

Click bait: Forward-reference as lure in online news headlines



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Abstract

This is why you should read this article. Although such an opening statement does not make much sense read in isolation, journalists often write headlines like this on news websites. They use the forward-referring technique as a stylistic and narrative luring device trying to induce anticipation and curiosity so the readers click (or tap on) the headline and read on. In this article, we map the use of forward-referring headlines in online news journalism by conducting an analysis of 100,000 headlines from 10 different Danish news websites. The results show that commercialization and tabloidization seem to lead to a recurrent use of forward-reference in Danish online news headlines. In addition, the article contributes to reference theory by expanding previous models on phoricity to include multimodal references on the web. © 2014 Elsevier B.V. All rights reserved.

Keywords: Online news headlines; Forward-reference; Cataphora; Discourse deixis; Media commercialization; Tabloidization

1. Introduction

What makes the reader click? This question can be considered the single most important issue for a journalist when writing headlines for online news media. If the readers do not click (or tap) on the headlines, they do not read the stories, leading to less activity on the news page and, thus, less potential for commercial revenue.

Journalists, by tradition, use a variety of strategies to make their headlines catch the readers' attention. Some use stylistic and narrative devices to make the headline seem (more) interesting (Lindemann, 1990; Schaffer, 1995; Bucaria, 2004; Ifantidou, 2009), while others center on sensationalism (Molek-Kozakowska, 2013), provoking content (Wallberg, 2013:13) and other types of gossip-like content emphasizing sex, scandal, self-improvement, tragedy and the para- or supernatural (Schaffer, 1995). This paper will focus on a widely used, but sparsely described, variant of the stylistic and narrative techniques in online news: forward-reference.

Forward-reference in headlines occurs in two forms, discourse deixis and cataphora. Following Yang (2011:129), we define forward-referring discourse deixis as *reference to forthcoming (parts of the) discourse relative to the current location in the discourse*, e.g. 'This is the best news story you will ever read.' In comparison, cataphora (Halliday and Hasan, 1976) is a closely related concept. Cataphors point forward as well, though not at the discourse level, but to a word or a phrase later in the sentence or text, e.g. 'When he arrived at the crime scene, the journalist interviewed the victim's wife.' Here, the pronoun *he* refers to the postcedent, *the journalist*, later in the sentence.

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The use of forward-referring headlines on the web is illustrated in the following examples. The first is a headline from an editorial blog on bbc.co.uk, the second a news headline from thesun.co.uk, while the third is a headline from the media site upworthy.com.

- (1) This is an A-minus paper? (bbc.co.uk)
- (2) He loves Beatles, menthol cigs..and longs for muscles like Van Damme [sic] (thesun.co.uk)
- (3) This Amazing Kid Died. What He Left Behind is Wondtacular (upworthy.com)

In (1) the pronoun *this* refers deictically to a forthcoming discourse segment in the full text that must be read or viewed in order for the reader to understand what is being referred to. Thus, the pronoun can be regarded as a sort of teaser, an information gap (Loewenstein, 1994, 2003; Golman and Loewenstein, 2013) that must be filled, inciting the readers to click and see what *this paper* is. Later in the text, it is revealed that it is a very short and presumably plagiarized final essay by an athlete from University of North Carolina's athletic department that received a grade of A minus. The paper was part of an academic fraud scandal in the spring of 2014.

Similarly, the pronoun *he* in (2) points forwards, not at a discourse segment, but at a name, and is thus an instance of cataphora. If the curious reader clicks and reads on to find out who *he* is, it is, surprisingly, revealed that the person being referred to is North-Korean despot Kim Jong-un.

Finally, (3) is an example of a viral hit that has gained over 15 million pageviews (Grobart, 2013). This popularity is perhaps prompted by the emotional wording, or, as proposed by Fitts (2014), by the curiosity inducing information gap created by the pronouns *this* and *what*.

As observed by Baicchi (2004): "The use of such empty pronouns is strategic and satisfies the need for creating expectations and suspense." (2004:26). A point elaborated on by Wulff (1996) and Wales (1996): "The greater 'the distance', so to speak, between 3PP [third person pronoun] and NP [nominal phrase], the greater an effect of suspense and anticipation. It is not surprising, therefore, that cataphora both within the sentence and between sentences is now a regular journalistic device." (Wales, 1996:39).

It should be noted that it has not been comprehensively examined if forward-reference in headlines actually generates curiosity and suspense – it might as well, in some instances, lead to annoyance if the reader just wishes to skim the headlines.² However, a reception study conducted by Ifantidou (2009) found that the readers, in this case college students, did not care if there were underdetermined semantic meanings in headlines as long as they were found creative and riveting. It can thus be assumed that forward-reference does not lead to annoyance, but rather curiosity and suspense, as long as the reference is used in a way that is considered creative and riveting by the reader.³

Furthermore, concerning the claim of generated anticipation, previous effect studies (van Gompel and Liversedge, 2003; Kazanina et al., 2007) show that when encountering a cataphor, the parser predicts that the postcedent will occur later in the discourse and, thus, builds up (syntactic) anticipation. This effect has been summarized by Strauss and Feiz (2014): "Cataphoric reference [...] requires that the listener or reader attends more closely to the upcoming discourse, because a referent has just been introduced *as if it were already known or previously mentioned*, when in fact, it will not emerge until some time later in the discourse." (2014:148, original emphases).

2. Research question

In this paper we will suggest a multimodal expansion of the phoric reference system based on the different types of references that occur in headlines in online news media. Using this as a stepping stone, we will set up an analysis of 100,000 headlines on 10 different Danish news websites in order to examine how forward-referring headlines are used in online news media, to what extent and in which type of content.

In an international setting, Danish news websites can be considered a fitting case due to the widespread usage of internet in Denmark⁴ leading to a widespread consumption of web news: Second to TV, web news is the primary form of news consumption in Denmark (Nielsen and Schröder, 2013:21).

Still, a reservation has to be given. It is somewhat uncertain in what way an analysis of forward-referring headlines in Danish media can be considered representative for other cultural settings, since discourse deixis and cataphors may be expressed in different ways in different languages. For instance, in Nunggubuyu, a non-Pama-Nyungan language of

² According to a recent unpublished survey on click-bait in newsfeeds, conducted by Facebook researchers El-Arini and Tang (2014), "[...] 80% of the time people preferred headlines that helped them decide if they wanted to read the full article before they had to click through."

³ Moreover, forward-referring headlines seem to be widely read. Of the 10 most viewed stories in 2013 on Danish public service news pages tv2.dk and dr.dk, more than half of the headlines – 5 and 7 on tv2.dk and dr.dk, respectively – were forward-referring (Blom and Hansen, 2014).

⁴ According to Reuters Institute (Newman and Levy, 2013:7), 90 percent of Danes use the Internet.

northern Australia, there are special forms of demonstratives for deictic discourse use only (Himmelman, 1996:225), while in other types of languages, Danish for instance, there are no demonstratives *with the sole purpose* of referring to the discourse. However, all languages seem to have a demonstrative system (Diessel, 2006:483), and thus ways of referring forwards and backwards in the discourse. Furthermore, it seems feasible that the Germanic languages have similar ways of constructing forward-reference due to their historically related pronominal and demonstrative systems, e.g.:

- (4) *This* is a remarkable story (English)
- (5) *Dette* er en bemærkelsesværdig historie (Danish)
- (6) *Dies* ist eine bemerkenswerte Geschichte (German)

Form variations do occur, though. For instance, modern Danish distinguishes between colloquial and formal demonstratives. In colloquial Danish, *den her*, *det her*, *de her* correspond to proximal and forward-referring *this* in English, while *den* (*der*), *det* (*der*), *de* (*der*) correspond to distal and backward-referring *that*. However, this system is rarely used in written (formal) Danish. Instead, *denne*, *dette*, *disse* are used as proximal and forward-referring forms, while *den*, *det*, *de* are used as distal and backward-referring forms (Therkelsen, 2003) having replaced the archaic *hin*, *hint*, *hine* in recent times. Therefore, Danish journalists have the choice of being either colloquial or formal when referring forward in the discourse. There are other variations as well, and to some degree the results of the analysis might therefore be language specific.

The paper contributes to previous studies⁵ of reference in news headlines (Mårdh, 1980; Jenkins, 1990; Kronrod and Engel, 2001) and the pragmatic functions of headlines (Iarovici and Amel, 1989; Dor, 2003; Molek-Kozakowska, 2013). Furthermore, it expands on the very sparse studies on forward-referring news headlines, which can be comprised to the works of Jenkins (1990) and Baicchi (2004). Jenkins (1990) offers a quantitative account of ellipsis in headlines, treating ellipsis of determiners in headlines as (potential) cataphors. She concludes her analysis by stating that ellipsis “[...] is cataphoric in the sense that some of the empty slots cannot be filled with confidence until the ensuing text has been read” (Jenkins, 1990:361). Baicchi (2004) also considers some instances of ellipsis in headlines as cataphors (2004:18), but this is not her primary agenda. Instead, she considers cataphora an instance of indexicality, thus treating cataphora as a semiotic phenomenon, in order to account for the complexity of headlines, including delays in accessing the referents in the text. In our theoretical section (section 5), we will return to both Jenkins’ and Baicchi’s notion of ellipsis as cataphora.

3. Hypotheses

Since discourse deixis and cataphora do not carry any full content in headlines, they must, tentatively, be considered a device primarily used for creating anticipation and making readers click, rather than for summarizing the story. Hence, the use of forward-referring headlines may clash with the traditional writing norms of ‘quality’ news journalism in which headlines are used to summarize the story, as well as to catch the attention (Bell, 1991:189; Kronrod and Engel, 2001:686; Andrew, 2007:24; Ifantidou, 2009:699).

As a consequence, the *intended* perlocutionary effect of forward-referring headlines does *not* match Dor’s (2003) hypothesis that the “best headline for a story is thus not supposed to make the ordinary reader go on reading the story, but to ensure that the reader has indeed received the best ‘deal’ in reading the headline itself.” (2003:718). On the contrary, we will argue that forward-referring headlines are indeed meant to make the ordinary reader click and go on reading, making it a bad ‘deal’ to just read the headline – because read in isolation, a discourse deictic or cataphoric headline does not make much, if any, sense. The *optimal relevancy* (Dor, 2003:696) is therefore for the reader to click on the headline and read (parts of) the story, not to scan the headline and move on to the next story straight away. This claim corresponds to Ifantidou’s (2009) proposed argument: “If headlines lack in informative value with respect to the article introduced, their function to attract attention may be more promising as a goal to fulfill.” (2007:700). In addition, it concurs with Kronrod and Engel’s (2001) explanation for the preference for high accessibility markers⁶ in headlines: “[A] headline which supplies perfectly explicit information may tempt the reader to ignore the piece itself and move on to the next headline. Therefore, the headline is constructed in such a way as to not give too much information, so that the reader is driven to read the whole reportage” (2001:697). A point that is also emphasized by Molek-Kozakowska (2013): “The fact that readers are sometimes inclined to devote attention to following stories [...], suggests that headlines are ‘opening’ devices, which make readers invest attention to ‘seek closure’[...].” (2013:187).

⁵ These can be grouped into studies focusing on *production* (Bell, 1984, 1991), *reception and effect* (Perfetti et al., 1987; León, 1997; Ifantidou, 2009; Brône and Coulson, 2010), *content* (Althaus et al., 2001; Andrew, 2007), *tropes and figures* (De Knop, 1985; Lindemann, 1990; Schaffer, 1995; Bucaria, 2004; Molek-Kozakowska, 2014) in addition to the above-mentioned studies on *reference* and *pragmatic function*.

⁶ That is, reference expressions such as personal pronouns used by the addresser to introduce a discourse referent that has a high mental accessibility for the addressee (Ariel, 1988).

We hypothesize that journalists use forward-referring headlines in order to generate clicks/taps and reading activity for financial reasons. The business model of online news media sites are predominantly based on advertisements (Thurman and Herbert, 2007) while paywalls, although often hyped, still seem to be secondary when it comes to financial revenues (Myllylahti, 2014). This means that most online news media depend on clicks/taps and reading activity in order to attract advertisers on a market where other online services and sites attract considerably more readers than most traditional news media institutions (Greer, 2004:113).

(H1) Forward-reference in headlines is more frequently used on commercial news websites than non-commercial news websites.

In Denmark, some commercial news websites have paywalls, while others do not. Since paywalled media sites can be expected to focus more on subscription revenues than ad revenues, the paywalled sites can be considered less commercialized expanding the hypothesis.

(H2) Forward-reference in headlines is more frequently used on commercial news websites without paywalls than commercial websites with paywalls.

Furthermore, forward-referring headlines can be considered akin to the tabloid tradition of running sensational stories which are supposed to provoke sensory and emotional reactions (Grabe et al., 2001) because they are “unexpected, dramatic, or appeal to readers’ curiosity”, as summed up by Skovsgaard (2014:202, *our emphasis*). Based on these thoughts, we hypothesize that there is a correlation between the frequency of forward-referring headlines used as ‘click bait’ and the level of tabloidization of the media outlet.

(H3) Forward-reference in headlines is more frequently used on tabloid news websites than non-tabloid news websites.

Tabloid journalism is notoriously hard to define, but we will follow Sparks (2000) who considers sensations, emotions and private lives the content trademark in tabloid journalism (cf. Skovsgaard, 2014 for a detailed account of the terms sensationalism and privatization).

4. Method and data

We have chosen a quantitative two step big data analysis with the purpose of answering our research questions and testing our hypotheses. Initially, we analyze 2000 headlines from the Danish news page tv2.dk. tv2.dk is an online news page commercially funded and run by the Danish public service station TV 2. This particular media is of special interest with regards to our hypotheses because it has a conflict of interest. On the one hand, it has a set of public service obligations, and on the other hand, it is commercially dependent. So it is neither a case of solely commercialization, nor of solely public service journalism, making it the ideal preliminary case as a media placed in the middle of different interests.

The headlines were randomly collected by an automated news aggregator (RSS-reader)⁷ during the period 1 January, 2013–31 December, 2013. This was done in order to (a) inductively-deductively develop a multimodal phoric reference model fitted to analyze online news headlines (presented in section 5), (b) examine which types of forward-referring expressions are used in the headlines, (c) find the most frequently used cataphorical and discourse deictic lexemes in order to pave the way for an automated lexeme search in a bigger data set, and (d) map the distribution of forward-referring headlines on news sites such as tv2.dk.

We have coded headlines as forward-referring if they contain one or more deictic or cataphoric expression(s) that refer forward to a word, a phrase, a sentence or (a part(s) of) the discourse in the full article. The headlines have also been coded in different content categories based on the five main news categories used on tv2.dk: news, sports, weather, lifestyle, and gadgets.

In the next phase, we have expanded our data set from 2000 to 100,000 randomly chosen headlines, still covering the year 2013, and comprising 10,000 headlines from 10 different Danish news websites with (primarily) self-produced news content. All major national Danish news media are included (with the exception of *Information* and *Weekendavisen* which did not produce 10,000 available online headlines in the data period). These media institutions, in their traditional offline form, range from public service media, to omnibus, tabloid, and free papers. We have chosen these media because newspaper websites and public service websites are considered the primary source of news on the web by Danish news readers (Nielsen and Schrøder, 2013:22). With the exception of the public service station DR, all of the web pages use commercials, and with the exception of the free paper Metroxpress, all the newspaper websites use paywalls.

⁷ Developed by Filip Wallberg, Centre for Journalism, University of Southern Denmark. We thank Filip for making this project possible.

Table 1

Websites from which the data ($N = 100,000$ headlines) was collected.^a

Media and website	Media institution	Users	Commercials	Paywall
DR (dr.dk)	Public service station	1,923,807	No	No
TV 2 (tv2.dk)	Public service station	1,507,564	Yes	No (TV programs excepted)
Metroxpress (mx.dk)	Newspaper (free, partly tabloid)	433,167	Yes	No
Politiken (politiken.dk)	Newspaper (omnibus)	1,331,891	Yes	Metered model ^b
Berlingske (b.dk)	Newspaper (omnibus)	761,956	Yes	Metered model
Jyllands-Posten (jyllands-posten.dk)	Newspaper (omnibus)	775,209	Yes	Premium model ^c
Ekstra Bladet (eb.dk)	Newspaper (tabloid)	1,634,177	Yes	Premium model
BT (bt.dk)	Newspaper (tabloid)	1,300,843	Yes	Premium model
Børsen (borsen.dk)	Newspaper (niche)	264,993	Yes	Freemium model ^d
Kristeligt Dagblad (kristeligt-dagblad.dk)	Newspaper (niche)	262,544	Yes	Freemium model

^a The user statistics were gathered from Danske Medier Research (<http://www.fdim.dk/>). The information on applied paywall models stems from Paywall Watch (<http://paywallwatch.net/overview/>).

^b Audiences have access free of charge to a limited number of articles within a delimited time frame. Access to further articles requires subscription (quoted from <http://paywallwatch.net/subscription-models/>).

^c Audiences have access free of charge to most of the content, but access to certain pieces of – usually perceived as particularly high-quality – content requires subscription (quoted from <http://paywallwatch.net/subscription-models/>).

^d Subscription is required to access most of the content, but access to certain articles – usually the ones quickly produced from wire agency text – is free of charge. The freemium model is some kind of reversed premium model (quoted from <http://paywallwatch.net/subscription-models/>).

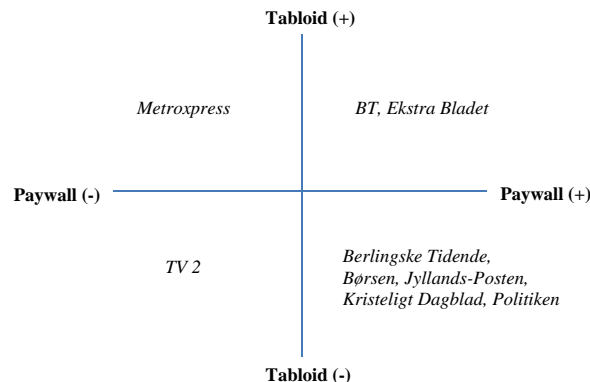


Fig. 1. Commercial media classified by tabloid content and paywalling.

Table 1 displays the websites from which the headlines were collected. It accounts for the different types of media institutions,⁸ the amount of desktop users as of January 2014 (at the end of the data period), the applied paywall models, and whether or not the web pages use commercials. The public service station DR is the only media that is neither commercial, paywalled, nor tabloid. According to our hypotheses, the lowest frequency of forward-referring headlines is therefore expected for dr.dk.

The other media, all commercial, can be grouped according to differences in paywalling and tabloid content as seen in Fig. 1.

According to our tabloidization hypothesis (H3), BT and Ekstra Bladet are expected to have a higher frequency of forward-referring headlines on their news sites than the rest of the media. However, a high frequency can also be expected on tv2.dk, since TV 2 is exclusively dependent on commercials, disregarding paywalled TV programs. The same applies to mx.dk (Metroxpress) which is partly tabloid, commercially funded, but not paywalled.

⁸ Following Skovsgaard (2014:208), we consider Ekstra Bladet and BT tabloid media since they both focus on scandal, entertainment and private life, in addition to other news types. Metroxpress is regarded as partly tabloid based on an editorial shift in 2013: An editor from Ekstra Bladet became editor-in-chief on Metroxpress stating publicly that the newspaper would change in a more tabloid direction (Christensen, 2013). Børsen and Kristeligt Dagblad are considered niche media as they focus on specific content, respectively finance, and faith, ethics and existence. The other newspaper media are either omnibus, i.e. focusing on various topics, or free, i.e. producers of free newspapers.

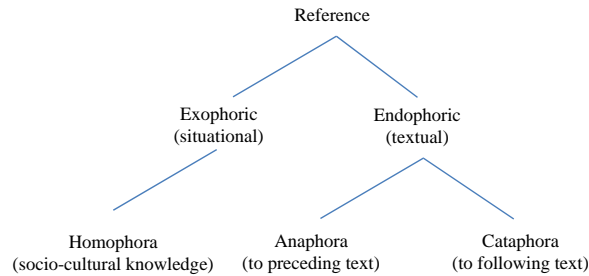


Fig. 2. The basic phoric reference system (Halliday and Hasan, 1976).

5. Headlines and reference

When analyzing headlines, an essential theoretical question arises: Is the headline a text, or is it part of a text? According to [Iarocici and Amel \(1989:441\)](#) the answer is both: “The headline is a special kind of text; a text which cannot have an autonomous status. It is a text correlated to another text, to which it has the function of a headline.” Consequently, the headline can, tentatively, be considered a text that is part of and dependent on another text.

Regarding the notion ‘text’, we choose to follow Halliday and Hasan’s definition: “A text is a unit of language in use. It is not a grammatical unit, like a clause or a sentence; and it is not defined by its size. [...] A text is best regarded as a semantic unit; a unit not of form but of meaning.” (Halliday and Hasan, 1976:1–2). A news headline can thus be considered a text from a semantic-functional perspective given that it is a semantic unit of meaning, i.e. a (partial) condensed summary of a news story ([van Dijk, 1988:36](#)), and simultaneously part of another semantic unit, i.e. the full article as a text.

As a consequence, news headlines may be more or less dependent semantically on the content of the full article. Some headlines give a condensed version of the story that can be read, interpreted, and fully understood in isolation, e.g. *US begins air strikes against Islamic State in Syria* ([bbc.co.uk](#)), while others, such as forward-referring headlines, do not make full sense if read alone,⁹ e.g. *Every day is grammar day when you’ve got this job* ([cnn.com](#)). This difference can be accounted for in more detail by looking at the phoric reference system.

Cataphora and discourse deixis are part of a larger pointing system used in languages to point at words, discourses or the situational context¹⁰. This elaborate system, first accounted for by [Bühler \(1934/1965\)](#) and later elaborated on by [Fillmore \(1971\)](#), [Halliday and Hasan \(1976\)](#) and [Lyons \(1977\)](#) can be described by the general term *phoricity*: “The need to look elsewhere to interpret a reference item” ([Du Bois, 1980:226](#)). [Fig. 2](#) depicts the basic phoric system as accounted for by [Halliday and Hasan \(1976\)](#).

Forward-referring headlines are considered phoric because the reader needs to locate the entities that are being referred to *later* in the full text or discourse, i.e. ‘needs to look elsewhere’ in order for the headline to make sense.

According to [Martin \(1992:98 ff.\)](#), there are three types of phoricity: *reminding*, *relevance* and *redundancy* all of which are combined in the following nominal phrase: *The bigger one*. The determiner *the* refers to a recoverable participant in the context (reminding). The adjectival inflexion *bigger* refers to the identity of one or more participants related to the participant in the context (relevance). And finally, *one* acts as a substitute for experiential meaning that needs to be recovered from the context (redundancy). Ellipsis is another type of phoric redundancy which we will return to in the next section. Furthermore, [Martin \(1992:123\)](#) distinguishes between *cataphora* and *esphora*, where the latter refers forward within the same nominal group, e.g. *the paper he wrote*. In our analysis, though, we are only looking at forward-reference beyond the nominal group.

In addition to textual phoricity, reference can also be made to the discourse, as stated earlier. In this regard, [Lyons \(1977:667–668\)](#) distinguishes between *pure textual deixis*, i.e. references to sections of texts, and *impure textual deixis*, i.e. references to what is expressed in sections of texts. Others ([Lakoff, 1974](#); [Webber, 1991](#); [Ribera, 2007](#); [Yang, 2011](#)) prefer the notion *discourse deixis* emphasizing that what is being referred to, is located in the discourse. A more operational definition is given by [Levinson \(1983:85\)](#) who regards anaphora, and as a consequence cataphora, as co-referential, i.e. it

⁹ Cf. Halliday’s account of textual coherence and cohesion: “For a text to be coherent, it must be cohesive; but it must be more besides. It must deploy the resources of cohesion in ways that are motivated by the register of which it is an instance; it must be semantically appropriate, with lexicogrammatical realizations to match (i.e. *it must make sense*); and it must have structure.” (Halliday, 1994:339, our emphasis).

¹⁰ The situational (deictic) part of the reference system will not be accounted for in full detail since forward-reference in headlines is a co-textual/discursive phenomenon (see [Lyons, 1977](#) for a full account of the deictic system).

refers to the same entity as the full expression introduced previously (if anaphora) or later (if cataphora) in the sentence or text, while forward-referring discourse deixis introduces a new referent, but not in a co-referential way.¹¹

Although the subject of our analysis lies within the forward-referring part of the phoric system, a comment has to be made regarding the category of *homophora* (Halliday and Hasan, 1976:71). Nominals in news headlines often refer to (other texts about) a running news story, and can thus be considered homophoric as seen in this example from the online version of Time Magazine:

(7) This Is How Much The Search For The Missing Plane Has Cost (time.com)

The definite references *the search* and *the missing plane* refer to an event and an entity mentioned in a media news story that ran for several months in 2014, the story about a search for a missing plane from Malaysian Airline. This type of reference refers to a shared textual knowledge within a 'news community' (cf. Martin, 1992:122) and cannot be considered endophoric.

Originally designed to describe references as observed in non-electronic texts, the phoric system needs further elaboration, we will argue, if adapted to multimodal (Kress, 2010) references used in headlines on news websites. For instance, consider this headline from the online version of CNN:

(8) If this is the debris of Malaysia Airlines Flight 370, what happens next? (cnn.com)

In this headline, the pronoun *this* points deictically at a specific type of upcoming discourse embedded in the text, i.e. a video of the debris. The reference is thus multimodal which can also occur when there is a reference to a picture, a drawing, a figure, a soundbite, etc. embedded in the article. This way, pronouns can point within the same semiotic mode, e.g. a written text, or at another semiotic mode, e.g. a picture or a video.

Fig. 3 illustrates parts of the complex reference network on news websites, including the hyperlinked reference from headline to article.

The preceding theoretical review is summarized and illustrated in Fig. 4 as an expanded version of the reference system.

Our point of interest lies in the highlighted areas in the endophoric part of the reference system focusing on forward-referring discourse deixis and cataphora. In our analysis we will treat both kinds as instances of forward-reference given that the suggested intended perlocutionary effect is the same whether the reference is cataphorical or an instance of forward referring discourse deixis.

6. Types of forward-reference

Based on the analytical results from our preliminary coding of the data set (cf. section 7.1), forward-reference in headlines is prototypically expressed by demonstrative pronouns (9), personal pronouns (10), adverbs (11) and definite articles (12) in Danish:

- (9) Det var Chávez' sidste ord (tv2.dk)
These were Chávez' last words
- (10) Han vil have landsholdet i EU-tøj (tv2.dk)
He wants to make the national team wear EU clothes
- (11) Her kan du gå på 4G med iPhone 5 (tv2.dk)
Here you can use 4G with Iphone 5
- (12) TV: Om få sekunder eksploderer terrorbomben (tv2.dk)
TV: In a few seconds the terror bomb explodes

All of these headlines can be regarded as click bait leaving the reader wondering: *What were Chávez' last word? Who is he? Where can you use 4G? What terror bomb?*

Comparing the use of the demonstrative pronoun in (9), *These were Chávez' last words*, with headlines from other Danish news websites, it is evident that the brief discourse reference to Hugo Chávez' last words is not caused by the need for brevity, seeing that his last words were not that many:

¹¹ For a discussion on the overlaps between contextual and textual use of deixis, see Schiffrin (1990).

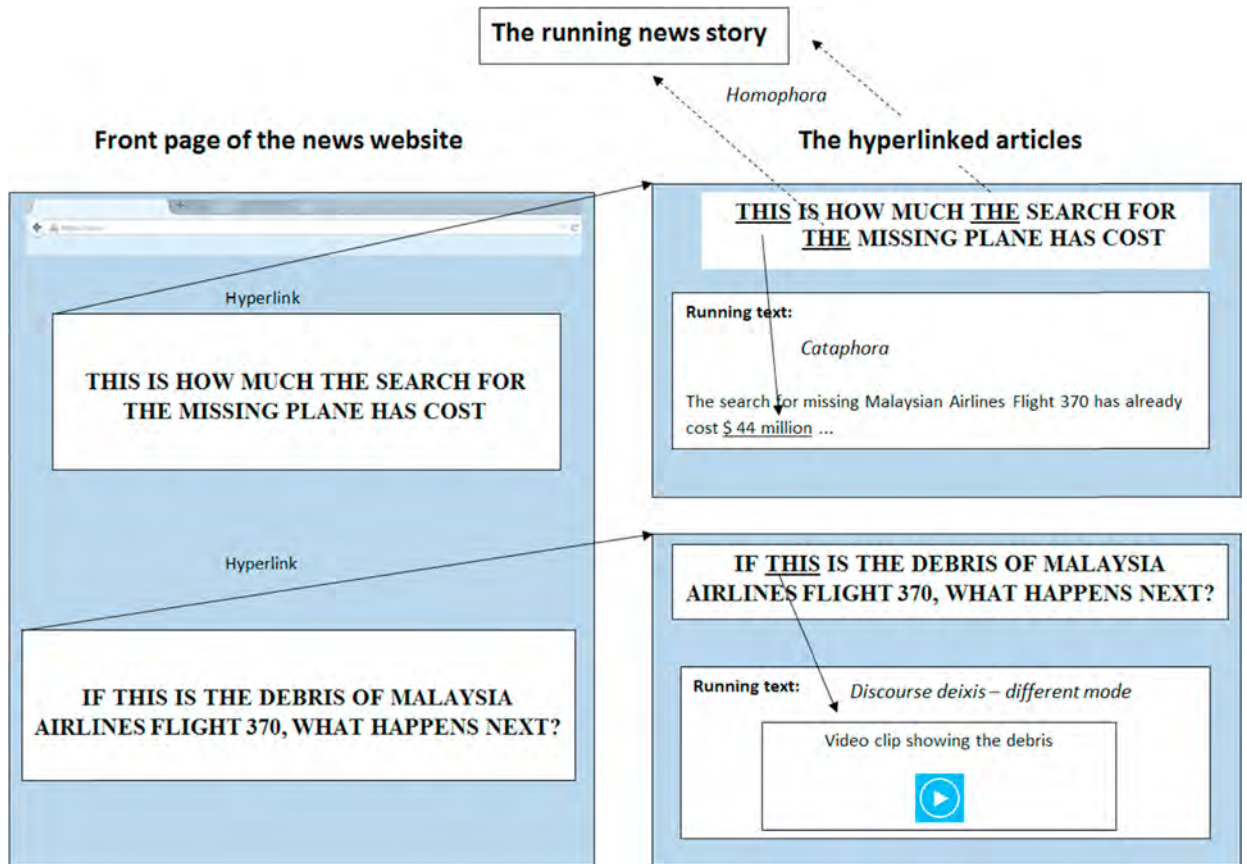


Fig. 3. Illustration of a reference network on news websites.

- (13) Hugo Chávez' sidste ord: Jeg vil ikke dø (dr.dk and eb.dk)
 Hugo Chávez' last words: *I don't want to die*

Similarly, the newspaper Jyllands-Posten chose to summarize the story about the EU clothes (cf. (10) *He wants to make the national team wear EU clothes*), in passive voice without the forward-reference:

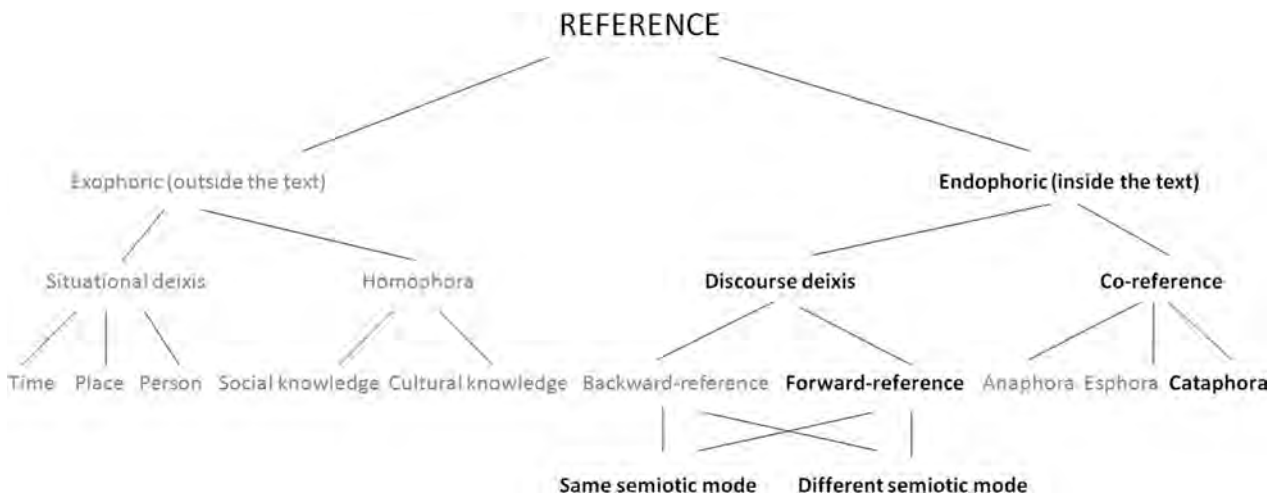


Fig. 4. The expanded phoric reference system.

- (14) Landsholdet kan tvinges i EU-dragter (jyllands-posten.dk)
The national team can be forced to wear EU clothes

While the reader may still wonder who is doing the forcing, the referent in question is no longer hinted at in the first word, neither is it (=he) the theme of the sentence. In other words, there is no forward-reference, and the headline can be read and understood in isolation.

In addition to the exemplified prototypical expressions, forward-reference can also be conveyed by elliptic and implicit reference. These categories are somewhat debatable, and we will therefore grant them some thoughts before continuing with our treatment of the results.

Both Jenkins (1990) and Baicchi (2004) argue that ellipsis in headlines can be cataphoric. We agree, but have chosen only to regard ellipsis of syntactic *obligatory* phrases¹² as potential cataphora, not including *facultative* parts of phrases, such as determiners, which would quickly lead to analytical guesswork. The typical case of obligatory ellipsis in our data set is the ellipsis of the subject and thus the agentive argument.

- (15) Vil bevæbne syriske oprørere (tv2.dk)
Want(s) to arm Syrian rebels

In (15) the reference for the semantic agent is so empty that it is, in fact, not even there. We will argue that this corresponds to a null-morpheme functioning as an elliptical cataphor pointing towards the argument in the upcoming text. This must also be considered a case of click bait when compared to headlines from other Danish websites summarizing the same story by including the semantic agent:

- (16) Storbritannien og Frankrig vil bevæbne syriske oprørere (dr.dk)
Great Britain and France want to arm Syrian rebels

In addition to ellipsis of obligatory arguments, we also regard implicit forward-reference in imperative and interrogative headlines instances of forward-referring discourse deixis. Both types are exemplified in the following headlines:

- (17) Se om din bank er i risiko for at krakke (tv2.dk)
See if your bank is at risk of collapsing
- (18) Bor du i en voldelig kommune? (tv2.dk)
Do you live in a violent municipality?

It can be argued that the imperative *see* in (17) implicitly refers to something in the full text that will reveal whether or not the reader's bank is collapsing, corresponding to the deictic expression *in this article you can see . . .* A similar principle applies to (18) where the headline is not rhetorical, but implicitly refers to an answer that will be given in the upcoming discourse. In this case, if the reader clicks, a map appears showing the level of violence in Danish municipalities.

Last, we have considered whether or not general, i.e. non-specific, nouns act as cataphora. This idea is brought forward by Bruti (2004) who talks about "a cline of cataphoric indexicality (or "cataphoricity"), ranging from more empty signs (e.g. pronouns) to various degrees of indeterminacy (e.g. general nouns such as *fact*, *thing*, *man* etc.) and to spurious cases of cataphora." (2004:40, original emphases). However, we do not equate indeterminacy with phoricity since many instances of general nouns make sense when read in isolation in headlines.¹³ Therefore, we only regard general nouns as instances of cataphors *if* it can be argued that the noun has an implicit deictic reference to the upcoming discourse. This is particularly common in references to pictures, video clips and "top ten"-lists:

- (19) VIDEO: Kæmpe baby født i Texas (tv2.dk)
VIDEO: Gigantic baby born in Texas
- (20) 10 gode grunde til at spise chokolade (tv2.dk)
10 good reasons to eat chocolate

¹² An exception is *implicit* auxiliary or copula verb. For instance, in the headline *Fleeing man shot at Atlanta Hospital* (cnn.com) the auxiliary verb (s) *is*, *has been* or *was is* (*are*) considered implicit, not forward-referring.

¹³ Notice that non-specific nouns in headlines may have the same proposed effect as forward-reference. For instance, if a headline states: "Famous triathlete wins big race in exotic country", the reader (if interested in triathlon) may be left wondering which triathlete, which big race, and which exotic country the headline refers to. However, this is not a case of forward-reference, we will argue, but rather of underdetermined or non-specific nouns (Ifantidou, 2009:700).

Table 2

Forward-referring headlines in the preliminary data set from tv2.dk ($N = 2000$).

	News	Sport	Weather	Lifestyle	Gadget	<i>N</i>
Forward-referring	203	60	11	34	36	344
Not forward-referring	1125	407	39	38	47	1656
Total	1328	467	50	72	83	2000

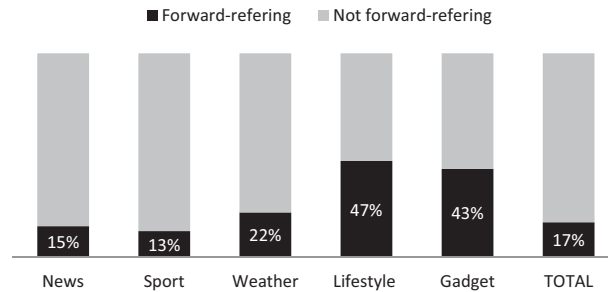


Fig. 5. Percentage of forward-referring headlines in the preliminary data set from tv2.dk ($N = 2000$). The difference between forward-referring headlines in hard news (in this case 'News') and soft news (in this case 'Sport', 'Weather', 'Lifestyle', and 'Gadget') is statistically significant at the $p < 0.01$ level.

In (19) and (20) it can be argued that the general noun *video* and the general noun phrase *10 good reasons* deictically refer to parts of the upcoming discourse, namely an embedded video and a list of 10 reasons, even though there is no *explicit* deictic expression present.

This leaves us with eight different manifestations of forward-reference in (Danish) news headlines:

1. demonstrative pronouns
2. personal pronouns
3. adverbs
4. definite articles
5. ellipsis of obligatory arguments
6. imperatives with implicit discourse deictic reference
7. interrogatives referring to an answer given in the full text
8. general nouns with implicit discourse deictic reference

7. Analysis and results

In this section, the preliminary results from the analysis of tv2.dk are laid out first. Secondly, the results from the analysis of the full data set are presented, and the hypotheses are tested.

7.1. The preliminary results

Of the 2,000 coded headlines on tv2.dk, 344 are forward-referring, equalling 17.2 percent. As seen in Table 2 and Fig. 5, forward-referring headlines are most frequent in soft¹⁴ content categories, in this case sport, weather, lifestyle, and gadget, but also present in the regular hard¹⁵ news. Notice that the content categories are based on TV 2's own division of content on the website:

¹⁴ We define soft news in concordance with Patterson (2000:4) as "typically more personality-centered, less time-bound, more practical, and more incident-based than other news" and associated with "sensationalism", "human-interest" or "news you can use."

¹⁵ "Hard news refers to coverage of breaking events involving top leaders, major issues, or significant disruptions in the routines of daily life [...]. Information about these events is presumably important to citizens' ability to understand and respond to the world of public affairs." (Patterson, 2000:3).

Table 3
Occurrences of forward-referring expressions in the headlines from tv2.dk.

Forward-referring expressions	Occurrences
General nouns	119
Adverbs	111
Ellipses	47
Imperatives	45
Interrogatives	24
Demonstrative pronouns	24
Personal pronouns	12
Definite articles	3

The results indicate that forward-referring headlines are primarily used in soft news content. This is not surprising considering that narrative strategies similar to forward-reference are often used in soft news. For instance, delayed leads, also named *soft leads* (Rich, 2010:145), have traditionally been used in soft genres. Delayed leads correspond to forward-referring headlines by postponing what the story is about with the purpose of creating curiosity and suspense, a narrative strategy that has been described by Mencher with the by now familiar words: “The business of luring the reader into a story.” (Mencher, 1997:131). Table 3 sums up the frequency of the different cataphoric and deictic expressions used for referring forward in the headlines. The results show that general nouns with implicit deictic reference are the most frequently used form of forward-referring expressions (119 occurrences), closely followed by adverbs (111 occurrences). Notice that there can be more than one occurrence of deixis and cataphora in a forward-referring headline.

The high frequency of general nouns is caused by a twofold text function. By referring to video clips, pictures and other embedded media, general nouns are not only used to create anticipation, but in addition act as content guidance, showing the reader which kind of modality is to be expected when clicking on, for instance a video or a picture. Most articles with video clips are therefore referred to by general nouns, raising the frequency.

The adverbs are also highly frequent. The 111 occurrences are all expressed by four adverbs: *her* (here), *derfor* (this is why), *sådan* (like this/this is how) and *så* (like so/this is how). The use of these expressions will be covered in the following section with excerpted examples in order to illustrate their typical referring function(s).

Her (here) typically points at something specific that is shown in the text, for instance a video, a picture or a list:

- (21) Her er USA's nye kraftige laservåben (jyllands-posten.dk)
Here is USA's new powerful laser weapon

Derfor (therefore/this is why) points at an explanation given in the text, which is particularly interesting from a pragmatic perspective because it sometimes presupposes that a statement is true without support and warrant:

- (22) Derfor er tvangsvaccination nødvendig (tv2.dk)
This is why forced vaccination is necessary

The statement presupposes that forced vaccination is a necessity, and now the reader needs to know why. This claim might provoke readers or make them wonder. This may be the intended effect, because the reader presumably will click to see what the presupposed claim is based on. In the actual text it is revealed that forced vaccination is only relevant for babies born by parents with hepatitis. By leaving out this information in the headline and instead referring to an explanation of something which seems improbable, the journalist eggs the reader to click on the headline and read the story.

Sådan (like this/this is how) is primarily used in consumer news, typically referring to an explanation on how to do something:

- (23) Sådan gør du din kaffe sundere (bt.dk)
This is the way to make your coffee healthier

Finally, *så* (like so/this is how) is used as a deictic comparative graduation of an attributive adjective often playing on a sensational or surprising revelation:

- (24) Så meget tisser vi i poolen (mx.dk)
We pee this much in the pool

Table 4
Occurrences of the five most frequent forward-referring lexemes.^a

	BT	Metro-xpress	TV 2	Ekstra Bladet	Politiken	Jyllands-Posten	Kristeligt Dagblad	Berling-ske	Børsen	DR
Her	315	204	224	207	160	94	112	67	84	62
Sådan	269	136	165	112	100	76	81	100	46	56
Så	117	135	71	80	16	27	15	20	13	13
Derfor	190	88	91	79	34	32	27	28	24	17
Dette/denne/disse	47	132	45	24	10	32	6	4	10	9
Total	938	695	596	502	320	261	241	219	177	157

^a The results are arranged in descending totals from left to right. For the totals, all differences are statistically significant at the $p < 0.05$ level, apart from Jyllands-Posten vs. Kristeligt Dagblad; Jyllands-Posten vs. Berlingske; Kristeligt Dagblad vs. Berlingske; and Børsen vs. DR. $N = 100,000$ headlines (10,000 per website).

Other, less frequent types of forward-referring expressions have been treated in section 5 and will not be further exemplified. Instead, we will move on to the next set of results.

7.2. Further results

Based on our preliminary analyses, we identified the five most frequently used discourse deictic and cataphoric lexemes in the data set from tv2.dk, comprising the above mentioned and examined adverbials *her*, *sådan*, *derfor* and *så* and the demonstrative pronoun *dette* (*this*) along with its gender variations *denne* and *dette*, plural *disse*. Searching for these words in the expanded data set and afterwards checking the headlines for discourse deictic forward-reference or cataphora, it proved possible to conduct a large scale comparative analysis of forward-reference in headlines across the 10 chosen Danish news websites.

Due to the diversified function of general nouns, we chose to disregard this type of reference in our expanded big data analysis. The same applies to ellipsis and implicit reference, since they do not have any explicit form and therefore cannot be found by an automated lexeme search. Personal pronouns and definite articles have also been left out because they, according to our initial analysis, are seldom used as cataphora in news headlines. By leaving out these variations, the analysis does not comprise all types of forward-referring headlines. The results should therefore not be regarded as fully comprehensive, but rather as part of a tendency assessment.

The results are depicted in Table 4 and support our hypotheses on a correlation between forward-reference in headlines and tabloidization and commercialization.

The public service station DR (at the far right) has the lowest frequency of forward-referring headlines, which was expected since the station is neither commercial, nor tabloid. At the other end of the spectrum, the tabloid media BT and Ekstra Bladet both have a higher frequency of forward-referring headlines compared to non-tabloid media with the exception of Metroxpress and the public service station TV 2. The position of Metroxpress and TV 2 is not surprising, given that Metroxpress is partly tabloid, and that both Metroxpress and TV 2 are exclusively commercial and not paywalled (with the exception of TV programs).¹⁶ In conclusion, it seems there is a strong tendency for using forward-referring headlines in commercial tabloid media and commercial media without paywalls.

Another potential factor is the amount of soft news as opposed to hard news. As showed in the preliminary analysis, forward-referring headlines seem more common in soft news than in hard news. Consequently, the results may be influenced by this, should Danish tabloid media and commercial media without paywalls prove to have a higher amount of soft news on their websites compared to non-tabloid and paywalled media. This proposition will remain unsolved here, though, and is left for future research.

8. Conclusion

As shown in the analysis, the results support our initial hypotheses: There is a stronger tendency in commercial and tabloid media for using forward referring headlines on news websites compared to non-commercial and non-tabloid media. This – as well as our qualitative analysis of excerpted examples – confirms that forward-referring headlines are

¹⁶ Furthermore, TV 2 might have been influenced by tabloidization as well in 2013 in the same way as Metroxpress. An editor from the tabloid paper Ekstra Bladet was hired as a responsible editor on TV 2 in the fall of 2012 (Frandsen, 2012), and with his arrival four journalists from tabloid papers BT and Ekstra Bladet were hired in 2013 as an addition to the web newsdesk (Andreassen, 2013). However, the responsible editor has not, to our knowledge, publicly declared an intention to make tv2.dk more tabloid.

primarily used as click bait luring the readers into clicking on and reading the full article thus making the news site more attractive for advertisers. If the readers click, it does the trick, seems to be the logic.

What is needed next, we will propose, is a full-scale effect and reception analysis of forward-reference. How many readers actually click on forward-referring headlines? Do they read the entire article, or do they stop when it is revealed what has been referred to? Are they annoyed or intrigued by the forward-reference? These are important unanswered questions, not only with financial relevance for the media, but indeed also for the general understanding of reader reception.

Furthermore, the ethical implications hinted at in parts of our analysis should be further addressed, perhaps in a critical discourse study. As shown, forward-reference is sometimes used to provoke the reader into clicking by using presuppositions that seem improbable and cannot be substantiated in the full text. From a critical perspective, this is perhaps closer to manipulation than stimulation, and should not be ignored or considered collateral damage in the war for readers if considered ethically and not financially.

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