal distributions, the test used was the Pairwise Wicoxon rank sum test. Its results are summarized in Table 2.

The test mostly—but not wholly—supports what the boxplot suggested visually. To start, the test fully corroborates that the three pragmatic subfunctions as well as the three syntactic subfunctions have, on average, the same duration function-internally. This is indicated by the respective pairwise comparisons coming out insignificant. The test also confirms that the duration of dispreferred 'well' is significantly distinct from the durations of 'well' used as adjective and additive subjunct; the difference vis-à-vis adjective 'well', however, is insignificant. Also insignificant are the differences between restart marker 'well' and each of the syntactic functions. For restart marker 'well' the only significant pairing is with additive subjunct 'well'. On the whole, then, the test paints a nuanced picture: while the median durations of pragmatic and syntactic 'well' are function-internally the same, which is as indicated in the boxplot, not all pairwise comparison across the two functional classes turn out significant. We should bear in mind, however, that this may be due to the

partly very low numbers in which some functions are attested in the sample (cf. Table 1 above).

What can be said from the evidence provided by the test is that what was called the 'priming hypothesis' is largely confirmed: the durations of the syntactic and pragmatic subfunctions are internally the same while, if compared to one another, partly distinct. This is most clearly so for the major pragmatic subfunction, namely dispreferred marker 'well': when speakers wish to indicate that the turn they are about to launch is in some way a deviation from the course of action initiated by the previous turn(s), they will typically produce a 'well' that is significantly *shorter* than when they use a syntactic 'well'.

Discussion

The main finding of this study is that dispreferred marker 'well' is typically articulated with significantly shorter duration than (most) syntactic functions of 'well'. I will review the implications of this finding in the concluding section. In this discussion section I wish to put the spotlight on, not what is typical, but on what is *atypical*. That is, I will examine cases of by far the largest group of 'well's in the sample, namely dispreferred 'well', whose durations deviate from the central tendency. This focus is justified by the fact that while the median duration of dispreferred 'well' was 0.166 s, the analysis also showed that the durational range of dispreferred 'well' is quite extended (SD = 0.09540477), including a number of outliers with durations of up to or over half a second. Given this wide range and the internal variation it indicates, these instances do warrant further examination. To 'unlock' this variation, in what follows I will review the three most extreme examples from the long end and, respectively, the short end of the durational spectrum in their sequential contexts.

The longest 'well' in the sample has a duration of 0.688 s (represented in the upper most circle in the boxplot on the extreme left in Fig. 2); it occurs in fragment (8), an exchange between Albert and June, who are talking about Phil:

(8)

1	Albert:	Is that June's boyfriend then.
2	June:	**well** (0.601) that Phil, he's a (0.454) screw I think.
		(BNC: KB1 5128-5129; corrected transcription)

Albert asks a simple looking yes–no question: "Is that June's boyfriend then." (with the name "June" referring not to his interlocutor, who by coincidence has the same name, but to a non-present girl). Instead of a response that, preferably, answers the question in the positive, June in line 2 provides, not the sought information whether or not Phil is the girl's boyfriend, but a scathing critique of Phil: "he's a (0.454) screw I think"—undoubtedly a major attack on someone that her interlocutor Albert unsuspiciously thought might be the girl's boyfriend. June's response, then, is highly dispreferred: not only does it not answer the question in the positive, as the bias built into a positively formatted question would suggest; it also makes

Albert make look utterly naive and is hence highly face-threatening. Also, June's 'well' is followed by a lengthy pause of 0.601 s, undescoring the dispreference of her response.

The second longest 'well' in the sample with a duration of 0.472 s is presented in fragment (9). Dad and Mum are discussing food. Dad is inquiring about some "posh potato thing(s)" in line 1. While the inquiry looks like an information-seeking question, Mum demonstrably treats it as a 'pre-request' (cf. Levinson 1983, 2013; Schegloff 1988) to get to eat the potato meal: she 'skips' providing the information whether they have the "potato thing(s)" (thereby initiating the sequence *truncation* typical of pre-request sequences[5]) but immediately responds to the request action she ascribes to Dad's question. The response is indirectly formatted but still unmistakably a denial: by noting that "well (1.05) I didn't think that was very nice yesterday." she expresses her dislike of the food in question leaving her husband to infer that she would rather not have it tonight. Note also how her highly unfavorable evaluation is in stark contrast with Dad's evaluation, which is that it "was very nice!" (line 5). The disagreement, then, plays out on two levels: on the level of opinion (whether it was or wasn't nice) and on the level of action (whether they will or will not have it for dinner). Mum's response is thus doubly dispreferred, a dispreference also structurally reflected in the 0.105 s pause following 'well'.

(9)

1	Dad:	Have we got posh potato thing(s).
2	Mum:	**well** (1.05) I didn't think that was very nice yesterday.
3	Dad:	what.
4	Mum:	that (.) mixture that we had
5	Dad:	Wwo' 't was very nice!

(BNC: KBS: 147-151); corrected transcription

A third and last example of a long 'well' to be discussed here is in line 9 in (10). Carl and Susan have been discussing the ability to float of a befriended mother's child with Down's syndrome. Susan remarks that the child is doing "fine" (line 1) in the water. Carl in line 6 notes that "she had some floats on" thus raising the possibility that the child's floating may have been simply due to the support by the floats. Susan's following turn "we:' she's only a tot isn't she." rebuts this possibility by pointing out that the floats were used because of her age (as a "tot", i.e., toddler), not because of a Syndrome-caused inability to float. The marker in line 9 is articulated with elongated vowel (as shown by the colon) but reduced by omission of the final consonant; the duration of 'well' is 0.428 s; unlike the previous two examples,

[5] Pre-requests are turns that check a *precondition* for an action. For example, a customer's question "Do you have X?" checks the availability of X, which is the precondition for requesting X. According to Levinson (1983), pre-request sequences "properly have a four-position structure" (Levinson 1983: 357), consisting of 'pre-request' ('Do you have X?'), 'go ahead' ('Yes'), 'request' ('Can I have X?'), and 'response' (provision of X). Pre-request sequences are often *truncated*, that is, positions 2 and 3 are 'skipped' and the position 1 pre-request is immediately responded to by a position 4 turn granting or denying the request.

"we:" is not separated from the turn by a perceptible gap; i.e., the gap is below the humanly perceptual threshold of 120 ms (Heldner 2011).

(10)

1	Susan:	a::h no she's ↑fine
2		(1.4)
3		°yeah° cos they're not supposed to, y' see there again,
4		Down's Syndrome children are not supposed to be able to float
5		well she was doing a (0.6)
6	Carl:	she had some floats on I know but
7	Susan:	**we:'** she's only a tot isn't she.
8	Carl:	mhm

(BNC: KBG 1649-1655; corrected transcription)

These three extreme cases have in common that 'well' prefaces highly dispreferred actions; also, in two of the three examples, 'well' is separated from the turn-constructional unit by a lengthy pause. The former observation raises the question whether the duration of dispreferred 'well' might correlate with disagreement: the more disagreement 'well' foreshadows, the longer its duration. To at least initially approach this question, let us take a look at the other end of the durational spectrum, namely at the shortest instances of 'well' in the sample. If the hypothesis is correct, we would expect to find milder levels of disagreement; further, if the level of disagreement is also structurally marked, we would also expect to find shorter or no pauses following 'well'.

The shortest 'well' in the sample is shown in its sequential context in example (11). The marker (in line 7) is reduced to the labio-velar and a barely audible vowel; its duration is fleetingly short with 0.048 s. Also, there is no perceptible pause after the marker. Wendy and Bev are trying to agree on a day to go swimming. In the exchange preceding the fragment, Wendy has suggested Monday as a suitable day. She pursues this idea in lines 1, 3, and 5–6 initially supported in so doing by Bev only to be stopped by Bev in line 7. Bev's turn "we' let me just check me diary ()", however, does not amount to a rejection of Wendy's emerging plan to go on Moday, which would be the most dispreferred move, but merely puts the course of action on hold, which is less dispreferred.

(11)

1	Wen:	I'm working but it's half past twelve i(s)n't it?
2	Bev:	That's right, ↑yeah, I do[n't mind¿]
3	Wen:	[well let'] s let's let's say we're dry
4	Bev:	Yeah
5	Wen:	and see what the weather's like an' yee know,
6		I mean we now know
7	Bev:	**we'** let me just check me diary ( )

(BNC: KE6 900-905)

The second-shortest duration occurs in line 7 in (12). Here the phonological reduction is taken to extremes: only /w/ is articulated; the duration is 0.051 s and again the marker is not followed by a perceptible pause. The speakers are discussing Joyce's wish to get a new video. The first unidentified speaker UNK1 introduces a place "at Bentley" where Joyce "might get one (0.3) that's reasonable", while the second unidentified speaker UNK2 states in somewhat more definitive terms "you should be able to get one Joyce". Speaker UNK2's turn cannot be seen in disagreement with Joyce's preceding turns, which were minimal confirmations of positively formatted questions. It appears that the only divergence from social expectations is the slight upgrade in certainty from UNK1's tentative "you might get one" to UNK2's slightly more assertive "you should be able to get one".

(12)

1	UNK1:	There's a place at Bentley on yo' left hand side,
2		you might get one (0.3) that's reasonable
3	UNK2:	d' you want a new video?
4	Joyce:	°yeah°
5	UNK2:	a new one?
6		°mm°
7	UNK2:	**w'** you should be able to get one Joyce

(BNC: KB2 2393-2397; corrected transcription)

The third-shortest 'well' occurs in (13). As before, 'well' is heavily reduced, which results in a duration of 0.059 s; as in the previous two examples, the turn itself follows immediately after the marker. The speakers are discussing the origins of several family members. Heidi in line 2 inquires about where she was bred, locating it tentatively as "here" in line 3. Vicki's "mhm" confirms this reference as correct. A long pause of more than 12 s ensues. Finally, Joan self-selects to expand the sequence by saying "we' you spent your (.) first four years in Malton." Note that she audibly places the nuclear stress on the adjective "first", which suggests that she is treating the phrase "first four years" as the focal information, not the place reference "Malton". If this interpretation is correct, Joan's turn provides not a disagreement with the informational status quo—that Heidi was raised in Malton—but that she was raised "here" only the first four years of her life. This is not a denial of the information that Heidi and Vicky had agreed on—that Heidi was bred in Malton—but merely an informational refinement.

(13)

1	Vicki:	Northampton, Geoff was born in [Wiltshire].
2	Heidi:	[Where] would you say I was bred.
3		Here¿
4		(0.8)
5	Vicki:	mhm.
6		(12.1)
7	Joan:	**we'** you spent your (.) first four years in Malton.

(BNC: KC3: 1311-1315)

The examples reviewed seem to be in line with the hypothesis that duration correlates with level of disagreement: we find strong disagreements associated with long durations of, and also pauses after, the marker but clearly weaker disagreements when 'well' has short durations, in which case it is also phonologically reduced and not marked off by silence. Obviously, examining a mere six examples is insufficient to make a sweeping claim. The hypothesis is therefore left for future research to be tested more rigorously.

Conclusions

The main quantitative finding of this study was that dispreferred 'well' is significantly shorter than (most) syntactic uses of 'well'. This finding offers a number of intriguing implications, which I will sketch out in the following.

The finding is consistent with Romero-Trillo's above noted finding of the lack of tonicity of pragmatic marker 'well'; it also chimes in well with Aijmer's observation that 'well' marking dispreferreds and quotation is phonologically reduced. Taken together, the three findings seem to suggest that *typically* intonation, articulation, and duration work in unison: pragmatic marker 'well' in its key incarnation as a dispreferred marker is toneless, reduced, and short. Also, the finding is consistent with Gravano et al. (2012), who found duration to be correlated with specific pragmatic functions of select pragmatic markers.

However, while the shorter duration of pragmatic 'well' may be true in most cases, we have also reviewed and discussed evidence to suggest that dispreferred 'well' may at times also be long and without any reduction, particularly when strong disagreement emerged in the interaction. We hypothesized that duration of 'dispreferred 'well' may correlate with the level of disagreement expressed in the 'well'-prefaced turn: the stronger the disagreement, the longer 'well' (which may also be coupled to fuller articulation and longer post-'well' silence); the weaker the disagreement, the shorter 'well' (and also the more reduced its articulation and the shorter the pause following it). We leave this (intriguing) hypothesis to be examined to future research.

A cautionary note is due with regard to additive subjunct 'well'. The overwhelming majority of 'as well' occur in turn-final position. Turn-final position has been observed to be subject to phonological variation: a large amount of research concerned with turn transition suggests that turn-final words, specifically turn-final syllables, get lengthened by current speakers to indicate turn completion (and thus to put on display their readiness to yield the turn) (e.g., Gussenhoven and Rietveld 1992; Turk and Shattuck-Hufnagel 2007; Levinson and Torreira 2015; Barthel et al. 2017; Bögels and Torreira 2015). Position in turn has not been factored in in this study. Given its well-established influence on durations of turn-final words it certainly would have to be included in a more far-reaching investigation.

Second, the finding suggests the possibility that duration could be a resource that hearers draw on in conversation to disambiguate 'well'. 'Well' with its multiple functions poses a potential problem for hearers in fast-pitched conversation. Obviously, a lot of the work to disambiguate 'well' will be accomplished

by exploiting other resources, most notably position and collocation. Regarding position, quote-marker 'well' and restart-marker 'well' will typically occur turn-internally, as most quotations follow a reporting clause ('he said', 'she said', etc.) and restarts, by default, follow a false start and will, hence, also occur inside the turn; also, 'well' in turn-initial position—the 'natural' position for 'well' (De Klerk 2005: 1190; see also Heritage 2013, 2015)—is highly likely to perform a dispreferred marker function. Regarding collocation, 'well' in combination with other markers such as 'oh', 'erm', or 'yeah' is typically the dispreferred marker 'well' (Heritage 2015), while 'well' following an intensifier such as 'very', 'rather', or 'really' is typically an instance of adverbial 'well'. However, there may be cases where these 'predictors' fail, that is, where neither position nor collocation provide sufficient clues as to the function of 'well'. To cite just two relevant examples:

(8) oh it does n't **well** before it was alright

(9) ever such a **well** well-paid job is n't it

In neither example does the position or the collocational environment alone help to clarify the role of 'well'. Clearly, phonology must be the deciding factor: for example, if 'well' was used as a restart marker, it will likely have been set off from the surrounding speech by pauses, and/or marked by decreased length (and possibly also reduced articulation and lacking tonicity). In a comprehensive study investigating how hearers disentangle distinct functions of 'well', all of these factors, including duration, will have to be taken into account to adequately model the hearer's experience in conversation.

Finally, it is worth considering the findings in the light of Hoey's (2005) theory of lexical priming. Of specific relevance in the present connection is Hoey's 6th priming hypothesis, which is concerned with polysemous words, an analogue to multifunctional words such as 'well': "[w]hen a word is polysemous, the collocations, semantic associations and colligations of one sense of the word differ from those of the other sense" (Hoey 2005: 13). Hoey's lexical priming hypothesis is strictly limited to priming related to the verbal modality; it does not account for non-verbal elements such as, for example, duration, a variable pertaining to the vocal modality. Given that the verbal modality is merely "the tip of an iceberg riding on a deep infrastructure of communicational abilities" (Levinson and Holler 2014: 2) built from the large semiotic inventory of the vocal and the gestural modalities it is hard to resist the temptation to hypothesize that 'priming' does include non-verbal elements such that the priming hypothesis for polysemous words would have to be extended to comprise not only 'the collocations, semantic associations and colligations' but also the discourse durations, and possibly also other paralinguistic characteristics (such as tones and articulation patterns) and perhaps even gestural components, to distinguish one sense, or in the case of 'well', one function from the other. All this pilot study can do, though, is propose this possibility. Examining the possibility with due scientific rigor needs to be left to future, more comprehensive multimodal research.

Companies with Ethical Standards

Conflict of interest The author states that there is no conflict of interest.

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