Definiteness in Akan

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DEFINITENESS IN AKAN

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Contents

List of glosses

1/2/3	1st/2nd/3rd person
COMP	complementiser
COP	copula
DCM	dependent clause marker
DEF	definite
DEM	demonstrative
EXPL	expletive
FOC	focus marker
FUT	future
INDF	indefinite
NEG	negation
PFV	perfective
PL	plural
PROG	progressive
PROX	proximal
REFL	reflexive
REL	relativiser
SG	singular

In examples taken from other authors, the glosses are in their original form.

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1 Introduction

This thesis addresses the question of how definiteness is expressed across languages, by re-examining the particular case of Akan (Kwa, Niger-Congo). In the recent literature, the definiteness question is often framed in terms of an opposition between two types of determiners: those that encode uniqueness (weak articles), and those that are anaphoric (strong articles) (Schwarz 2009, 2013). These two mechanisms are assumed to exist alongside a third definiteness category, that of demonstratives. The relevance of Akan in this debate lies in the fact that this language seems to support this three-way division of the definiteness space. Concretely, in the only formal paper to date dealing with Akan definites, Arkoh and Matthewson (2013) analyse the determiner *nó* as a strong article, and the definite bare noun as taking the place of a weak article, while assuming a third determiner form, the demonstrative *saa... nó*.

In this work, an alternative view on definites is put forward and tested on Akan. This alternative approach, the "strictly binary view on definites", assumes that languages lexicalise at most two definite forms: definite articles (which presuppose uniqueness) and demonstratives (which require a deictic or anaphoric antecedent). The advantages of this view lie in that it captures the German and cross-linguistic data on definiteness more adequately (and parsimoniously) than the three-way division found in Schwarz (2009, 2013).

Against this background, the research question of the thesis is whether the Akan determiner *nó* is a definite article, or whether it is a demonstrative, like *saa... nó*. The investigation is prompted by problems in the previous formal analysis of Akan definites (Arkoh and Matthewson 2013)—which assumed Schwarz's theory—and is carried out using quantitative and qualitative fieldwork methods. Although the experimental data are not clear-cut, the qualitative data speak strongly in favour of analysing *nó* as a definite article, and *saa... nó* as a demonstrative. This analysis confirms the validity of the strictly binary approach for languages which, like Akan, also have a bare noun option to express definiteness. At the same time, it also opens new questions regarding the competition of this noun phrase type with overt definite determiners.

The paper is structured as follows. §2 provides the theoretical basis for the investigation, by presenting the two theories entertained in the thesis. §3 reviews the previous literature on Akan definites, and shows how Schwarz's division of the definiteness space does not necessarily apply in this language. §4 is the empirical part of the thesis, and it investigates whether *nó* is a definite article or a demonstrative like *saa... nó*, using experimental and qualitative fieldwork methods. §5 discusses the consequences of the findings, and points out directions for future research.

2 Theoretical basis

The larger question tackled in this thesis is how definiteness is expressed across languages—more specifically, what distinctions languages make in the domain of definiteness. This section sets the background for the investigation of Akan definites by discussing two answers to this question. The first answer, developed in Schwarz (2009, 2013), is that there are two types of definite articles—one expressing uniqueness and one expressing anaphoricity—that are assumed to exist alongside a third definiteness category, that of demonstratives.[1] Motivated by some open issues in Schwarz's account, this section puts forward a second, more traditionally oriented theory, which will be labeled as the strictly binary view on definites. This view holds that the definiteness space is divided into two, rather than three, categories: definite articles and demonstratives. The strictly binary view on definites is shown to capture not only the German data on which Schwarz's theory is built, but also the definiteness systems of a number of other languages. What remains to be established is which of the two accounts fares better against languages which, like Akan, have three possibilities to express definiteness, namely bare nouns, articles and demonstratives—a task which is undertaken in the remainder of the thesis. The section starts with the definition of various definiteness uses (§2.1), followed by a presentation of the two definiteness theories entertained in the thesis (§2.2 and §2.3). These are applied to cross-linguistic data in §2.4, and summarised in §2.5. In §2.6, an excursion is made to bridging and immediate situation uses. Finally, §2.7 theoretically motivates the re-investigation of the Akan definiteness system under the strictly binary view on definites, and formulates the predictions of the theory for this investigation.

2.1 Background: Definiteness uses

Much of the argumentation to follow will center around the distribution of definite determiners; more specifically, around the possibility of using particular definite forms across different context types, or "definiteness uses" (as Schwarz (2009) calls them). This section presents the working definitions for the definiteness uses that will be discussed later in the thesis. The description relies heavily on Schwarz (2009), but is complemented with information and examples from other sources.

Situational Uses As their name suggests, situational uses involve reference to an entity which is unique in satisfying the nominal description in a given

[1] To improve readability, the theory developed in Schwarz (2009) and Schwarz (2013) will sometimes be referred to only with the author's name, without a year indication.

situation, which can be of varying sizes.[2] First, in **immediate situation** uses, the situation is the utterance context, and the entity in question is immediately perceptible to the senses, as in (1) below:[3]

(1) Context: In a room with one purring cat.
The cat is purring.

(adapted from Wolter 2006: 26)

The second type of situational uses are **larger situation** uses, which involve reference to a unique entity within a larger situation. The entity in question is not present in the utterance context, and thus, these uses rely on world knowledge, rather than direct perception: the interlocutors have to know that a certain situation typically contains a unique entity of a certain type. Examples for this use include uttering *the headmaster* at a school, *the conductor* with reference to a classical concert, or *the Prime Minister* in the UK. A complete example is found in (2):

(2) The reception was opened by **the mayor**.

(translated from Schwarz 2009: 60)

A special case of larger situation involves reference to globally unique entities, such as *the sun* or *the moon*, where the situation in question is the world:

(3) Armstrong was the first one to fly to **the moon**.

(translated from Schwarz 2009: 60)

These contexts will also be referred to as **global situation uses**.

Anaphora In anaphora, the definite expression refers to an entity that has previously been introduced in the discourse, the antecedent.

(4) *A man* walked in. **The man** coughed. (Wolter 2006: 49)

In what follows, the antecedent will be italicised, as in (4).

Deixis The term "deixis" is used in various ways in the literature. Some authors (e.g. Wolter 2006, Heim and Kratzer 1998, Wespel 2008) understand the term as simply reference to entities in an external, non-linguistic context. Here

[2]The notion of situation will be made more specific in §2.2. For the time being, a pre-theoretical understanding of the term as "context" suffices to describe these definiteness uses.

[3]Here and in the rest of the thesis, the relevant noun phrases in examples will be marked in bold, also in examples from other authors. Markings are by CBF.

a more restrictive definition will be adopted: the reference to the external entity has to come about via a demonstration or pointing gesture, as in (5).

(5) I like **that/this painting** [pointing at a painting] but not **that/this painting** [pointing at another painting].

(Wolter 2006: 70)

This sense of deixis is sometimes also referred to as "demonstrative use" (Schwarz 2009), a term which is not adopted in this thesis to avoid confusion with the demonstrative determiner. Differences between this use and reference in immediate situations will be discussed in more detail in §2.6.1, together with the determiners that are found in them.

Bridging Also known as "associative anaphora" (Hawkins 1978) or "inferrable noun phrases" (Prince 1981), bridging involves definite reference to an entity which has not been mentioned before, but whose presence can be inferred from the previous linguistic context.

(6) A car drove by. **The horn** was honking. (Wolter 2006: 51)

(7) John bought a book. **The author** is French. (Schwarz 2009: 6)

As with situational uses, the definite expression is possible only if the entity is unique in the context.

Some authors have suggested finer-grained distinctions of the phenomenon. Particularly, in §2.6.2 we will be concerned with the division proposed by Schwarz (2009) between "part-whole bridging"—in which the referent of the definite expression is a part of a previously mentioned entity (*horn-car* in (6))—and "relational bridging"—where the definite noun phrase is unique with respect to a previously mentioned relatum argument (*author-book* in (38)).

2.2 Theory I: Schwarz (2009)

With the relevant background in place, we can turn to the main question of this section, namely how definiteness is expressed across languages. One answer which has received some attention in the recent literature is the one developed by Schwarz in his dissertation (Schwarz 2009) and in a shorter, more cross-linguistically oriented paper (Schwarz 2013). Schwarz's theory assumes three forms overall. In the first place, it distinguishes two types of articles (weak and strong definite articles), which correspond to two definiteness mechanisms—one based on uniqueness, and one based on anaphoricity.[4] Additionally, Schwarz

[4]In the literature, the determiner is sometimes also said to be a "familiarity article" . In what follows, this term will be avoided: as we will see in §3.2, "familiarity" has been interpreted in different ways, leading to varying interpretations of what anaphoric definites can do.

assumes a third form, that of demonstratives, which is not discussed in detail, but which he argues to be separately encoded.

Let us first clarify the notions of strong and weak definite articles (henceforth also "strong articles" and "weak articles" for simplicity). These terms refer to two distinct series of definite determiners found in various German dialects. At least in some of the varieties, the alternation involves a phonologically full form (the strong article) and a phonologically reduced/unstressed one (the weak article) (e.g. Cabredo-Hofherr (2013) for Voralberger, Studler (2008) for Swiss German, Hartmann (1982) for Mönchengladbach). However, there seems to be a consensus in the traditional literature that their distribution is somehow related to their semantics, which appears to be relatively uniform across dialects (Studler 2008: 164–172). Concretely, the two determiners are each found in a cluster of environments which are normally presented as a list of possible determiner-noun combinations. On the one hand, weak articles are used with nouns referring to globally unique entities (*sun*, *moon*), names of professions (*pastor*, *blacksmith*), or parts of the body (*head*, *nose*), among other possibilities. On the other hand, strong articles are used with pre-mentioned entities, or entities that are immediately perceptible to the senses. The same strong-weak alternation has been argued to be encoded in Standard German (e.g. Himmelmann 1997): although this variety seems to have only one lexeme for both articles (*der*, *das*, *die*), the contrast becomes apparent in sequences of prepositions followed by a determiner. In these contexts, and granted that certain morphological restrictions are met, the sequence contracts to a portmanteau morpheme when the article is weak (*zu dem → zum, in dem → im, an dem → am*); and it remains uncontracted when it is strong.

Schwarz's contribution to the description of these determiners—based on Standard German (his own intuition) and Fering (a Frisian dialect described by Ebert (1971))—is the idea that strong and weak articles are each found only in some definiteness uses. He observes, first, that weak articles but not strong articles are found in situational uses.[5] This is shown in (8) (a larger situation use) and (9) (a global situation use):

(8) Der Empfang wurde **vom** / **#von dem** **Bürgermeister**
the reception was by-the$_{\text{weak}}$ / by the$_{\text{strong}}$ mayor
eröffnet.
opened
'The reception was opened by the mayor'

German (Schwarz 2009: 40)

(9) Für dich ist ein Brief **vom** **Papst** angekommen.
for you is a letter from.the$_{\text{weak}}$ Pope arrived

[5] Additionally, according to Schwarz (2009), weak articles are also found in part-whole bridging, which we will discuss later on in §2.6.2.

'You got a letter from the Pope.'

German (Schwarz 2009: 158)

Second, strong articles, but usually not weak articles, are used in anaphora:

(10) In der New Yorker Bibliothek gibt es *ein Buch über*
In the New York library exists EXPL a book about
Topinambur. Neulich war ich dort und habe # **im** / **in**
topinambur. recently was I there and have in-the$_{\text{weak}}$ / in
dem **Buch** nach einer Antwort auf die Frage gesucht, ob
the$_{\text{strong}}$ book for an answer to the question searched whether
man Topinambur grillen kann.
one topinambur grill can
'In the New York public library, there is a book about topinambur. Recently, I was there and searched for an answer to the question of whether one can grill topinambur.'

German (Schwarz 2009: 20)

Based on the dissociation between the two articles, Schwarz proposes that two semantic mechanisms for definiteness should be distinguished, one per determiner. Concretely, since situational uses (typical of the weak article) involve reference to a unique entity within a domain, weak articles must encode uniqueness. On the other hand, since strong articles are prototypically used in anaphora, they must encode anaphoricity.

Let us examine the proposal in more detail. The definition of the weak article, and the syntactic structure Schwarz (2009: 149) assumes for it, are presented below:[6]

(11) $[\![\text{D}_{\text{weak}}]\!] = \lambda s \lambda P\text{: } \exists!x\ (P(x)(s)).\ \iota x\ [P(x)(s)]$

(12) $[_{\text{DP}}\ [\ \text{D}\ s_r\ ]\ \text{NP}\ ]$

The determiner essentially involves an iota type shift, that takes a property as an argument, and returns exactly one entity with that property. The type shift comes with a uniqueness presupposition: the determiner is licensed only if there is a unique entity with the nominal property within a domain. This basic proposal is complemented by a domain restriction system based on Kratzer's (1989) situation semantics. The necessity for such mechanism responds to the agreed-upon fact that uniqueness (and quantification, more generally) is not usually

[6] In §5 of his thesis, Schwarz (2009) proposes a refinement of this definition, which is designed to capture part-whole relations (which are then extended also to larger situations) more adequately. Since the weak article definition in (11) is more general and is the one that has been adopted in the subsequent literature, it will also be adopted in what follows.

considered with respect to the whole world, but rather with respect to a smaller domain. The idea behind Schwarz's situational model of domain restriction is that uniqueness, like the truth of sentences, is evaluated with respect to situations (parts of worlds). However, the situation with respect to which truth is considered (topic situation) may differ from the one against which uniqueness is evaluated (resource situation). Together with other phenomena, this leads Schwarz to separately encode a situation pronoun at DP-level, whose role is to pick up a resource situation within which uniqueness is calculated. When topic situation and resource situation are the same, the resource situation gets bound by the topic situation via an operator, both represented higher up in the structure. When the situations are not the same, the situation pronoun of the DP receives its value from a context assignment function g, which picks out a contextually salient situation. A technical implementation of the second option ("free" situation variable) is shown below for (13) (a repetition of (9)).

(13) Für dich ist ein Brief **vom** **Papst** angekommen.
for you is a letter from.the$_{\text{weak}}$ Pope arrived
'You got a letter from the Pope.'

(14) a. $[\![[[\text{the}_{\text{weak}}\ s_1] \text{ pope }]]\!]^g$ is defined if there is a single pope in the resource situation g(1). If defined,
b. $[\![[[\text{the}_{\text{weak}}\ s_1] \text{ pope }]]\!]^g = \iota x\ [\text{pope } (x)(g(1))]$[7]

Turning to the strong article, Schwarz proposes the following definition:

(15) $[\![\text{D}_{\text{strong}}]\!] = \lambda s \lambda P.\lambda y\text{: } !\exists x\ [P(x)(s) \wedge x = y].\ \iota x\ [P(x)(s) \wedge x = y]$

(16) $[_{\text{DP}}\ 1\ [[\ \text{D}\ s_r\ ]\ \text{NP}\ ]]$

The function is, again, an iota type shift. What differs with respect to the weak article is that it has an extra argument: a referential index, represented by *1* in (16). The presupposition of the strong article is that its referent has to be identical to an entity bearing the nominal property in the resource situation. Schwarz (2009) assumes that this entity (i.e. the presupposed entity to which then the referential index is assigned) has to have been mentioned in the previous discourse. If this presupposition is satisfied, the expression returns that individual, or more precisely, the unique individual bearing the nominal property that is identical to the pre-mentioned entity. This definition captures the anaphoricity of the strong article, while ruling it out from larger situations: in anaphora, there is a pre-mentioned entity; thus, the presupposition of the determiner is met and it returns that individual; on the other hand, larger situations do not supply such antecedent, so the expression remains undefined. Applied to (10), slightly adapted in (17), the definition would work as in (18):

[7] In this case, the resource situation g(1) also happens to be the world. So $g(1)=w_s$—cf. Schwarz (2009: 178).

(17) In der New Yorker Bibliothek gibt es *ein Buch über*
In the New York library exists EXPL a book about
Topinambur, nämlich "Gesund abnehmen mit Topinambur".
topinambur namely healthy lose.weight with topinambur.
Neulich war ich dort und habe #**im** / **in dem** **Buch** nach
recently was I there and have in-the$_{\text{weak}}$ / in the$_{\text{strong}}$ book for
einer Antwort auf die Frage gesucht, ob man Topinambur
an answer to the question searched whether one topinambur
grillen kann.
grill can.
'In the New York public library, there is a book about topinambur, namely "Losing weight healthily with topinambur". Recently, I was there and searched for an answer to the question of whether one can grill topinambur.'

(18) $[\![[\ 1\ [[\ \text{the}_{\text{strong}}\ s_2\ ]\ \text{book}\ ]]\ ]\!]^g = \iota x\ [\text{book}\ (x)\ (g(2))\ \ x{=}g(1){=}$*Gesund abnehmen mit Topinambur*$]$

The strong-weak alternation and the two mechanisms they embody are at the core of Schwarz's proposal. Indeed, the claim that there are "two types of definites cross-linguistically", as Schwarz's theory is often summarised, makes reference precisely to these two German determiners. In fact, however, Schwarz also assumes a third determiner form: the demonstrative. This determiner, which is only marginally discussed in his thesis (Schwarz 2009: 34–37), is presented as similar to but separate from the strong article. The similarity between the two determiners is shown by the fact that the German strong article can be translated into English using the distal *that*, as Schwarz (2009: 35) observes. What differs between the two determiners is not clarified, but one can make some guesses. Their distribution seems to play a role in the differentiation: strong articles are presented as mainly anaphoric; whereas demonstratives are only briefly discussed in connection with deixis. A further point of divergence seems to be morphological: according to Schwarz (2009: 35), German and its dialects have "alternative demonstrative expressions" that are not strong articles. This claim is not backed up with any form, but it can be assumed that he is thinking of the proximal *dieser* 'this', which is inequivocally classified as a demonstrative in traditional grammars (Dudenredaktion 2016: 280).

In sum, Schwarz (2009) assumes a three-way division of German definites. Each of these definites are associated with particular definiteness uses. A summary of the determiners and the prototypical contexts in which they are found is shown in Table 1 below. As indicated by the question marks, the information on the demonstrative is tentative, based on the considerations of the previous paragraph.

Determiner	WEAK ARTICLE	STRONG ARTICLE	DEMONSTRATIVE
Form	*im*	*in dem*	? *dieser*
Use	larger situation	anaphora	? deixis

Table 1: Overview of definiteness uses and forms typically found in them in West Germanic dialects, as summarised in Schwarz (2009).

2.3 Theory II: Strictly binary view on (German) definites

As presented so far, Schwarz's theory is attractive because it provides a unitary semantic analysis of the two German articles, which the descriptive literature had presented, to a large extent, as a long list of possible uses. However, the German data are more complex than the one-to-one mappings between determiners and uses presented so far—a fact which Schwarz acknowledges, but which he does not address in detail in his work. Starting from this premise, this section outlines a second theory, that is labeled as the "strictly binary view on definites". This theory argues that the complexity of the German data can be captured assuming a more traditional two-way distinction between definite articles and demonstratives. Let us start with the issues in Schwarz (2009), to then turn to the alternative proposal.

2.3.1 Open issues in Schwarz (2009)

The previous section concluded with a table showing the correspondences definites in German and the contexts in which they are found. The correspondences shown in the table, repeated below for convenience, are based on the minimal pairs on which Schwarz (2009) develops the denotation of the two German articles. Further, these are the correspondences that are usually assumed in the literature, which sees the weak article as primarily used in situational uses and the strong article as primarily anaphoric (see, for instance, Hanink 2017: 63, Ingason 2016: 112, Jenks 2017: 13).

Determiner	WEAK ARTICLE	STRONG ARTICLE	DEMONSTRATIVE
Form	*im*	*in dem*	? *dieser*
Use	larger situation	anaphora	? deixis

Table 2: Overview of definiteness uses and forms typically found in them in West Germanic dialects, as summarised in Schwarz (2009).

However, Schwarz discusses also other uses of the determiners, which he only partly incorporates into his theory. When these uses are taken into account, a more differentiated picture arises, shown in Table 3.

Determiner	WEAK ARTICLE	STRONG ARTICLE	DEMONSTRATIVE
Form	*im*	*in dem*	? *dieser*
Uses	larger situation anaphora	anaphora deixis	deixis anaphora

Table 3: Distribution of German determiners (revised).

Let us go determiner by determiner. The first complication in the dataset has to do with the weak article, which is not just found in larger situations, but also in anaphora. Specifically, in German, Fering, and Swiss German, the weak article seems to be preferred over the strong article when the antecedent is a discourse topic, or when the definite noun phrase is in a contrastive topic configuration. Less restrictive anaphoric uses of the weak are reported for Swiss German:

(19) Es esch emou *e König* gsi. **De Kchönig** het e Tochter ghaa.
EXPL was once a king been the$_{\text{weak}}$ king had a daughter had
'Once there was a king. The king had a daughter.'

(Studler 2008: 53)

The second complexification has to do with the strong article, which is not only anaphoric, but also deictic:

(20) Hans ist in **DEM Auto** [pointing at car 1] gekommen, nicht in
Hans is in the$_{\text{strong}}$ car [pointing at car 1] come not in
DEM Auto [pointing at car 2].
the$_{\text{strong}}$ car [pointing at car 2]
'Hans came in that car, not in that car.'

German (Schwarz 2009: 34)

Schwarz sets deictic uses of the strong article aside for his analysis, arguing that they have "a special status" (Schwarz 2009: 34). However, judging by the data from other dialects, there seems to be something essential about the deicticity of strong articles: indeed, it is reported at least for Swiss German (Studler 2008: 55), Austro-Bavarian (Wiltschko 2012: 110), and Voralberger more specifically (Cabredo-Hoherr and Schaden 2012: 11).

(21) Wo soll ich **die böuder (do)** heschtöue?
where show I the$_{\text{strong}}$ pictures there put
'Where shall I put those pictures?'

Swiss German (Studler 2008: 55,

glosses CBF)

(22) Context: A points to a house (the only one in the immediate surroundigs) and asks B:

(23) Gfoit a # **s'** / **des Haus**?
like you det_{w} / det_{s} house?
'Do you like this house?'[8]

Austro-Bavarian (Wiltschko 2012: 11)

Finally, turning to demonstratives, they are anaphoric, and not just deictic, as shown in (24) and (25).

(24) Der König hatte *eine Tochter*. **Diese Tochter** war schön.
the king had a daughter PROX daughter was beautiful
'The king had a daughter. This daughter was beautiful.'

German (Studler 2008: 59)

(25) De König het *e Tochter*. **Die Tochter** esch schön.
the king has a daughter. DEM daughter is beautiful.
'The king had a daughter. This daughter was beautiful.'

Swiss German (Studler 2008: 59)

Although Schwarz would not necessarily deny the anaphoricity of the demonstrative, it is worth making this feature explicit, considering the brief treatment of demonstratives in his work.

What are the consequences of this more complicated picture found in Germanic? First, it seems that characterising the strong article as merely anaphoric, and the weak article as merely unique (and thus not anaphoric), misrepresents the wider distribution of these determiners. Indeed, the consistency with which the two definites appear in a cluster of uses across dialects suggests that this wider distribution should not be set aside without comment. The second point that arises is whether Schwarz's (2009) theory can capture the more complex distribution of the two determiners. On the one hand, the anaphoricity of the weak article is not problematic: Schwarz (2009) acknowledges this overlap with the strong article, and proposes that the uniqueness mechanism can also capture this use. Concretely, the idea the uniqueness presupposition can be met not just in the extra-linguistic context (as in larger situations) but also in the linguistic context. On the other hand, the deixis of the strong article (and deixis more generally) is not dealt with in his work, so it is unclear weither the definition of

[8]In the original paper, the example shows how the Austro-Bavarian weak article is ruled out with pointing even if there is only one entity with the nominal property—we discuss this contrast between weak articles/definite articles and strong articles/demonstratives in §2.6.

the strong article can capture it. Overall, it seems that the three categories are not as clearly delimited as Schwarz proposes. This begs the question whether the three-way division he proposes (and the particular characterisation of the different determiners) is the most adequate to capture the Germanic data.

2.3.2 Binary division of German definites

A more straightforward way to capture the data once the "extra" uses are taken into account is by assuming a binary division of the definiteness space in German. In other words, the three-way distinction found in German and its dialects between weak articles, strong articles, and demonstratives can be reduced to a two-way distinction between weak articles on the one hand, and strong articles and demonstratives on the other. The division is illustrated in Table 4:

Determiner	WEAK ARTICLE	STRONG ARTICLE	DEMONSTRATIVE
Form	*im*	*in dem*	*dieser*
Uses	larger situation anaphora	anaphora deixis	

Table 4: Binary division of the definiteness space in German.

As can be seen in the table, the key move for this binary division involves putting strong articles and demonstratives together under the same category. There are two arguments to put strong articles and the proximal *dies-* together. The first is distributional: once deixis is taken back into the picture, and once demonstratives receive a more explicit description, what emerges is that the two determiners have the same distribution. Concretely, they are both possible in anaphora and deixis, and they are both excluded from larger situations. The second argument is morphological and starts from Schwarz's claim that German has "alternative demonstrative forms" that "contrast with the strong article" (Schwarz 2009: 35). This statement is only partly true. Standard German has, indeed, a proximal *dies-*, as we have seen, but the distal demonstrative, based on the root *jen-*, is not used commonly in the spoken language, and when it is, it often introduces relative clauses, instead of referring deictically (Dudenredaktion 2016). A similar restricted distribution of the distal seems to hold in other dialects, such as Amern (Heinrichs 1954) and Swiss German (Studler 2008). In absence of a distal form, the strong article can be seen as filling a paradigmatic gap in the demonstrative system. In other words, it is possible to see the German demonstrative paradigm as containing two forms: the proximal *dies-*, and the distance-neutral strong article.[9] This classification is further supported by

[9]For various Swiss German dialects, the *jen-* demonstrative *ä(j)n-* also has a reduced distribution, but the root that in Standard German expresses the proximal (*dese*) has been

the fact that, what is described as "Demonstrativum" (demonstrative) in some German dialects (at least Amern (Heinrichs 1954); Swiss German (Studler 2008); Fering (Ebert 1971)) is a form which—though stressed, lengthened or sometimes used in combination with locative particles—is identical to the strong article form.[10]

At this point, the question arises whether Schwarz's definitions of the strong and the weak article still apply for this new distribution of the determiners. The answer is positive. The definition of the weak article requires no modification: the uniqueness mechanism (i.e. an iota type shift with a uniqueness presupposition and situation-based domain restriction) was designed to capture the larger situation uses of the weak article, and it can be extended to anaphora.

The situation is somewhat more complicated for the strong article: its denotation was designed for anaphora, but we now need to make sure that its deixis is captured, a use which Schwarz leaves unexplained. What will be argued here, following Simonenko (2014) and Šimík (2016), is that the same mechanism that captures anaphora also applies in deixis.[11] Let us consider the entry of the strong article again, repeated below for convenience:

(26) $[\![\mathrm{D}_{\mathrm{strong}}]\!] = \lambda s \lambda P.\lambda y\colon\ !\exists x\ [P(x)(s) \wedge x = y].\ \iota x\ [P(x)(s) \wedge x = y]$

As a reminder, the key components here are the index and the anaphoricity presupposition: the demonstrative is felicitous if there is a salient entity with which it can co-refer. To resume the previous anaphora example, (10), repeated below, *in dem Buch* is felicitous because there is a pre-mentioned book in the previous sentence:

(27) In der New Yorker Bibliothek gibt es *ein Buch über*
In the New York library exists EXPL a book about
Topinambur, *nämlich "Gesund abnehmen mit Topinambur"*.
topinambur namely healthy lose.weight with topinambur.
Neulich war ich dort und habe # **im** / **in dem** **Buch**
recently was I there and have in-the$_{\mathrm{weak}}$ / in the$_{\mathrm{strong}}$ book
nach einer Antwort auf die Frage gesucht, ob man
for an answer to the question searched whether one
Topinambur grillen kann.
topinambur grill can.

lexicalised as a distal (Studler 2008). The reasoning thus applies the other way round: the strong article, as an unmarked form, can be used to refer also to proximal entities.

[10] A possible explanation of why the deictic strong article form is described as being stressed is that, often, examples of deixis involve contrastive focus, such as example (5) in §2.1.

[11] In Simonenko (2014) and Šimík (2016), the link between anaphora and deixis is also facilitated by the comparison of Schwarz's approach with Elbourne's (2008) description of demonstratives in English, which are deictic and anaphoric.

'In the New York public library, there is a book about topinambur, namely "Losing weight healthily with topinambur". Recently, I was there and searched for an answer to the question of whether one can grill topinambur.'

Schwarz (2009) assumes that the antecedent of the strong article has to be anaphoric, i.e. pre-mentioned. The assumption that is required to explain deixis (which is also the assumption made by Simonenko (2014) and Šimík (2016)) is that the antecedent presupposition can be met not just with an anaphoric antecedent, but also with a "deictic" one. In other words, a strong article/demonstrative can also be used if there is an entity in the extra-linguistic context with the nominal property. This entity is the one that is pointed at in deixis, a gesture which becomes obligatory if there are several books in the situation, in order to identify the correct one. How Schwarz's denotation of the strong article would work for deixis is illustrated in (29) for (28).

(28) Context: There is a table with several books on it. The speaker points at "Losing weight healthily with Topinambur" and says:

In **dem** **Buch** gibt es sehr leckere Gerichte.
In the$_{\text{strong}}$ book give it very yummy recipes

'In that book there are really good recipes.'

(29) $[\![[\ 1\ [[\ \text{that}\ s_2\ ]\ \text{book}\ ]]\ ]\!]^g = \iota x\ [\text{book}(x)(g(2)) \wedge x = g(1) =$ *Gesund abnehmen mit Topinambur*$]$

In the above examples, the strong article is defined if the value of the index ("Losing weight healthily with topinambur") is a book that is immediately accessible in the context. This presupposition is met: such entity is available in the extra-linguistic surroundings ("Losing weight healthily with topinambur", a book, is on the table). Thus the function returns the unique individual that is a book and is identical to "Losing weight healthily with topinambur".

At this point we can also address an issue which is not always clarified in the literature on definiteness, namely why exactly the two determiners are excluded from (and not just found in) particular environments. The first question is why, on the definition provided, weak articles cannot be used in deixis, i.e. why they cannot be used naturally with a pointing gesture. The answer is that this pointing gesture is the one picking out the entity the demonstrative expression co-refers with; thus, it is indicative of the "extra" argument of the demonstrative, the referential index. Since weak articles do not have such index, no entity is picked via pointing, and the gesture is not licensed.

The second question is why strong articles are excluded from larger situations. The simple answer is that this use does not provide an appropriate deictic

or anaphoric antecedent. It has to be noted, however, that this restriction is not dictated by the theory: as Grubic (2015: 162–164) discusses at length, in principle, indices can be assigned to any salient entity, and there is disagreement as to what exactly counts as "salient". On a broad understanding of the term, the unique entity of larger sitution uses (e.g. *mayor* in a town situation) could also count as salient and be a suitable antecedent for the strong aticle/demonstrative, contrary to fact. To address this issue, Grubic (2015) enriches Schwarz's definition of the strong article with the presupposition that its antecedent will require a certain degree of salience, which can vary across languages and determiners (e.g. demonstratives vs. pronouns). Applying this analysis to the present case, it seems that, in German, the degree of salience required from demonstratives is that provided by anaphoric/deictic antecedents, and not less. A way to define this level of salience in a unified manner, at least preliminarily, is to appeal to the notion of "immediacy": anaphoric antecedents are immediate in that there have been just mentioned, and deictic antecedents are immediately perceptible, in that they are found in the utterance situation. By contrast, a mayor in a town (in a larger situation use) is not. Overall, then, the explanation for why strong articles/demonstratives cannot be used in larger situations is still that they require deictic or anaphoric antecedents; however, we now have a notion which unifies both terms, which may explain why the limit as to what counts as an antecedent is set precisely for those two uses. Although this has to be introduced as a language-specific condition here, the generalisation also holds of other languages, as we will see in §2.4.

Having justified the new categorisation and specified the analysis of the two categories, how should they be called or characterised? It seems that the labels of "definite article" (for the weak article) and "demonstrative" (for the strong article and the proximal) would be appropriate. Regarding the latter, we have already seen how strong articles fit into the demonstrative paradigm of German. Further, deixis and anaphora are precisely the things demonstratives are assumed to do in the literature (see, for instance, Wolter 2006 and Elbourne 2008). On the other hand, labeling the weak article as "definite article" follows from its characterisation as a determiner that is not only found in situational uses but also in anaphora. Indeed, these are the uses that, according to Schwarz (2013) and Hawkins (1978) characterise the definite article in English.

Note that the idea that strong articles are demonstratives, and weak articles merely definite articles is not new in the literature, even though it does not enjoy so much popularity in the formal literature. For instance, Himmelmann (1997) argues at length that uncontracted *in dem* in German behaves similarly to the proximal *dies-* in requiring an antecedent. Studler (2008: 203) discusses the issues that arise when one tries to draw a line between "Demonstrativa" and strong articles in Swiss German, since they have the same morphology (except for the vowel lengthening of the demonstrative) and major overlaps in distribution. Further, Simonenko (2014) proposes a parallel analysis of *the-that* and weak-strong

articles in Austro-Bavarian, based on their wh-subextraction properties. So, the binary view on German definites formulates explicitly and develops further a division that is already found in the literature. It does so by linking this particular division of definites to the formal framework provided by Schwarz (2009). This formal framework provides us with the tools for appropriate cross-linguistic comparison between German and other languages, to which we now turn.

2.4 The two theories in the cross-linguistic context

In the previous section, it was argued that the German data are captured more adequately assuming two, rather than three, definiteness categories. Here the approach is extended to other languages, and shown to provide a better description of the patterns found than Schwarz's three-way division of the definiteness space. So, a "strictly binary view" on definites, as the theory is labeled, seems have cross-linguistic validity. The data in question are summarised in Table 5.

	Larger Sit.	Anaphora	Deixis	
German	art	art	dem	dem
English	art	art	dem	dem
Spanish	art	art	dem	dem
Mandarin	∅	∅	dem	dem
Czech	∅	∅	dem	dem

Table 5: Distribution of demonstratives and definite articles across languages.

The table shows the distribution of definite forms in various languages. More specifically, it depicts some definiteness uses from §2.1 and the determiners found in them across different languages. A definite was included if it can be found in a use without affective or contrastive import, and excluded if it is not found in that use. The colour coding indicates the category of the definite, with green for definite articles, red for demonstrative and purple for bare nouns. The data for the individual languages come from the following sources: English - Wolter (2006), Spanish - CBF, Mandarin Chinese - Jenks (2017), Czech - Radek Šimík (p.c.).

Two descriptive generalisations can be made by inspecting Table 5. First, languages seem to distinguish at most two overt forms: articles and demonstratives. This is the case for German, English and Spanish. Some languages, such as Czech and Mandarin Chinese, only have one determiner, the demonstrative; however, the binary split is still reflected, since the demonstrative is in alternation with a bare noun. Second, the two definiteness categories have a similar distribution across languages. Concretely, demonstratives can be used in anaphora and deixis, but not in larger situations. On the other hand, definite

articles and bare nouns are found in larger situations and in anaphora, but not in deixis.

In order to capture the above data with Schwarz's theory, one has to assume a many-to-one, sometimes many-to-many relations between form and meaning. This is because the theory distinguishes three semantic categories (weak articles/uniqueness; strong articles/anaphoricity, and demonstratives with an unspecifid mechanism), while the languages in Table 5 only have two ways to express definiteness. While this can be implemented, an analysis along these lines goes counter to the spirit of Schwarz's theory, which posited one mechanism per morphological distinction (uniqueness for weak articles, anaphora for strong articles). As an example of a possible implementation using Schwarz's theory, let us consider the case of English. In this language, the definite article is used in larger situations, and also as an unmarked option in anaphora. These are the two uses which, according to Schwarz, characterise weak articles and strong articles, respectively. Based on this, Ingason (2016: 113) and Jenks (2017: 29) analyse *the* as spelling out two mechanisms: the uniqueness mechanism of the weak article, and the anaphoricity mechanism of the strong article. English demonstratives are not dealt with by these two authors. However, if we were to follow the same reasoning, *this* and *that* would also have to spell out the anaphoricity mechanism. Additionally, one woud have to find a way to implement deixis with these determiners, a use for which Schwarz (2009) (and Jenks 2017 or Ingason 2016) have no explanation. Overall, then, the resulting analysis is not very parsimonious.

On the other hand, the binary view on definiteness that was applied to German captures the data more straightforwardly. First, the theory assumes precisely the two categories that are also morphologically distinguished in the languages listed, namely definite articles and demonstratives. Further, since the distribution of these two categories is homogeneous across languages, they probably can be captured using the same definitions that were proposed for German in 2.3.2. So, definite articles would denote an iota type shift with a uniqueness presupposition. This explains why they are found in larger situations and anaphora but not in deixis. Note that, in contrast to Ingason's (2016) and Jenks's (2017) approach, the ability of *the* to appear in anaphora is explained in the same way as anaphora with the weak article in Schwarz (2009): here, as in larger uniqueness uses, the definite article presupposes uniqueness, which is met in the linguistic context.

Similarly, the behaviour of demonstratives can be captured by the antecedent mechanism, i.e. the adapted definition of the strong article presented in §2.3.2. The definition would work in the same way as with the German strong article/demonstrative, allowing the determiner in deixis and anaphora. Note also that the languages in Table 5 all seem to agree in what they consider to be an appropriate antecedent, namely entities in anaphora and deixis. Based on this, in what follows it will be assumed that the degree of salience required to

be a (demonstrative) antecedent—which was captured for German with the notion of "immediacy"—is constant across languages. Thus, demonstratives will be assumed to be consistently excluded from larger situation uses, which do not supply an immediately accessible antecedent (deictic or anaphoric).

Of course, the analysis of the strictly binary view would have to be adapted for languages like Czech and Mandarin Chinese. The only adjustment required is the idea that these languages do not lexicalise a definite article. Following Chierchia (1998) and Dayal (2004, 2011), it can be assumed that, in absence of an overt article, the iota type shift can be expressed covertly. This is what allows for the bare noun to appear in typical definiteness uses such as larger situations and anaphora. On the other hand, the definition of the demonstrative can stay the same, since it seems to have the same distribution as in German and in English. To sum up, here, as in the previous language type, the binary view on definites has less difficulty in capturing the binary definiteness splits found in English or Mandarin, and as has been argued in the §2.3.2, German.

A final comment is in order before turning to the next section: the claims that the distribution of a determiner behaves "in the same way" across languages only applies at the level of granularity assumed so far, i.e. when the criterion applied is whether a definiteness form is allowed in or banned from a particular definiteness use. There is, however, finer-grained variation. One particularly clear example of such variation concerns anaphora: although this use seems to allow both for demonstratives and for definite articles/bare nouns, languages have different preferences as to what determiner should be used as a default. So, English *the* is an unmarked option to pick a linguistic antecedent, whereas German *im* (the weak/definite article) can only be used anaphorically in case the noun phrase is a discourse topic or is in a contrastive topic configuration (cf. §2.3.1). Similarly, the bare noun in Mandarin Chinese is only possible in subject position (which Jenks (2017) analyses as a topic position), while the demonstrative must be inserted in other configurations. Beyond anaphora, and turning to a language that is not listed here, it has been noted that French needs a demonstrative for immediate situation uses (Robinson 2005), even though English uses *the* pervasively in this context type.

How can these patterns be explained? In line with previous analyses (Schwarz 2009: 284–285, Jenks 2017: 22–25)—but applied to different phenomena—this finer-grained variation is assumed to stem from lexical competition and blocking. An argument in favour of this idea is that the cross-linguistic differences appear in uses where, in principle, both definiteness forms can appear: so, in uses where the competition is possible. Further, there are language-specific properties that may explain the specific distribution that we find. For instance, in English, *the* can appear in subject position, whereas the difference between the article *im* and the demonstrative *in dem* in German becomes apparent only in certain syntactic configurations, namely those that come with a prepositional phrase. These morphosyntactic differences necessarily come with differences at the level

of discourse, which may affect determiner choice. For instance, it has been argued that demonstrative pronouns in German cannot pick up discourse topics (Bosch and Umbach 2007). Although this example is only distantly related to our argumentation, it is an example of how determiner choice and discourse phenomena are linked. Similarly, Thai is a language which, like Mandarin Chinese, usually takes demonstratives in anaphora (Jenks 2015). The insertion of the demonstrative in this use could be seen as a strategy to achieve an object-level interpretation: since the language does not encode tense or number overtly, the same sentence is interpreted interpreted as generic if the bare noun is used, as in the below example from Jenks (2015):

(30) a. miawaan phŏm cəə kàp *nákrian khon nɨŋ*
yesterday 1ST meet with student CLF INDEF
'Yesterday I met a student.'

b. (i) **(nákrian) khon nán** chalàat mâak.
student CLF that clever very
'That student was very clever.'

(ii) #**nákrian** chalàat mâak.
student cleaver very
'Students are clever.'

Thai (Jenks 2015: 11)

These are, of course, only tentative explanations for the finer-grained variation found in the domain of definiteness. Although these are all phenomena to be investigated, the rest of the thesis focuses on the coarser-grained distributions found in Table 5.

2.5 Summary: How is definiteness expressed across languages?

Overall, then, how is definiteness expressed across languages? At least some of the recent literature on definiteness (e.g. Jenks 2017, Ingason 2016, Arkoh and Matthewson 2013) would answer the question adducing Schwarz's (2009) theory: there are two definiteness mechanisms (uniqueness, anaphoricity), which, however, explain only two of the three definiteness categories Schwarz distinguishes—namely, the behavior of weak and strong articles, but not that of demonstratives. According to this portion of the literature, the uniqueness-anaphoricity distinction is morphologically supported: for instance, by the strong-weak distinction in German, while the third form (the demonstrative) is assumed throughout. However, on closer inspection this division runs into problems: the data from anaphora do not yield a clear-cut dissociation between strong and weak articles, and deixis is not taken into consideration. These factors lead to

complications of the theory, such as the absence of a one-to-one mapping between uses and forms that made the theory appealing.

As a response to these issues, an alternative view on the German and cross-linguistic data has been developed in §2.3 and §2.4, the strictly binary view on definites. This view states that there are indeed two definiteness cross-linguistically, but it goes beyond this statement: it further assumes that Schwarz's two mechanisms for definiteness exhaust all possibilities in the definiteness space. In other words, there are those two definites, and no more. The conclusion is reached by applying the same reasoning as Schwarz: a morphological distinction coupled with a particular distribution is indicative of a semantic distinction. When applying this procedure to the more complex data, only two categories emerge, which correspond, roughly, to what is traditionally understood under "definite articles" and "demonstratives". This binary distinction seems to be reflected across languages, including those that do not lexicalise a definite article, and including also German, on which Schwarz's theory was originally developed.

Given the advantages of this approach, in what follows the strictly binary view will be adopted as a working hypothesis of how languages express definiteness. Since it will be at the center of the discussion to follow, let us spell out clearly what this theory says. The main claim of the strictly binary vew on definites is that there are only two definiteness meanings. The first mechanism, uniqueness, is an iota type shift that comes with a uniqueness presupposition. The second mechanism incorporates an index into its denotation, and presupposes a deictic or anaphoric antecedent. a second claim is that this binary division is reflected in two lexicalisation patterns: some languages (Czech, Mandarin Chinese) lexicalise only the second mechanism, in the form of a demonstrative; other languages (English, German) lexicalise both meanings, and thus have definite articles and demonstratives.

2.6 Other definiteness uses

The argumentation so far has focused only on a selection of the definiteness uses presented in 2.1. This is because deixis, larger situations and anaphora are the uses that provide clear-cut dissociations between the determiners of the two theories. This sections develops the view that will be adopted for two further (somewhat more complex) uses: immediate situations and bridging.

2.6.1 Immediate situation uses

The main question concerning immediate situation uses is whether demonstratives are excluded from them, just like in other situational uses. As a reminder, immediate situation uses involve definite reference to an entity which is present in the utterance context and which is unique in bearing the nominal property. Based on this description, the answer to the question seems to be negative: in

the literature, there are examples that meet this description in which demonstratives can be used, in addition to definite articles.[12] Below are some English, Fering and Spanish examples:

(31) Context: In a room containing one purring cat.
The / **This** / **That cat** is purring.

(adapted from Wolter 2006: 36)

(32) Skal ik ham **det** / **a** **pokluad** auer du?
shall I him DEM / DEF pencil over do?
'Shall I give him the pencil?'

Fering (Ebert 1971: 106
glosses CBF)

(33) ¿Me pasas **el** / **ese** **libro**?
Me pass the / that book
'Can you pass me the/that book?' Spanish (CBF)

Note that these immediate situation uses of the demonstrative are predicted under the strictly binary view on definites: in this theory, the presupposition of the demonstrative can be met not just if the antecedent is anaphoric, but also if it is deictic, i.e. immediately perceptible in the external context. The contexts in (31)-(33) meet this requirement, and so the use of the demonstrative comes as no surprise.

However, the question arises whether these are true immediate situation uses, or whether we are dealing deixis. This question can be viewed from different perspectives, and the answer depends on where one wants to draw the line between the two uses. First, as defined by Schwarz (2009), the label "immediate situation use" seems to imply that reference is achieved by using a particular semantic mechanism, namely the situational domain restriction of the definite article/weak article in Schwarz's analysis. Since we are assuming that the mechanism that applies in (31)-(33) with the demonstrative is its usual index-based mechanism, this requirement for an immediate situation use is not met. Thus, under this perspective, the answer to the question is that we are dealing with deixis, rather than with immediate situation uses.

A second interpretation of the question understands deixis as pointing. So, the question is the following: is pointing involved in the above examples (which means that it is a deictic use) or not (which is more typical of an immediate situation use)? The empirical situation is not clear in the literature. With reference to (32), Ebert (1971: 104) indicates that "indicating gestures" (*hinweisende Geste*) are necessary to use *di*, i.e. the strong article/demonstrative form in

[12]Note that this is true also of Germanic, contrary to what Schwarz (2009) suggests in some of his examples (Schwarz 2009: 39, ex. (40)).

Fering. On the other hand, Roberts (2002) argues that, if the entity in question is sufficiently salient, as in (34) below, a deictic gesture is not required:

(34) Context: In a coffee shop, where one man is harassing the personnel. The speaker says:
That guy is obnoxious.

(adapted from Roberts 2002: 33)

On this perspective, are we dealing with deixis? The answer is not straightforward, since it is not clear whether pointing is obligatory in these contexts or not.

Overall, are demonstratives found in imediate situation uses? The answer to this question relies on a number of theoretical and empirical assumptions as to what this use involves. In what follows, it will be assumed that demonstratives are possible here, based on their availability in contexts that meet the definition of "immediate situation use".

Although, under this view, immediate situations do not dissociate between definite articles and demonstratives (since both determiners can be used), a dissociation can be found if the deixis is brought into the picture, and the two uses are evaluated in conjunction. With reference to entities in the external context, definite articles can be used only if there is one entity bearing the nominal property. On the other hand, demonstratives are allowed regardless of the number of entities found, and often a pointing gesture is involved.

2.6.2 Bridging

This section clarifies the view on bridging that will be adopted in the remainder of the thesis—what determiners can be found in it, and how it should be analysed. Discussing bridging in detail is necessary because, according to Schwarz, it is a further use where the weak-strong article alternation is found, thus providing further support for his theory. In this section, Schwarz's analysis of bridging is rejected, in favour of a more traditional approach to the phenomenon: bridging is unitarily analysed as a special type of larger situation use, where the situation is introduced linguistically.

Let us start with the previous literature on bridging. To remind the reader, this use involves definite reference to an entity which has not been mentioned before, but whose presence (and uniqueness) can be inferred from the previous linguistic context, such as the referent of *the author* in (35) below.

(35) John bought *a book* today. **The author** is French.

(Hawkins 1978: 24)

The literature on English disagrees on the exact nature of the phenomenon: does bridging rely on an explicit link with a previous expression (as the label "associative anaphora" suggests), or is it a special case of uniqueness reference (as its original name "bridging inference" indicates)? In spite of this disagreement, there is a consensus that this use is only possible with definite articles (Wolter 2006), as in (35) above, while demonstratives are only lincensed exceptionally, with an additional contrastive import, as in (36) below:

(36) Gentian jerked the plug out of the drain and climbed out of the tub. [The cat] leapt into the sink and began biting at **that plug**.

(Wolter 2006: 51)

Based on German data, Schwarz proposes a more differentiated view: there are actually two types of bridging, which supposedly receive differential marking in German. The first category, part-whole bridging, is similar to a situational use: the definite expression is used by virtue of the fact that its presence (and its uniqueness) can be inferred from the context—as happens, for instance, in part-whole relations. As in situational uses, part-whole bridging involves uniqueness and thus requires the weak article:[13]

(37) *Der Kühlschrank* war so groß, dass der Kürbis problemlos
The fridge was so big that the pumpkin without-a-problem
im / # **in dem** **Gemüsefach** untergebracht werden
in-the$_{\text{weak}}$ / in the$_{\text{strong}}$ crisper stowed be
konnte.
could
'The fridge was so big that the pumpkin could easily be stowed in the crisper.'

German (Schwarz 2009: 52)

The second type of bridging, relational bridging, involves a linguistically encoded relation: that between a relational noun and its relatum argument, which works as an antecedent. Typically (but not necessarily), this linguistic relation is found in producer-produced pairs, such as author-book, painter-painting, etc. As expected when an anaphoric relation is involved, the strong article is required in this use. (38a) is an example of relational bridging use. The contrast between (38a) and (38b) illustrates the relationality requirement of this type of bridging: unlike *Schriftsteller* 'writer', *Autor* 'author' is relational and can pick up a relatum antecedent, licensing the strong article.

[13] In what follows, the expressions corresponding to the "whole" will be italicised. No special linguistic status is attached. The markings, by the author of the thesis, are to improve readability.

(38) Hans entdeckte in der Bibliothek *einen Roman über den Hudson.*
Hans discovered in the library a novel about the Hudson.
Dabei fiel ihm ein...
In.the.process remembered he$_{\text{Dat}}$ PART
'Hand discovered a novel about the Hudson in the library. In the process, he rembered...'

a. ...dass er vor langer Zeit einmal einen Vortrag #
that he a long time-ago once a lecture
vom / **von dem** **Autor** besucht hatte.
by-the$_{\text{weak}}$ / by the$_{\text{strong}}$ author attended had
'...that he had attended a lecture by the author a long time ago.'

b. ...dass er vor langer Zeit einmal einen Vortrag # **von**
that he a long time-ago once a lecture by
dem **Schriftsteller** besucht hatte.
the$_{\text{strong}}$ writer attended had
'...that he had attended a lecture by the writer before.'

(adapted from Schwarz 2009: 246, 247)

To capture the special anaphoric relation found in relational bridging, Schwarz adapts the definition of the strong article: instead of a property, it takes a relation as an argument, whose first argument is the property of the noun phrase (*author* above) and whose second argument is a covert pronoun, which picks up the previously mentioned relatum argument, *book*.

The bridging data presented so far, summarised in Table 6, is problematic for the strictly binary hypothesis of definiteness.

	Part-Whole	Relational	Contrast
English	*the*	*the*	*that*
German	*im*	*in dem*	?

Table 6: Preliminary distribution of English and German determiners in bridging.

The problem lies in the fact that German seems to make a distinction that English does not have. The strictly binary view on definites has problems capturing this pattern: since this theory analyses German strong articles as demonstratives, the expectation is that they will pattern like their English counterpart. On the other hand, Schwarz's theory could explain the differences by arguing that the two bridging mechanisms are indeed active in English, but they are both spelled out by *the*. Although bridging in English is not explicitly discussed by Schwarz (2009), this argumentation is in line with the assumptions in Ingason

(2016) and Jenks (2017), who assume that *the* lexicalises both the strong article and the weak article.

However, there are reasons to think that bridging in German and its dialects is parallel to English, contrary to what is argued by Schwarz (2009). To start, the distinction between relational and part-whole bridging is not reported in descriptions of German dialects, which identify bridging as a context reserved for weak articles. A case in point is Swiss German: Studler (2008) classifies 'associative-anaphoric' uses, i.e. bridging as a typical use of the weak article. This use is presented without further subdivision. Studler further notes that the weak article is the form chosen for translation by her informants in an example involving *book-author* pair (Studler 2008: 148), which is the prototypical relational bridging example. Similarly, the availability of strong and weak articles in bridging is explicitly tested by Cabredo-Hoherr and Schaden (2012) for Voralberger (Austro-Bavarian). Cabredo-Hoherr and Schaden examine a number of bridging contexts, including a variety of part-whole relations and relational bridging (which they call "functional associative anaphora"). In all bridging types, weak articles are listed as the unmarked form. Strong articles may sometimes be used, but only with added emphatic or contrastive import, as in (39) below:

(39) I bi gescht i-s kino ganga. **Da** / **dea** **film** isch
I am yesterday in-the cinema gone the$_{\text{weak}}$ / the$_{\text{strong}}$ film is
langweilig gsi.
boring been
'I went to the cinema yesterday. The film / That film was boring!'

Voralberger (Cabredo-Hoherr and Schaden 2012)

Beyond dialectal data, the distinction between the two bridging types is also not clearly supported in Standard German—specifically, the data regarding relational bridging are unclear. First, the author of this thesis was unable to replicate the contrast in (38) in informal conversations with three native speakers. They were reluctant to accept the sentence without making changes to the definite noun phrase ((*von*) *dem Autor* '(by) the author'): they either added a relatum argument to it (*von dem Autor des Buches* 'by the author of the book') or changed the case of determiner to the genitive (*von dessen Autor* 'of the$_{\text{GEN}}$ author'). One of the speakers even spontaneously changed *Autor* for the non-relational counterpart *Schriftsteller*. Although they require confirmation, these data suggest that using the relatum antecedent does not saturate the argument of the relational noun *Autor*, which is how relational bridging is supposed to work according to Schwarz. Beyond these examples, Schwarz (2009) provides some experimental evidence in favour of the two bridging types, showing that strong articles are preferred over weak articles in producer-produced relations, the prototypical relational bridging dependencies. However, most of the items

in the experiment introduce a confound: like in the sentence in (40) below, the sentences contain expressions such as *boring* or *to not have a high opinion*, which may facilitate an affective reading of the relevant NP. In other words, the uncontracted strong article in (40) may be licensed because it receives an affective interpretation, rather than because of the availability of a relatum antecedent. That this is a possibility is evidenced by the English translation, which would also allow for a demonstrative NP.

(40) Paul fand das Gedicht in der Zeitschrift sehr schön, obwohl er
Paul found the poem in the magazine very beautiful, although he
sonst nicht sonderlich viel # **vom** / **von dem**
otherwise not really much from-the$_{\text{weak}}$ / from the$_{\text{strong}}$
Dichter hielt.
poet held
'Paul found the poem in the magazine very beautiful, although otherwise he doesn't have a high opinion of the/that poet.'

(adapted from Schwarz 2009: 56)

The data need to be confirmed. However, taking all information together, the following distribution emerges:

	Part-Whole	Relational	Contrast/Affectivity
English	*the*	*the*	*that*
German	*im*	*im*	*in dem*
Voralberger	*da* (weak)	*da* (weak)	*dea* (strong)

Table 7: Revised distribution of English and German determiners in bridging.

On this description of the data, the distribution of German strong and weak articles is parallel to that of English demonstratives and definite articles: in both languages, weak articles/definite articles are found across the two bridging types distinguished by Schwarz, and strong articles/demonstratives are only licensed with with some additional import, such as contrast or an affective reading.[14]

This empirical generalisation has two consequences for the present discussion. First, the data are in consonance with the strictly binary view, in that German *im*/*in dem* and English *the*/*that* display a similar behaviour. Second, at least in what respects part-whole and producer-produced pairs, it seems that bridging can be treated as a uniform phenomenon involving uniqueness. The phenomenon is uniform because no semantic/morphological dissociation is observed,

[14] Admittedly, in English the additional import reported is contrast, whereas in Voralberger the additional import is emphasis/affective reading. It would be interesting to check whether both "extra" meanings are available in the other language as well.

neither in English nor in German. That uniqueness is involved is evidenced by the use of the definite article as the unmarked determiner.

How can this uniqueness be implemented, i.e. how exactly is the definite article licensed in bridging? For part-whole relations, we can adopt the explanation by Schwarz:[15] the entity in question is unique in the situation with respect to which it is evaluated. Applying the reasoning to (37), Schwarz (2009: 158–161) assumes that the situation in question is a kitchen, which includes a unique fridge, and, consequently, a unique crisper—a context which satisfies that uniqueness of the crisper. At first, extending such an explanation to the relational bridging examples may seem problematic. This is because, according to Schwarz (2009) the reason why the strong article is is required here is that uniqueness does not hold in the first place: in the situation exemplified by (38), a library situation, there is no unique author present. However, Schwarz's definition of the weak article allows us to circumvent this issue: all that is required is that the uniqueness of the referent of the author hold in the resource situation—which can coincide with the topic situation or simply be a contextually salient situation. It can be argued that, in (38), mentioning the book in the first sentence makes a writing situation salient, in which the author of that book is unique. This salient situation can then be picked out by the situation pronoun of the article that accompanies *author*.

This section concludes with two cross-linguistic notes. First, the generalisation that definite articles, but not demonstratives, are generally allowed in bridging, does not only hold of German and English, but also of other languages. The reasoning extends to languages with a bare noun/demonstrative alternation. Below are some minimal pairs exemplifying this (note that these are all examples that would fall under Schwarz's (2009) relational bridging category):

(41) Hoy Juan ha comprado un libro. **El** / # **Ese autor** es francés
today John has bought a book. DEF / DEM author is French
'Today John has bought a book. The author is French.'

Spanish (CBF)

(42) Oggi Giovanni ha comprato un libro. **L'** / # **Quell' autore** è
today John has bought a book. DEF / DEM author is
francese
French
'Today John has bought a book. The author is French.'

Italian (CBF)

[15] As with larger situations, Schwarz develops a more complex explanation for part-whole bridging in Chapter 5 of his dissertation (Schwarz 2009: 192–236). We do not contemplate it here.

(43) Honza si včera koupil knihu. **Autorem** / # **tím autorem**
Honza REFL yesterday bought book author / DEM author
je Francouz.
is frenchman
'Honza bought himself a book. The author is French.'

Czech (adapted from Šimík 2014: 4)

Second, although the focus so far has been on definite articles and demonstratives, cross-linguistically there is at least one more way to implement bridging, namely by using a possessive. This option is the preferred one for certain possession relations in Voralberger, e.g. inalienable possession when the noun is modified (e.g. *person-his small nose*, Cabredo-Hoherr and Schaden (2012)). In some languages, such as Ngamo (Grubic 2015: 164, note 21) the possessive even seems to be the overall preferred form in part-whole relations. This suggests that the cross-linguistic picture for bridging may be more complex than has been presented here, and is likely to involve competition with yet another form.

2.7 A different language type: contribution of Akan

In previous sections, the hypothesis was put forward that there are only two types of definites cross-linguistically: definite articles and demonstratives. This hypothesis was formulated as a response to some issues in Schwarz's theory of definiteness, and was developed into an approach that we have called "strictly binary view on definites". The binary partition proposed by this approach was shown to be reflected in two groups of languages. In the first group, made up by English and Spanish, both determiners were lexicalised. The second group, which comprised Mandarin and Czech, only had one overt determiner, the demonstrative, and left the expression of uniqueness to the bare noun. This section is concerned with a third language type, which does not fit neatly into the cross-linguistic picture presented so far: languages with a bare noun, a definite article (or a determiner which is described as such in some sources) and a demonstrative. Ngamo (Grubic 2015), Mauritian Creole (Wespel 2008), Haitian Creole (Wespel 2008), Ga (Renans 2016a,b) and Akan (Arkoh and Matthewson 2013) all belong to this group.

At first sight, this language type is problematic for the hypothesis that there are at most two types of definites. This is because, since they have three ways of expressing definiteness, they easily lend themselves to an analysis in Schwarz's terms. Indeed, a number of languages mentioned in the previous paragraph have been analysed against Schwarz's theory, with the bare noun as a weak article, the overt article as a strong article, and a third form, the demonstrative, which is mostly left unanalysed. The analyses are summarised in Table 8.

	WEAK	STRONG	DEM	Source
German	*im*	*in dem*	? *dieser*	Schwarz (2009)
Ngamo	∅	*=i'e*	*wònsi'i*	Grubic (2015)
Mauritian Creole	∅	*la*	*sa a*	Schwarz (2013)/Wespel (2008)
Akan	∅	*nó*	*saa. . . nó*	Arkoh and Matthewson (2013)

Table 8: Definite forms in languages with a bare noun, analysed against Schwarz's (2009) theory.

However, with the strictly binary view on definites in mind, the question also arises whether these analyses are correct. On the one hand, there is indeed the possibility that these languages are an exception to the generalisations of this theory, supporting Schwarz's approach instead. On the other hand, however, we have seen how the strictly binary approach captures the behaviour of definites in a variety of languages. including those on which Schwarz's theory was originally developed, namely German and its dialects. Considering this, it seems worth investigating the three forms of Ngamo, Akan or Mauritian Creole against the background of the strictly binary view.

Let us formulate the research question in more specific terms. According to the strictly binary view, there are two possible definiteness mechanisms, one uniqueness-based and one antecedent-based. Further, we have seen two possible lexicalisation patterns for these meanings: either only the demonstrative is lexicalised (leaving uniqueness to the bare noun), or both the demonstrative and the definite article are lexicalised. Thus, examining the "third language type" against the background of the strictly binary view would involve seeing whether they lexicalise demonstratives and definite articles, or whether they only lexicalise demonstratives. The demonstrative form seems clearly identified in these languages. The question which arises is the nature of the "intermediate" definite (that which has been analysed as a strong article in previous analyses): is it a demonstrative or is it a definite article? On the first option, the resulting system is one with several demonstrative forms and a bare noun, effectively putting it in the same category as Czech and Mandarin Chinese. On the second option, the languages would be like English or German in encoding two forms, but would differ from them in additionally allowing for a an argumental bare noun with definite import. Overall, then, examining these languages against the background of the strictly binary view boils down to examining the "intermediate" category in detail, and comparing it to the demonstrative.

What distribution do we expect for each option? Based on the considerations of the previous sections, we predict the following:

- If the "intermediate" definite form is a demonstrative it will be found in deixis, anaphora, and immediate situation uses, and it will be excluded from larger situation uses, global situation uses, and bridging.

- If the "intermediate" definite form is a definite article, it will be found in larger situation uses, immediate situation uses (if the entity referred to is the only one with the nominal property), bridging, and anaphora, and it will be excluded from deixis.

The predictions are also summarised in Table 9 below.

	Bridging	Large/Global Sit.	Imm. Sit.	Anaphora	Deixis
Art	✓	✓	✓	✓	✗
Dem	✗	✗	✓	✓	✓

Table 9: Distribution of demonstratives and definite articles.

This dissertation takes Akan as a case study to examine the third "language type" presented in this section. The case of Akan is particularly interesting for various reasons. To start, as the first language beyond Germanic to which Schwarz's analysis was applied—and as evidenced by the frequent citation of Arkoh and Matthewson's proposal—Akan has become a standard example of a language that overtly encodes strong articles while relegating the role of the weak article to the bare noun. However, as will be discussed in the next section, the previous formal analysis of this definiteness system (Arkoh and Matthewson 2013) is not without problems, suggesting that a new analysis may be in order. Finally, as we will also see, the status of the determiner is also not clear in the descriptive literature, which makes the investigation of even more value for the description of the Akan language.

3 Akan definites: Previous literature

This section reviews the previous literature on Akan definites. Continuing the argumentation in §2, the main goal is to establish whether the Akan definiteness system really supports Schwarz's theory, as has been proposed in the previous formal analysis on this topic (Arkoh and Matthewson 2013). The conclusion that this is not the case makes the strictly binary hypothesis more attractive, and prompts the re-investigation of Akan definites under this working hypothesis. The section starts with a linguistic introduction to Akan and its main grammatical properties (§3.1), followed by the discussion of the previous formal analysis of Akan definites, Arkoh and Matthewson (2013) (§3.2).

3.1 The Akan language

Akan (Kwa, Niger-Congo) is a group of mutually intellegible dialects spoken by approximately 9.2 million people (Simons and Fennig 2007) predominantly in the southern half of Ghana, with small pockets of speakers also found in Ivory

Coast (Dolphyne 1988). The largest Akan dialects are Asante Twi (3.8 million speakers), Fante (2.7 milion speakers), and Akuapem Twi (600 000 speakers) (Simons and Fennig 2007). The data in this thesis come from the Asante Twi dialect of Akan. Asante Twi, like the other major varieties of the language, has its own standard orthography and is taught in schools in regions where it is spoken as a native language (Duah 2013).

Akan has received some attention in the formal literature, particularly in the domain of syntax and phonology. However, unlike other major West African languages such as Hausa, it lacks a recent complete reference work in English: to the author's best knowledge, its most widely cited grammar is from the 19th century (Christaller 1875). Thus, the description of the language provided below is mostly based on papers on individual topics on the grammar of Akan, and on an unpublished online Asante Twi course by Bearth et al. (1999), which has a comprehensive and linguistically informed grammar section.

Let us turn to the basic grammatical properties of Akan. Akan is a tone language which distinguishes between high and low tones. In the linguistic literature, these are sometimes indicated with acute (´) and grave accents (`), respectively. Since the speakers that acted as the main consultants for this thesis did not have a background in linguistics, the tones will be left unmarked in what follows. The basic word order of the language is Subject-Verb-Object. Further, the language allows for serial verb constructions.

Beyond these general properties, nominal morphology and nominal syntax are of particular interest, given that this thesis is concerned with definiteness markers. Starting with morphology, Akan is described by Bodomo and Marfo (2002) as distinguishing between mass nouns and count nouns, which can be singular or plural. The number distinction is encoded in a noun class system that has been descibed as residual (Osam 1993), and for which there seems to be no agreed classification in the literature. This noun class system is reflected in a series of vocalic and nasal prefixes that attach to the noun:[16] *ɔ-/o-*, *a-*, *ɛ/e-*, *n-/m-*.[17] As it is described in Osam (1993), Bearth et al. (1999), and Bodomo and Marfo (2002), the system is not very transparent: all exponents can surface as singular or plural depending on the noun class, and it is not possible to predict which plural prefix a noun will take based on the singular form, or vice-versa. Further, number distinctions are also sometimes encoded in derivational suffixes (expressing kinship, identity, occupation, ...), which may or may not co-occur with a prefix. Some examples of the possible singular-plural patterns are found below (examples from Bearth et al. 1999, glosses CBF):

(44) Prefix marking

[16]Some adjectives agree in number, but not in class, with the nouns they modify. Their prefix is lexically determined (Konoshenko and Shavarina 2016).

[17]The vocalic prefixes undergo vowel harmony with the first stem vowel, hence the alternation. The nasal prefix undergoes homorganic assimilation (Bearth et al. 1999).

a. a-bɔfra, m-mɔfra
SG-child, PL-child
b. ɛ-dan, a-dan
SG-house, PL-house

(45) No sg/pl distinction
a. didi-foɔ, didi-foɔ
glutton-SG, glutton-PL
b. n-woma, n-woma
SG-book, PL-book

(46) Suffix marking
a. ɔ-nua, e-nua-nom
SG-sibling, PL-sibling-PL
b. wɔfa, wofa-nɔm
uncle, uncle-PL

In spite of the complexity of the system, one generalisation that can be made is that *n-* is a relatively widespread plural marker, which can be the plural for nouns with any of the singular prefixes. Indeed, Ofori (2016) analyses it as the 'Elsewhere' plural form, in a Distributed Morphology sketch of the Akan nominal system. Following the convention in Arkoh and Matthewson (2013), these nominal prefixes will not be glossed. Nonetheless, since the investigation will test uniqueness, special care must be taken to select nouns for which the singular-plural contrast is active, in order to investigate the singular form.

Turning to the syntax of the noun phrase, most determiners and quantifiers, as well as nominal modifiers (adjectives, numerals, relative clauses, ...) follow the noun. A modified noun phrase in the unmarked word order (according to Appah (2003)) is presented in (47) below:

(47) M-bofra n-ketewa mienu a wɔ-ba-ae no nyinaa.
PLU-child PLU-small two REL 3PLUSUBJ-come-PAST DEF all
'Both/all of the two small children who came.'

(Appah 2003: 39)

Possessive pronouns and genitive constructions (in bold) precede the noun:.

(48) a. **Ɔhene no** kaa foforɔ mmienu no.
chief DEF car new two DEF
'The chief's two new cars.'

b. **Ne** kaa foforɔ mmienu no.
3SG.POSS car new two DEF
'His two new cars.'

(Bearth et al. 1999,
glosses CBF)

Before turning to the previous formal analysis of *nó*, it will be useful to clarify which definiteness forms are found in Akan. In general, the descriptive literature agrees on the markers that exist, but not entirely on their semantic affiliation. Most sources consulted (Amfo 2009, Arkoh 2011, Afriyie 2014) distinguish three simple definite determiners, and two morphologically complex ones. The complex forms are a combination of the simple determiners with the prenominal marker *saa*, which, when used in isolation, functions as a manner adverb ('like this').[18] An overview of the different forms is found in Table 10 below. Other forms that Afriyie (2014) discusses in connection to specificity and definiteness (*ko*, *korɔ* 'a particular') are left aside in this thesis.

Simple determiners	Complex determiners
nó	*saa. . . nó*
yi/*wei*	*saa . . . yi*

Table 10: Overview of Akan definite determiner forms

Yi and *wei* are unitarily described as proximal demonstratives. According to Amfo (2009: 138, note 6), *wei* is a colloquial variant of *yi*. The complex forms are also uniformly classified as demonstratives, with *saa . . . yi* as proximal and *saa . . . nó* as distal. The discrepancies in the literature have to do with *nó*, which Bearth et al. (1999) classify as a definite article, but Amfo (2009) as a distal demonstrative. Arkoh (2011) discusses it both as a definite article and as a demonstrative.[19] In addition to these determiners, several sources list the zero determiner (singular bare noun) among the definite determiners (Afriyie 2014), usually in connection with kind reference.

A final comment is in order. The morpheme *nó*, which has been presented so far as a definite determiner, also surfaces with tonal variations as a third person singular object pronoun, (49), and as a dependent clause marker (in temporal clauses, (50), and at the end of relative clauses, (51)).

(49) Mɪ-ma-a **nʊ** edziban.
2SG.SUBG-give-past 3SG.ANIM.OBJ food
'I gave her food.'

(Arkoh and Matthewson 2013: 20)[20]

[18] In the dialect discussed by Arkoh and Matthewson (2013), Fante, the equivalent of *saa* is *dɛm*. Both are pre-nominal demonstrative markers and they are presented as totally equivalent in the literature (e.g.Amfo 2009, Afriyie 2014)

[19] We return to these conflicting classifications at the end of the section.

[20] Original glossing from Arkoh and Matthewson (2013)—the prefix on the first verb is,

(50) Adjoa ba-e **no**, me-a-n-hu no.
Adjoa come-COMPL DCM I-COMPL-NEG-see her
'When Adjoa came, I didn't see her.'

(Fretheim and Amfo 2008: 360)

(51) Mpɔbʊwa nʊ aa mʊ-tɔ-ɪ **nʊ** a-yiw
shoe FAM REL 1SG-SUBJ-buy-PAST DCM PFV-miss.
'The shoe I bought is missing.'

(Arkoh and Matthewson 2013: 23)

Previous papers, including Arkoh and Matthewson (2013), have suggested a unitary analysis of all variants of *nó*. However, since the aim of this dissertation is to disentangle the semantic complexities of the Akan definiteness system, the investigation will focus only on the NP-determiner.

3.2 Arkoh and Matthewson (2013): Is *nó* a strong article?

With the relevant background in place, we can now turn to the previous formal account of Akan definites, namely Arkoh and Matthewson (2013). The paper is presented, both by its authors and in the subsequent literature (Schwarz 2013, Schwarz 2016, Ingason 2016, Jenks 2017), as providing support for Schwarz's theory of definiteness. The main claim of the paper, based on data from the Fante dialect of Akan, is that *nó* is a "familiarity article", a category which they eventually formalise as a strong article in Schwarz's (2009) sense. Further, the Akan bare noun—an underspecified form which can be indefinite but also express uniqueness—is said to perform the function of a weak article. Throughout, a third form is assumed, that of the demonstrative, which is left unanalysed. Overall, the Akan system seems to support the three-way division of the definiteness space into uniqueness, anaphoricity and deictic definites which Schwarz (2009) assumed for German and its dialects. In what follows, however, it will be argued that Arkoh and Matthewson's (2013) paper does not necessarily support this three-way distinction. This is because the authors' notion of a "familiarity definite", as *nó* is defined, does not coincide with that of Schwarz's (2009) strong article. As a consequence, the relevant evidence for a strong article analysis of *nó* (and, by extension, for the three-way division of definites) is not provided.

To understand the core of the problem, it is necessary to first clarify what "familiarity" means. Arkoh and Matthewson (2013) present various definitions: an entity is familiar if it is known by the interlocutors, or, more technically, if the existence of the entity is already in the common ground. Both characterisations

however, a first person singular form, rather than a second person, as indicated here. The glosses from Arkoh and Matthewson (2013) are transcribed phonetically and come from the Fante dialect of Akan.

make reference to a very specific view on how discourse and reference tracking work, namely that of dynamic semantics as devised by Heim (1982). For the present purposes, the important part of the theory is Heim's characterisation of NPs. In Heim's view, definite and indefinite NPs denote indexed variables that refer to discourse referents. What distinguishes the two is the Novelty-Familiarity condition, which regulates index assignment: if the index is already in the set of discourse referents, the NP is definite; if the discourse referent (i.e. the index) is novel, then the NP is indefinite. What this means, then, is that, by definition, all definites are familiar. At this point, and from an empirical perpective, the crucial question is under which conditions an index counts as "already being in the set of discourse referents". Roberts (2003), developing an idea already found in Heim (1982), distinguishes two ways in which this may happen, i.e. two different types of familiarity. First, the discourse referent may have been explicitly introduced in the previous discourse—this is the traditional notion of anaphora. This type of context Roberts (2003) calls "strong familiarity". Second, the existence of a discourse referent may be presupposed by means of common knowledge, e.g. because the entity in question is perceptible by the senses, or because the entity referred to is expected in the particular scenario being described (e.g. *the sun* in any context (our global situation use), or *the knife* at a crime scene (our bridging)). These types of context involve what Roberts (2003) calls "weak familiarity".[21]

The main problem with Arkoh and Matthewson's (2013) paper is that the authors assume that familiarity in Heim's (1982) and Roberts's (2003) sense is the defining characteristic of strong articles, whereas this is not the case. It becomes evident that their assumption cannot be correct when one considers that the notion of familiarity is what distinguishes definites from indefinites–and thus it should apply in all definiteness uses. Strong articles, however, are a subtype of definites, found only in certain definite contexts (typically, anaphora, according to Schwarz (2009)). Admittedly, Schwarz (2009, 2013) and other authors (Jenks 2015, Grubic 2015) call strong articles "familiarity definites", and the incorporation of a referential index into the denotation of the strong article is openly inspired by Heim's (1982) dynamic semantics, which, as we have just seen, sees definite (and indefinite) NPs as indexed variables. However, Schwarz clarifies at various points in his dissertation (e.g. in the introduction, Schwarz 2009: 3, and in the technical discussion of the strong article in Chapter 6, Schwarz 2009: 238-289) that by familiarity he only means "strong familiarity", i.e. familiarity achieved by means of anaphora. Further, even though Schwarz's definition of the strong article is inspired by dynamic semantics definites, the main contribution of his thesis is the idea that referential indices should not be incorporated into the definition of all definites across the board, as Heim (1982) or Roberts (2003) do, but only to those that are explicitly anaphoric.

[21]Note that, according to Roberts (2003), definites presuppose uniqueness in addition to familiarity as defined here.

As a consequence of this theoretical mix-up, Arkoh and Matthewson (2013) build up a somewhat contradictory argumentation, which partly follows Schwarz's (2009) idea on what strong articles do, but which mostly provides examples where familiarity, but not strict anaphoricity, is involved. With reference to the first point, based on examples such as (52) below, Arkoh and Matthewson argue that *nó*, like German strong articles, cannot express uniqueness. This is because the globally unique noun *ɔsɪran* 'moon', and the head noun of the relative clause, which refers to a unique individual, appear with the bare noun.

(52) Amstrɔn nyi nimpa aa o-dzi-i kan tu-u kɔ-ɔ
Armstrong is person REL 3SG.SUBJ-eat-PAST first fly-PAST go-PAST
ɔsɪran do.
moon top.
'Armstrong was the first person to fly to the moon.'[22] (A&M, p. 2)

On the other hand, they also provide examples where *nó* seems to be referring to an entity which is unique within a certain situation, as in (53) (from Amfo 2009, in the Asante Twi dialect) and (54) below.

(53) **Ɔkasamafo no** bɛ-ba seesei ara, enti yɛ-n-twɛn kakra.
speaker DEF FUT-come now just so we-IMP-wait little
'The speaker will arrive soon, so let's wait a little while.'

(54) **Sɔfʊ nʊ** be-dzi-kan abɔ mpaa
priest DEF FUT-take-first beat prayer.
'The priest will pray first (before anything taking place).'

(A&M, p. 12)

In these examples, familiarity is met, but not anaphoricity/strong familiarity. The above examples (which are uttered, respectively, at a talk, and at a church) are typical examples of larger situation uses, from which strong articles in German are consistently excluded, and in which only weak articles are found (according to both Schwarz (2009) and to the working hypothesis adopted in this thesis). The reason why Arkoh and Matthewson include these examples as evidence for their analysis of *nó*, is that they still fall under Roberts's (2003) definition of weak familiarity, as the entities in question are expected in the context. Other examples which assume Roberts's (2003) familiarity, but not necessarily the anaphoricity of the strong article, involve definite/indefinite pairs, such as (55) below:

[22] Arkoh and Matthewson's (2013) examples, in the Fante dialect, are transcribed phonetically. The determiner *nó* appears as *nʊ*. In this and other sections about Arkoh and Matthewson (2013), the paper will be referenced as A&M.

(55) a. Kofi hu-u **ɔtʊmfʊ nʊ**.
Kofi see-PAST blacksmith DEF
'Kofi saw the blacksmith.'
b. Kofi hu-u **ɔtʊmfʊ**.
Kofi see-PAST blacksmith
'Kofi saw a blacksmith.' (A&M, p. 11)

This minimal pair is presented as evidence that *nó* expresses familiarity: (55a) is only possible if the blacksmith in question is known to the interlocutors, otherwise the indefinite bare noun in (55b) has to be used. However, as can be seen in the indefinite translation of the bare noun, the criterion applied (i.e. the question of whether the entity is known) is teasing apart definites from indefinites, rather than different subtypes of definiteness. This follows straightforwardly from Roberts's (2003) and Heim's (1982) notion of familiarity, but is not the evidence needed to show that *nó* is strong in Schwarz's (2009) sense.

The consequence of this contradictory argumentation is that, overall, most of Arkoh and Matthewson's (2013) examples are inconclusive with respect to Schwarz's (2009) three-way division of the definiteness space. Let us consider for a moment which type of minimal pairs would be required to defend this theory, which is summarised schematically in Table 11:[23]

Determiner	WEAK ARTICLE	STRONG ARTICLE	DEMONSTRATIVE
Form	∅	*nó*	*saa. . . nó*
Use	larger situation	anaphora	? deixis

Table 11: Arkoh and Matthewson's (2013) analysis of Akan definites assuming Schwarz's theory.

First, one would have to show that the strong article (here: *nó*) can be used in anaphora (positive evidence) and in no other context (negative evidence). On the one hand, Arkoh and Matthewson provide plenty of positive evidence for the anaphoricity of *nó*, for instance example (56):

(56) Mʊ-to-o *ekutu (no).* **Ekutu *(no)** yɛ dɛw papa
1SG-buy-PERF orange *FAM. Orange FAM be nice good.
'I bought an orange. The orange was nice.'

(adapted from A&M, p. 2)

However, there is no negative evidence delimiting *nó* from demonstratives and uniqueness definites. With regard to the first, it is not shown that *nó* cannot

[23]Note that Arkoh and Matthewson (2013) would not state that anaphora is needed for *nó*, but merely familiarity. The table below assumes the original division proposed by Schwarz (2009).

be used in deixis—more specifically, deixis examples are generally missing. As for the second point, it is not shown that *nó* cannot be used in larger situation uses, from which strong articles in German are consistently excluded. On the contrary, there are even two examples that seem to involve a larger situational use, namely the speaker and priest examples that we saw in (53) and (54) above.

To support Schwarz's (2009) three-way division of definites, one would also have to show that the alleged uniqueness definite (here: the bare noun) can be used in situational uses, and nowhere else. At first sight, the relevant examples seem to be provided. First, there is one example of global situation use of the bare noun, namely the moon example in (52). Further, in the anaphora example in (56), the bare noun was not possible.

However, due to a number of confounds, the bare noun evidence is not totally convincing. First, there are no examples where the bare noun acts as a subject —in fact, Arkoh and Matthewson (2013: 12, note 19) note that the bare noun is not always accepted in this syntactic position. What is more, in the examples, the bare noun appears as the object of a motion verb, as in (52) above, and in (57) below:

(57) Mo-ro-ko **gua** mu.
1SG.subj-PROG-go market in
'I am going to the market.' (A&M, p. 11)

The apparent restrictions in its distribution suggest that the bare noun may not be lincensed only due to the uniqueness of the noun (*ɔsiran* 'moon', *gua* 'market'), but rather because the noun phrase incorporates into the verb. Further, the third bare noun example in Arkoh and Matthewson's (2013) paper seems to involve a proper name, 'Pope', as the authors acknowledge in a footnote (Arkoh and Matthewson 2013: 19, note 31).

(58) Kwami ny-aa krataa fi-i **Egya krɔnkrɔn pop** hɔ.
Kwame get-PAST letter from-PAST father holy pope there
'Kwame got a letter from the Holy Father Pope.' (A&M, p. 11)

Finally, the demonstrative (the third definiteness form) is barely discussed. Furthermore, instead of it being delimited from the alleged strong article *nó*, it is presented in an example in which both determiners can be used:

(59) a. Mɛ-kyere wo **mfoni no**.
1.FUT-show you picture FAM
'I will show you the pictures.'

b. Mɛ-kyere wo **saa mfoni no**.
1.FUT-show you DEF picture FAM
'I will show you those pictures.'

(A&M, p. 8, adapted from
Amfo and Fretheim 1995: 109)

So, the delimitation between demonstratives and strong articles is unclear.

3.3 Consequences

The issues in Arkoh and Matthewson (2013) confirm the suspicion, formulated in §2.7, that Schwarz's system does not adequately capture "the third language type"—at least not in Akan. It is only by extending the notion of anaphoricity to that of "familiarity" that Arkoh and Matthewson (2013) can maintain a strong article analysis of *nó*. Although this change is indeed a technical possibility, the outcome is a totally different system from that of Schwarz (2009): for instance, the alleged strong article ends up appearing in contexts typical of the weak article (as in the larger situation examples with the priest in (54) and the speaker in (53)). Considering the problems of the analysis, a re-investigation of the Akan determiners seems in order. The next sections will do this against the background of the strictly binary view on definites, a theory which has cross-linguistic validity and which we wanted to extend to the third language type.

As a reminder, the strictly binary view asks whether the "intermediate" definite determiner (here: *nó*) is a definite article or a demonstrative like *saa... nó*. As we have seen in §3.1, this question does not receive a unitary answer in the traditional Akan literature. Considering this, both responses seem plausible hypotheses worth pursuing. From a morphological perspective, a demonstrative *nó* is an attractive option: this analysis would yield a symmetrical demonstrative paradigm, with two simplex forms (the proximal *yi* and distal *nó*) and two complex forms (*saa... yi*, *saa... nó*), which possibly come with some emphatic import, as suggested by Amfo (2009: 140) for *saa... yi*. On the other hand, the priest and speaker examples from Arkoh and Matthewson (2013) suggest that we are dealing with a uniqueness definite, i.e. with a definite article. Either way, the relevant minimal pairs that tease apart the two categories are generally absent in the literature, whose examples involve mostly immediate situation uses or contextless sentences. Overall, then, whether *nó* is a definite article or a demonstrative is still a genuine open question.

4 Empirical evidence: Is *nó* a definite article or a demonstrative?

This section is the empirical part of the thesis, which investigates the Akan determiners against the background of the strictly binary view on definites. The research question is whether *nó* is a definite article (i.e. an iota type shift with a uniqueness presupposition) or a demonstrative (i.e. an iota type shift with

a referential index, which presupposes a deictic or anaphoric antecedent). To remind the reader, the predictions for each option are as follows:

- If *nó* is a demonstrative, it will be found in deixis, anaphora, and immediate situation uses, and it will be excluded from larger situation uses, global situation uses, and bridging.
- If *nó* is a definite article, it will be found in larger situation uses, immediate situation uses (if the entity referred to is the only one with the nominal property), bridging, and anaphora, and it will be excluded from deixis.

The predictions are summarised again in Table 12 below:

	Bridging	Large/Global Sit.	Imm. Sit.	Anaphora	Deixis
Art	✓	✓	✓	✓	✗
Dem	✗	✗	✓	✓	✓

Table 12: Distribution of demonstratives and definite articles.

While investigating this research question, a comparison will be made with the distal *saa. . . nó*, which sets a baseline for what demonstratives can do in Akan.

The question is investigated using two methods. First, in §4.1, the behaviour of *nó* and *saa . . . nó* is examined in a quantitative pen-and-paper questionnaire, with focus on anaphora and bridging. Second, in §4.2, their behaviour is examined across a wider range of definiteness uses, using controlled elicitation. The data presented in this section all come from the author's own work with native speakers of Akan (Asante Twi dialect) in Accra (Ghana) and in Berlin. The overall conclusions of the section are presented in §4.3.

4.1 Quantitative study

Background/Rationale The study was designed to test two competing views on the Akan definiteness system, namely:

- **Hypothesis I** *Nó* is a definite article and presupposes uniqueness.
- **Hypothesis II** *Nó* is a demonstrative and presupposes an antecedent (which can be anaphoric or deictic).

In order to test these two hypotheses, the behaviour of the definite was examined across two definiteness uses: bridging and anaphora. Bridging is a use which, according to the view developed in §2, dissociates between the two definiteness types, licensing articles and disallowing demonstratives. This is because it satisfies the uniqueness presupposition of the definite article, but not the antecedent presupposition of the demonstrative, since the context provides no immediate (deictic or anaphoric) antecedent. This dissociation is illustrated for English in (60):

(60) John went to a hospital. When he arrived, he waited in the corridor.
a. **The doctor** called him after a while.
b. #**That doctor** called him after a while.

In turn, anaphora is a context in which both demonstratives and definite articles are found. This is because uniqueness is met, and an antecedent is provided, potentially satisfying both the uniqueness and the antecedent presupposition. The context can thus serve as baseline for acceptability for both determiners. In sum, by selecting these two types of contexts, the availability of an antecedent is manipulated systematically, while keeping uniqueness constant across conditions.

As a control, the behaviour of *saa... nó* was also examined across the two conditions, setting a baseline for what demonstratives can do in Akan. The predictions of the two hypotheses, formulated informally here, are as follows:

- **Predictions Hypothesis I:** If *nó* is a definite article, it will be acceptable in both anaphora and bridging. A dissociation is expected with *saa... nó*, which is not available in bridging.
- **Predictions Hypothesis II:** If *nó* is a demonstrative, it will be acceptable only in anaphora and unacceptable in bridging. The baseline for unacceptability is set by *saa... nó*, which is unacceptable in bridging.[24]

Design and Method The items were created in collaboration with a native speaker of Asante Twi. The items were manipulated across four conditions in a fully crossed 2x2 design, with factors DETERMINER TYPE (*Nó*, *Saa... Nó*) and ANTECEDENT TYPE (*+Ant(ecedent)* for anaphora, *-Ant(ecedent)* for bridging).[25] See (61)-(64) for a sample manipulation of an item:

(61) ***Nó*, *+Ant***
Prosper went to church. He talked to **a pastor**. After a bit, **pastor *nó*** started praying.

(62) ***Nó*, *−Ant***
Prosper went to church. He talked to **some choristers**. After a bit, **pastor *nó*** started praying.

[24]Note that, although the background is the binary view on definiteness, the set-up of the questionnaire can also be formulated in Schwarz's (2009) terms. Indeed, the contexts used in the investigation dissociate only between definite articles and demonstratives but also between strong articles. Hypothesis I would then correspond to a weak article analysis of *nó* and Hypothesis II with a strong article analysis of the determiner. Note, however, that the question regarding the definition of *nó* does not make sense under Schwarz's (2009) three-way division, since *nó* is the only possible candidate for a strong article in Akan.

[25]As explained above, uniqueness is kept constant across all conditions.

(63) ***Saa. . . Nó*, *+Ant***
Prosper went to church. He talked to **a pastor**. After a bit, ***saa* pastor *nó*** started praying.

(64) ***Saa. . . nó*, *−Ant***
Prosper went to church. He greeted **some choristers**. After a bit, ***saa* pastor *nó*** started praying.

Each item consisted of two context sentences and one test sentence (the final sentence). The first context sentence introduces a situation in which an individual goes to some place. In the second sentence, the factor ANTECEDENT TYPE is manipulated: in the *+Antecedent* conditions (those corresponding to anaphora), an individual that is expected to be unique in the situation (*pastor* in (61) and (63)) is introduced as an indefinite NP, either as direct object (for verbs like *see*) or as a prepositional object (for verbs like *sit next to*); in the *-Ant* conditions, an entity is also introduced, which is expected but not unique in the situation in question (*choristers* in (62) and (64)). In order to avoid co-reference of this entity with the subject NP of the following sentence (which would result in an unwanted anaphoric dependency), the introduced entity in the *-Ant* condition is in the plural. In the test sentence (the third sentence), the factor DETERMINER TYPE is manipulated: the subject contains either *nó* or *saa. . . nó* as a determiner.

In informal judgements prior to running the questionnaire, the discourse in the *+Ant* conditions was judged by speakers as being more coherent. The reason for this is that the *+Ant* track only two, rather than 3, individuals. To control for this, the test sentence always begins with a temporal PP (*after a bit*, *a bit later*, *later on*; each variant repeated 4 times across the experiment). The idea was to link the second and the third sentence, to ensure that there would be a coherent sequence of events regardless of the presence of an antecedent. Overall, in the second three verbs were used (each repeated four times): *see*, *sit next to*, *greet*. The predicates were selected because they described events that seemed plausible following the introductory sentence, while also introducing the required direct/prepositional object. The full list of items and their manipulations, together with an English translation, is provided in Appendix A.

Participants and procedure 40 speakers of the Asante Twi dialect of Akan took part in the questionnaire. 4 participants were excluded early on because they were not native speakers (2 participants) and because the questionnaire had been printed incorrectly (2 participants). 4 more participants were recruited to complete the lists. Out of the final population, there were 28 female and 12 male participants. All were students at the University of Ghana (Legon, Accra, Ghana), out of which 27 studied Linguistics and 13 other subjects. All were speakers of English, and 8 reported speaking at least another local language (Fante, Ga, Akuapem Twi, Sefwi).

In the pen-and-paper questionnaire, 12 test items and 12 fillers were presented, for a 1:1 item-to-filler ratio. The items were arranged in a Latin Square design, interspersed with the fillers, and randomised. Each of the four resulting lists was then presented backwards and forwards, for a total of eight lists, and 5 speakers per list. The participants' task was to judge whether the third sentence of the sequence, which was marked in bold, was a good continuation of the previous two sentences. The possible responses were on a 3-point scale, with 3 as acceptable, 1 as unacceptable and 2 as 'inbetween'; the scale was presented below each item. The participants were instructed to read the instructions, which were then repeated orally to them by the experimenter. A sample questionnaire (first two pages) is provided in Appendix B.

Predictions The predictions are formulated below in more formal terms. The expected patterns are illustrated visually in 1.

- **Predictions Hypothesis I:** *Saa... Nó, -Ant* is rated low and the other conditions are rated high. This means that there should be an interaction of DETERMINER TYPE and ANTECEDENT TYPE: changing from *+Ant* to *-Ant* affects the two determiners differently, lowering the judgements for *Saa... Nó*, but not for *Nó*.
- **Predictions Hypothesis II:** The two determiners should pattern alike, with high ratings for *+Ant* and low ratings for *-Ant* conditions: main effect of ANTECEDENT TYPE.

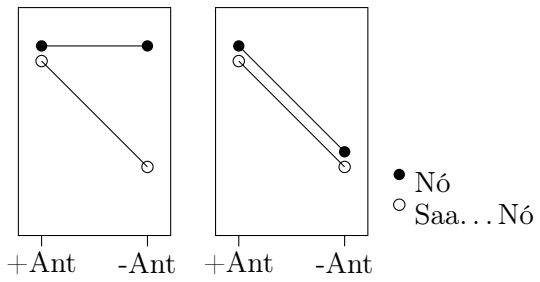

Figure 1: Predictions of Hypothesis I (left) and Hypothesis II (right), ratings on y-axis

Exploratory analysis One item from the *Saa... Nó, -Ant* condition and one filler were removed because no response had been provided.

There was a high prevalence of positive ratings, with rating 3 occurring more than twice the two other ratings (see Fig. 3).

The responses varied across and within subjects. Some subjects rated all or nearly all experimental items with 3. Two participants provided a clear pattern consistent with Hypothesis I, with high ratings for the *+Ant* conditions and

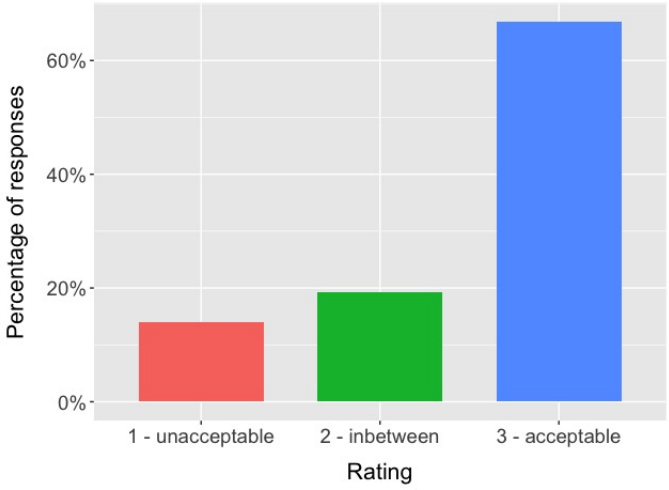

Figure 2: Percentage of responses for each rating

the *Nó, -Ant* conditions, and low ratings for the *Saa... Nó-Ant* condition. No subject seemed to follow a strategy in accordance with Hypothesis II (low ratings for *-Ant*, high ratings for *+Ant*).

Descriptive results Fig. 3 shows how often each rating was given for each condition. In all conditions, more than 50% of the sentences were judged as 'acceptable' (rating 3). The *+Ant* conditions were the ones that received the most positive judgements, with only 7.5% of negative and 17.5% of intermediate ratings. *Saa... nó,-Ant* received the lowest judgements, with 29% negative and 16% intermediate ratings. *Nó, -Ant* lies inbetween, with a higher proportion of Not Acceptable ratings than the baselines, and the highest proportion of intermediate ratings (24%).

A summary of the means by condition is provided in Table 13. The two *+Ant* conditions had the highest mean rating, followed by the *Nó, -Ant* condition and by the *Saa... Nó* condition.

Det. Type	*Ant. Type*	*Mean Rating*
Nó	+Ant	2.68
Saa... Nó	+Ant	2.66
Nó	-Ant	2.53
Saa... Nó	-Ant	2.26

Table 13: Summary of mean rating by condition

Statistical analyses Cumulative link models with random intercepts for subjects and items were fit using the *ordinal* package of R (Christensen 2015). All

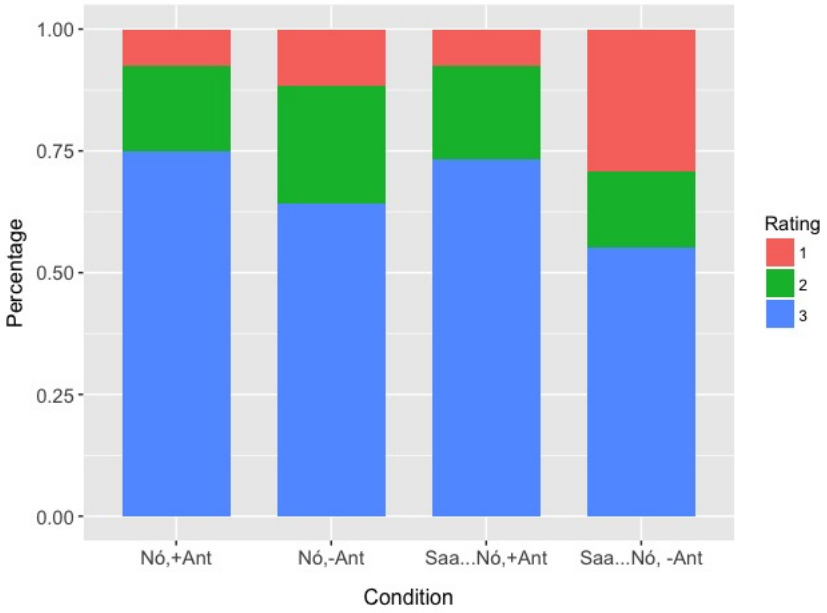

Figure 3: Proportion of ratings by condition

the models had rating as a dependent variable. First, the main effects were examined using a model with DETERMINER TYPE and ANTECEDENT TYPE as fixed effects. There was a main effect of ANTECEDENT TYPE ($\beta = -0.88$, SE $= 0.21$, z $= -4.19$, p < 0.01): *-Ant* conditions had a significantly higher probability of receiving lower ratings than *+Ant* conditions. There was also a main effect of DETERMINER TYPE ($\beta = -0.49$, SE $= 0.2$, z $= -2.23$, p < 0.05): *Saa... Nó* had a significantly higher probability of being rated lower than *Nó* conditions. A second model also included the interaction of ANTECEDENT and DETERMINER. The interaction did not reach significance ($\beta = -0.59$, SE $= 1.42$, z $= -1.43$, p $= 0.15$).

Exploratory post-hoc analyses of the simple effects revealed that the main effect of DETERMINER TYPE was driven by the *Saa... Nó, -Ant* condition: there was no difference between the two determiners in the *+Ant* condition, while judgements differed in the *-Ant* condition, with a negative effect of *Saa... Nó* ($\beta = -1.17$, z $= -3.9$, p $< .05$). The *Nó, -Ant* condition received lower judgements than the *Nó, +Ant* condition, but the difference was only marginal ($\beta = -0.58$, SE $= 0.3$, z $= -1.9$, p $= 0.053$). The *Saa... Nó, -Ant* condition received significantly lower judgements than the *Nó, +Ant* conditions ($\beta = -0.72$, SE $= 0.27$, z $= -2.6$, p < 0.05).

Discussion The pen-and-paper questionnaire was designed to test two hypotheses regarding the nature of *nó*: is it a definite article (determiner presupposing uniqueness, Hypothesis I) or is it a demonstrative (which requires an an-

tecedent, Hypothesis II)? Hypothesis I predicted an interaction, with *Saa... Nó, -Ant* being rated lower than the other conditions. Hypothesis II predicted that *Nó* should pattern together with *Saa... Nó* in receiving high ratings in *+Ant* condition and low ratings in *-Ant* (main effect of ANTECEDENT TYPE).

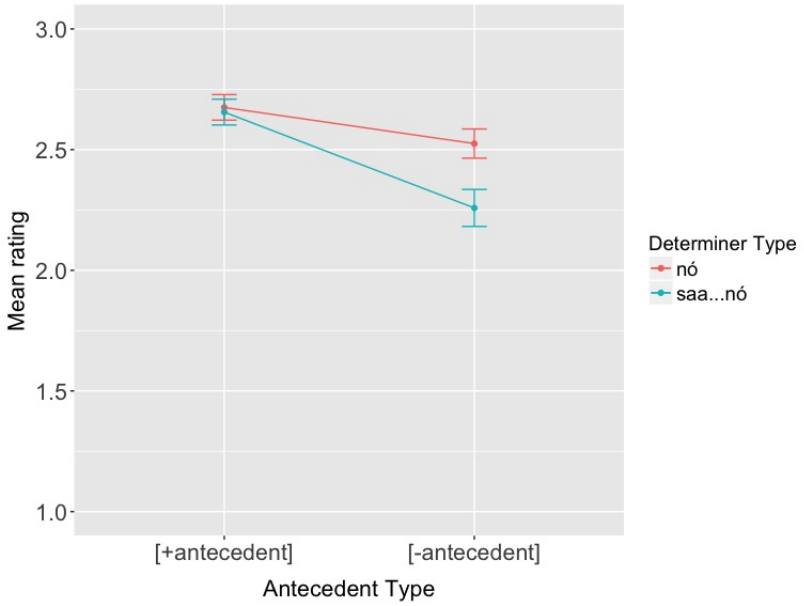

Figure 4: Plot of means with error bars.

The results are generally difficult to interpret and do not clearly tease apart the two hypotheses. The difficulty starts with the control, the demonstrative *saa... nó*. The patern shown by this determiner is the one expected, which was the same for both hypotheses: *Saa... Nó* had a higher probability of receiving lower judgements in *-Ant* than in *+Ant* conditions. This is in line with the idea that the determiner requires an antecedent to be used felicitously. However, the *Saa... Nó, -Ant* condition still received a high proportion of 'acceptable' ratings (more than half of the times)—which is unexpected if speakers consistently found the use of the demonstrative as infelicitous in absence of an antecedent. This indicates either that the antecedent is not the sole factor determining the availability of *saa... nó*, or that there was a problem in the setup of the experiment.

Turning to the actual research question, the pattern that arose for *nó* does not clearly tease apart the two hypotheses. On the one hand, it received high ratings for the *+Ant* conditions, as predicted by both hypotheses. However, on the other hand, the pattern for the *-Ant* condition did not clearly follow the predictions of either Hypothesis I or Hypothesis II. The divergence of the results from the predicted patterns can be described as *Nó, -Ant* being "inbetween" the baseline for acceptability (*+Ant* conditions) and the baseline for unacceptability

(*Saa... Nó, -Ant*), rather than patterning with either of the two. Descriptively, this "being inbetween" is reflected in the relatively high proportion of 2-ratings and slightly higher proportion of 3-ratings than in the *+Ant* conditions, and a lower mean than the *+Ant* conditions. Visually, it becomes evident if one compares the interaction plot of the means by condition, 4, with the figures describing the predictions of the two hypotheses in Figure 1.

From the perspective of the hypotheses, assuming Hypothesis II is correct, it is unexpected that *Nó, -Ant* condition received higher ratings than the *Saa... Nó, -Ant* condition, a difference which was significant. Indeed, Hypothesis II considered both determiners as demonstratives, meaning that both should have received equal judgements of unacceptability in *-Ant* conditions. One possible explanation for this pattern could be 'markedness': perhaps the *saa* adds emphasis that *nó* does not have, as suggested by Amfo (2009) (cf. §3.1). This could have led to lower judgements for *Saa... Nó*. However, this idea is not supported by the behaviour of *Saa... Nó* in *+Ant* conditions, whose ratings were as high as those for *Nó*.

Assuming Hypothesis I is correct, the absence of an interaction needs to be addressed. The interaction was predicted because, under this hypothesis, *nó* is a definite article and *saa... nó* a demonstrative. So, the expectation was that the factor ANTECEDENT should have had a different effect on the two determiners; concretely, *-Ant* should have had no effect on *Nó*, but it should have lowered the ratings on *Saa... Nó*. On the one hand, *Saa... Nó, -Ant* did receive lower ratings than its *Nó* counterpart, but possibly to not sufficiently low (or not consistently so) to lead to the interaction. Further, the *Nó, -Ant* condition was also rated lower than the *+Ant* baseline (although, it has to be noted, the difference was marginal), which was unexpected under Hypothesis I. A possible way to interpret these results from the perspective of Hypothesis I is that *nó* is felicitous without an antecedent, but that there was another factor influencing the judgements in the negative direction, namely coherence. In fact, in this condition, three individuals are introduced into the discourse, while in the *+Ant* conditions only two referents have to be tracked and no new referent was introduced in the text sentence. As a result, the discourse in *Nó, -Ant* may have seemed more fragmented than in the *+Ant* conditions. We tried to control for this by adding a temporal PP at the beginning of the test sentence; however, this might not have been sufficient to counterbalance for the effect of this potential confound.

Beyond these patterns, there are more general aspects of the results that require an explanation. One of them is the high proportion of positive ratings for *Saa... Nó,-Ant*, which is unexpected under both hypotheses, as was mentioned previously. The other is the variability of the judgements provided: even assuming one of the two hypotheses is correct, one would have to explain the inconsistency of the responses.

Post-hoc interviews Following data collection, informal interviews were conducted with Akan speakers using the questionnaires as a basis. In light of the inconsitent responses provided in writing, the goal was to see whether the speakers would respond differently in an oral setting, and to ask them directly about the criteria they had applied to respond. Three people were interviewed individually. Two of the speakers had already taken part in the questionnaire, whereas the third participant was asked to complete the questionnaire prior to the interview. One of the interviewees had provided a consistent pattern in his written responses (which were in consonance with Hypothesis I), whereas the other two had been more erratic. During the interview itself, experimenter and speaker went through the items and fillers, and the speaker was asked why he had provided the response he had given.

Starting with the linguistic generalisations that could be gathered, in the interviews all participants consistently provided responses consistent with Hypothesis I: all found the *Saa... Nó, -Ant* conditions to be unacceptable, and the *Nó, -Ant* and *+Ant* conditions to be acceptable. Concretely, for the first conditions the speakers commented that one would need to change the target NP from *saa... nó* to *nó* to make it sound natural. During the interviews, the speakers only failed twice to say spontaneously that the sentences in this condition were not acceptable (each speaker only once). When asked about it, the speakers still preferred the *nó*-variant of the sentence over the *saa... nó* variant. Comments that were made with respect to the unacceptability of *Saa... Nó, -Ant* were that "the sentence doesn't link", or that the entity in question had not been mentioned before, suggesting that the absence of an antecedent is what made the sentence unacceptable. Similar comments and responses were not made for the *Nó, -Ant* condition. Here, when asked about it, the speakers found that mentioning or not mentioning the antecedent in the previous sentence did not affect the acceptability of the target sentence.

The non-linguistic generalisation that coud be gathered is that, often, the judgement provided orally was not the same that was provided in writing. For instance, in the written questionnaire, one participant had rated some sentences from the *Saa... Nó, -Ant* condition with a 1, and some with a 3. In the oral interview, the same participant noted that he probably should have circled 1 in all cases, since he did not find the sentence to sound good. Note, however, that the speaker that had given the consistent pattern and who was also interviewed did not change his mind about his judgements.

There seem to be various reasons for the divergence between the written and the oral medium in some of the speakers. First, it was brought to the experimenter's attention that one of the items (item 12 in Appendix A, repeated below in (65)) was problematic. First, it seems that speakers may have read the first two words (*baa bi* 'a certain bar') as one: *baabi* 'somewhere'. As a consequence, speakers may have found the sentence odd because they did not expect to find a barman and drinks in the context provided. Further, the test

sentence sounded incomplete to the interviewees, who preferred continuing it by turning it into a serial verb construction including a recipient ('poured some drinks **for them**').

(65) *Reggie kɔɔ baa bi. ɔhuu baaman bi/nnamfonom bi. Mmrɛ tiawa bi akyi, baaman no/saa baaman no hwiee nsa kakra.*

Reggie went to a bar. He saw a bartender/some friends. After a bit, the bartender/that bartender poured some drinks.

Turning to more general behaviour, it seems that some speakers thought that they would be helpful if they provided positive responses. This is suggested by the comments of one speaker, who had explained that he had rated one unacceptable filler with '3' because he thought that he would "give it to her" (i.e. let it pass for the experimenter). Second, the experimenter observed during the interview that speakers would occasionally skip or modify words when reading. The changes involved a correction towards an acceptable reading, e.g. *saa* would be left out in a *-Ant* condition. Third, one speaker found a *Saa... Nó, -Ant* sentence to be possible if "you don't value the person"—this comment was made with reference to the referent of the definite NP in the test sentence. This suggests that *saa... nó* may trigger affective readings which may have confounded the responses: some people may have judged the sentence as acceptable because they accepted it under the affective import.

Overall, the results of the interviews do not go in exactly the same direction as those from the quantitative experiment. While the written questionnaire revealed a picture where *nó* without an antecedent was an "in-between" acceptability category, it was always considered as acceptable and also aways preferable over the *Saa... Nó, -Ant* condition. Further, the speakers (at least those that were interviewed) were more consistent than the individual patterns observable in the experiment. These oral interviews also revealed possible causes for these divergences: the written medium may have been a problem, as well as the willingness of the participants to help by providing positive judgements. Overall, the post-hoc interviews suggest that the presence or absence of an antecedent, as well as determiner type do play a role in acceptability, and that the difficult/complex results of the quantitative part did not came about but due to a mixture of methodological issues. In light of this, the hypotheses entertained seem worth investigating further. However, the results of the quantitative part can be trusted only to a certain extent.

Conclusion The aim of the study was to establish whether *nó* was a definite article or a demonstrative. The results were not clear, with patterns which did not clearly follow the two hypotheses entertained. However, the oral interviews suggested that this is not to be brought back to a completely different definiteness

system (e.g. one in which the presence or absence of an antecedent is irrelevant for determiner choice), but rather to confounding factors of the experimental setup. So, it is not possible to draw conclusions on the nature of *nó* based on the experimental data alone, but it seems that the two hypotheses can be investigated further using different methods.

4.2 Controlled elicitation

This section examines the behaviour of *nó* and *saa... nó* using qualitative fieldwork methods. All definiteness uses that were presented in §2.1 are examined. The results we expect are either or both of the patterns presented in Table 12 at the beginning of the section. §4.2.1 looks at situational uses, anaphora and deixis. Due to the complexity of the topic, bridging is examined separately in §4.2.2, taking into consideration also data from Arkoh and Matthewson (2013).

The data presented in this section come from 7 speakers of the Asante Twi dialect of Akan, and were collected between January and June of 2017. A number of preliminary sessions took place in Accra, Ghana (February 2017), but the core data come from work with two main consultants in Berlin (March - June 2017). Unless noted otherwise, all sentences presented in the main body of text were elicited with these two speakers, in at least two sessions each. These two consultants, both male, grew up speaking Twi, and Twi was the only local language they spoke fluently. One of the speakers grew up in Accra in a mixed community, but spoke Twi and English with his parents. The other speaker grew up in Kumasi, which is in a Twi-speaking region, and the people who brought him up also spoke to him in Twi. The meta-language used in the elicitation sessions was English.

The data were gathered following the guidelines for semantic fieldwork presented in Matthewson (2004). The tasks used were translation (where speakers had to translate from English into Asante Twi), and acceptability judgement tasks, which involve judging the (semantic) acceptability of a sentence given linguistic or non-linguistic context (i.e. a previous sentence or a description of a situation). Unless noted otherwise, the claims about *nó* are based only on the minimal pairs provided by the judgement tasks. Both types of tasks were mostly carried out in parallel, in sessions that lasted between one to one-and-a-half hours (breaks included). The judgements for a sentence translated in one session were elicited in at least one separate session for the same speaker.

4.2.1 Main definiteness uses

This section examines the behaviour of the two Akan definites in deixis, situational uses and anaphora. In these uses, *nó* behaves like a definite article, whereas *saa... nó* patterns like a demonstrative.

Deixis As defined in this thesis, deixis involves pointing, and it is a use in which the uniqueness of the definite article is not necessarily met, but which provides a deictic antecedent, thus licensing the demonstrative. In this context, *saa... nó* can be used, but not *nó*, as illustrated in (66).[26]

(66) Context: Kofi and Amma are in the market. Amma disappears and comes back with three dresses in her hands. Kofi says:

a. Me-pɛ **saa atadeɛ no**.
1SG-like DEM dress DEF
'I like that dress.'

b. #Me-pɛ **atadeɛ no**.
1SG-like dress DEF
Intended: 'I like that dress.'

Comment: *If you want to point and choose one, you have to bring in the saa.*

The lack of deicticity of *nó* is confirmed by a contrast that Löbner (1985) observes for English demonstratives and definite articles, exemplified in (67).

(67) a. Me-pɛ **saa car no** nanso me-m-pɛ **saa car no**.
1SG-like DEM car DEF but 1SG-NEG-like DEM car DEF
'I like that car but I don't like that car.'

b. #Me-pɛ **car no** nanso me-m-pɛ **car no**.
1SG-like car DEF but 1SG-NEG-like car DEF
Intended: 'I like that car but I don't like that car.'

Comment: *You like the car but you don't like it? Even if there are two cars, it sounds strange.*

The sentence was presented out of the blue. With *saa... nó*, the consultants constructed a scenario were there were at least two cars that can be pointed at, and found the sentence to be felicitous. This can be explained by assuming that these determiners are 'true' demonstratives: with each pointing gesture, the index is selecting a different car. If there is no index, on the other hand, the expression becomes contradictory, since there is only one referent, and this referent cannot be liked and not liked at the same time. This is what happens with *nó*. The consultants were not able to spontaneously construct a context and found the sentence to make little sense. One participant commented that it

[26]This example, as well as the previous one, were also tested with the two proximal forms, which patterned like *saa... nó*.

seems as if the speaker had mixed feelings about one car—this 'feeling' is also the one expressed in the comment. When explicitly asked about a context in which there are several cars, the comment was that a pointing gesture would not be natural with *nó*, unlike with the other determiners.

Immediate situation Recall that immediate situation uses and deixis are closely related, in that they both involve reference to an entity in the extra-linguistic context. The peculiarity of immediate situations is that the entity in question is unique within the situation, a requirement which is not necessarily met in deixis. As a consequence, definite articles can be used here (since their uniqueness presupposition is met), as well as demonstratives, since the context provides a deictic antecedent that meets their presupposition. In this type of context, both *nó* and *saa... nó* are found.[27]

Consider (68). This is a minimally modified version of the dress example in (66), in which only one dress is present. Here, both definite article and demonstrative are allowed:

(68) Context: Kofi and Amma are in the market. Amma disappears and comes back with one dress in her hands. Kofi says:

a. Me-pɛ **saa atadeɛ no**.
1SG-like DEM dress DEF
'I like the/that dress.'

b. Me-pɛ **atadeɛ no**.
1SG-like dress DEF
'I like the/that dress.'

Larger Situations Larger situations license definite articles but not demonstratives. This is because the entity referred to is known to be unique in the situation (licensing uniqueness), but it is not present in it, meaning that it does not constitute an appropriate (deictic) antecedent for the demonstrative. In this use, *nó* is allowed, but *saa... nó* is not. This is illustrated in example (69), which describes a typical bus situation in Accra: the so-called "trotro" (local bus) has a helper, the mate, that collects the money, shouts out the destination of the van, and helps the driver with riskier traffic operations. Here, the noun *mate* can be combined with *nó*, but not *saa... nó*:

(69) Context: Afia took a trotro from the university to central Accra. She is telling her friend about the beginning of the trip. They just started the conversation and haven't talked about anyone. Afia says:

[27] (68) was not tested with the Berlin speakers, but only with participants in Accra.

a. Me-foro-yɛ no, **mate no** kyea-a me.
1SG-climb-PST DCM, mate DEF greet-PST me
'When I got on, the mate greeted me.'

b. #Me-foro-yɛ no, **saa mate no** kyea-a me.
1SG-climb-PST DCM DEM mate DEF greet-PST me
'When I got on, that mate greeted me.'

Comment: *No, because you haven't spoken about him before.*

That uniqueness is the factor licensing the use of *nó* is further supported by the fact that entities that are typically found in the situation, but are not unique in it, cannot be used with the determiner. However, they are acceptable with the indefinite *bi*:

(70) Same context as (69):

a. #Me-foro-yɛ no, **kwantuni no** kyea-a me.
1SG-climb-PST DCM traveller DEF greet-PST me
'When I got on, the traveler greeted me.'[28]

b. Me-foro-yɛ no, **kwantuni bi** kyea-a me.
1SG-climb-PST DCM, traveller INDF greet-PST me
'When I got on, a traveler greeted me.'

The same pattern as above is found in (71) and (72). In the first example, *headmaster* is unique in a school situation, and can be combined with *nó*, but not with *saa... no*:

(71) Context: There is a new teacher at a school. A colleague is explaining to him how everything works. At the school there are several teachers, and you haven't talked about them before. The colleague explains to the new teacher:

a. **Headmaster no** bɛ-ma wo timetable.
headmaster DEF FUT-give 2SG timetable
'The headmaster will give you your timetable.'

b. #**Saa headmaster no** bɛ-ma wo timetable.
DEM headmaster DEF FUT-give 2SG timetable
'That headmaster will give you your timetable.'

[28]Note that the sentence is accepted if one particular traveler was previously known to the interlocutors. This would not be a larger situation use, but rather one in which the entity in question is unique in a resource situation which is not the trotro situation —e.g. a salient situation corresponding to a previous conversation.

Comment: *You cannot use* saa…nó *unless you want to be rude.*

By contrast, *teacher*, which is expected but not unique in a school, cannot be combined with *nó*, but only with the indefinite *bi*:

(72) Same context as (71)

a. #**Ɔkyerɛkyerɛni no** bɛ-ma wo timetable.
teacher DEF FUT-give 2SG timetable
'The teacher will give you your timetable.'

Comment: *There are a lot of teachers, so you can't know which one.*

b. **Ɔkyerɛkyerɛni bi** bɛ-ma wo timetable.
teacher INDF FUT-give 2SG timetable
'A teacher will give you a/your timetable.'

Note that the larger situation examples are also possible with a bare noun, and not just with *nó*. This phenomenon is discussed in §5.1.

Global Uniqueness *Nó* can be combined with nouns referring to globally unique entities, such as *sun* or *moon*:

(73) Context: Afia is on a bus, when a woman she doesn't know sits down beside her. The woman says:

Awia no a-bɔ ɛnne (oo).
sun DEF PRF-hit today (oo)

'The sun is shining today.' (after Barlew 2014: 627)

(74) Context: Amma is outside reading a book. A stranger comes to her and says.

Bosome no ɛpie.
moon DEF shine

'The moon is shining.' (after Grubic 2015: 127)

As with larger situations, these globally unique nouns are also possible without *nó*, an alternation which we discuss in more detail in §5.1. Even though the bare noun is also possible, *nó* in global situations seems to be an unmarked option. First, previous mention of these unique entities is controlled for, since the interlocutors are talking for the first time: licensing of *nó* due to anaphora is ruled out. Further, the use of *nó* does not seem to be coerced: the sentences

in (73) and (74) were the ones presented as first option in translation. The judgements were additionally collected in at least one further session for each speaker.[29] [30]

In contrast to *nó*, the distal demonstrative *saa... nó* does not combine with nouns denoting globally unique entities. This is expected if there is uniqueness but no explicit antecedent, meaning that the presupposition of the demonstrative is not satisfied.

(75) Same context as (73)

#**Saa awia no** a-bɔ ɛnne (oo).
DEM sun DEF PRF-hit today (oo)

'That sun is shining today.'

(76) Same context as (74)

#**Saa bosome no** ɛpie.
DEM moon DEF fall

'That moon is shining.'

The infelicity can be overridden only if the context is modified significantly. One consultant spontaneously provided an example scenario, where the distal could be combined with *sun*:[31] in a conversation, one interlocutor says that the sun on a particular day (e.g. last Wednesday) was really hot, and the second interlocutor confirms this ('Yes, the sun really was hot'), using *saa ... nó* 'that sun'. Crucially, this scenario overrides uniqueness, and provides the requirements for the use of a demonstrative: there is an antecedent (the sun has just been mentioned) and there is contrast between a number of possible (amount) of 'sun' (the sun on Wednesday, as opposed to the sun on a different day). It thus does not seem to be a true global uniqueness use.

Anaphora Both *nó* and *saa... nó* can be used in anaphora. Below is an example, based on Arkoh and Matthewson (2013: 2). The relevant noun was changed from *ekutu* 'orange', which does not have a separate plural form in Twi, to *atadeɛ*, which does.

[29] These contexts, from Barlew (2014) and Grubic (2015), are originally discussed to show that the definite determiner in Bulu and Ngamo, respectively, are only licensed if salience holds. These examples, however, are part of the minimal pair where salience is not met. Cf. §5.1 for the full minimal pair also showing that salience is not required to use *nó*.

[30] It was noted to the author of this thesis that the above contexts may not avoid an affective use. These examples have been taken from the literature, to facilitate comparisons between languages. The only contexts that the author could think of that would be more neutral involved generic statements ("The sun stands still and the earth spins around"), which, as we will see, go with the bare noun in Akan—thus, they would have introduced a confound.

[31] This spontaneous example was not tested further with other speakers

(77) Me-tɔ-ɔ *atadeɛ bi* nnora. **Atadeɛ no** yɛ-ɛ fɛ.
1SG-buy-PST dress INDF yesterday. Dress DEF COP nice
'I bought a dress yesterday. The dress was nice.'

One speaker suggested one change that would make the sentence sound more natural with the demonstrative, namely using it with reference to a dress that belongs to someone else. This can be interpreted as *saa... nó* introducing a distality parameter, so that referents that are distant (here only metaphorically) are preferred.

(78) Me nuabaa tɔ-ɔ *atadeɛ bi* nnora. **Saa atadeɛ no** yɛ
My sister buy-PST dress INDF yesterday. DEM dress DEF COP
fɛ.
beautiful
'My sister bought a dress yesterday. That dress is beautiful.'

The same example was judged positively by the other main consultant, both with *nó* and with *saa... nó*.

4.2.2 Bridging

The bridging data are discussed separately because the tests for this use were designed not only to determine the nature of *nó* (is it a definite article or a demonstrative?) but also to establish whether the distinction between part-whole bridging and relational bridging holds in Akan. The starting point is the previous formal analysis of Akan definites: in their paper, Arkoh and Matthewson (2013) complement the strong article analysis of *nó* with data from bridging. Concretely, they argue that Akan *nó* patterns with German strong articles in that they appear in relational bridging, but not in part-whole bridging. However, just like in German, there are reasons to doubt that this bridging distinction holds in Akan, due to a series of confounds that are introduced. With Arkoh and Matthewson's (2013) examples as a starting point, the alleged part-whole and relational bridging distinction is examined. The conclusion is that this bridging subdivision is not active in Akan, and that, when confounds are controlled for, *nó* is allowed across nearly all bridging contexts, which are shown to involve uniqueness.

Part-Whole bridging As a reminder, part-whole bridging involves definite reference to an entity which is a (unique) part of an individual that has been introduced in the previous discourse, as in the *crisper-fridge* alternation below (repeated from §2.6.2, (37)):

(79) *Der Kühlschrank* war so groß, dass der Kürbis problemlos
The fridge was so big that the pumpkin without-a-problem
im / # **in dem** **Gemüsefach** untergebracht werden
in-the$_{\text{weak}}$ / in the$_{\text{strong}}$ crisper stowed be
konnte.
could
'The fridge was so big that the pumpkin could easily be stowed in the crisper.'

Schwarz (2009) analyses part-whole bridging as a special type of larger uniqueness use: in very informal terms, the definite is licensed the siuation because it is known to be a unique "part" of a unique "whole" in a the situation. Applied to (79), the resource situation would be a kitchen situation. Since kitchens contain exactly one fridge, and fridges contain exactly one crisper, the definite/weak article in *im Gemüsefach* 'in the crisper' is licensed. Thus, part-whole bridging involves contexts in which the uniqueness presupposition of the definite article/weak article is met, whereas the antecedent condition of the demonstrative/strong article is not satisfied. Accordingly, Arkoh and Matthewson's (2013) analysis predicts that *nó* (which they analyse as strong article) will be ruled out from part-whole bridging, whereas the bare noun (which expresses uniqueness) will be allowed in this context.

These predictions are only partially met in Arkoh and Matthewson's (2013) examples. Consider (80), in which the part-whole relation is that between a sheep and its neck.[32]

(80) a. #*Iguan no* so ara ma nyimpa anan na wo-dzi-i
sheep DEF big just COMP person four and 3PL.SUBJ-eat-PAST
kɔn no / **kɔn**.
neck DEF / neck
'The sheep was so big that it was four people that ate the neck/a neck.'

b. *Iguan no* so ara ma nyimpa anan na wo-dzi-i
sheep DEF big just COMP person four and 3PL.SUBJ-eat-PAST
nɪ kɔn (bi).
3SG.POSS neck INDF
'The sheep was so big that it was four people that ate its neck.'
(A&M, p. 14)

In (80a), *nó* is indeed ruled out, as predicted by if it is a strong article. However, so is the bare noun, which should be acceptable in this context, in that it supposedly takes the role of a weak article. The only available option to ex-

[32]The markings on Arkoh and Matthewson's (2013) examples are by the author of this thesis.

press this part-whole relation seems to be the possessive, as shown in (80b). A possible way to interpret these data is that a confound is being introduced: the possessive—which as we briefly saw in §2.6.2, is also an option in bridging—is in competition with whatever the uniqueness definite is in Akan. It could be that the infelicity of *nó* is due to the preference/blocking of the possessive, rather than because it is a strong article.[33]

A similar pattern (possessive accepted, bare noun and *nó* ruled out) is found in the other part-whole bridging examples in the paper. The same potential explanation as in the previous example applies.

(81) a. Ye-hu-u *dan* *dadaw* *bi* wɔ ekurasi hɔ
1PL.SUBJ-see.PAST building old REF at village there
nɪ **nkyɛnsɪdan** e-hodwow.
3SG.POSS roof PFV-worn-out
'We saw an old bulding in the village; the roof was worn out.'

b. #Ye-hu-u *dan* *dadaw* *bi* wɔ ekurasi hɔ
1PL.SUBJ-see.PAST building old REF at village there
nkyɛnsɪdan nʊ / **nkyɛnsɪdan** e-hodwow.
roof FAM / roof PFV-worn-out.
Intended: 'We saw an old bulding in the village; the roof was worn out.' (indefinite reading with the bare noun).

(A&M, p. 14)

(82) a. *Asɔrdan nʊ* *aa* *o-si* *ekyir hɔ* *nʊ*, **na-adɔnbaa**
church FAM REL 3SG.SUBJ-stand back there DCM POSS-bell
a-stɪw.
PFV-worn-out
'The church at the back there, the bell is torn.'

b. #*Asɔrdan nʊ* *aa* *o-si* *ekyir hɔ* *nʊ*, **adɔnbaa**
church FAM REL 3SG.SUBJ-stand back there DCM bell
(**nʊ**) a-stɪw.
FAM PFV-worn-out
Intended: 'The church at the back there, the bell is torn.'

(A&M, p. 14)

As a response to these issues, part-whole bridging was re-investigated. The aim of the sentences created was to see whether there were any part-whole relations that could be expressed with *nó*, which, based on the data from the main

[33]One possible explanation for the preference for the possessive could be a priciple along Maximize Presupposition, to be explained in §5. Under such an account, however, it is not clear why the possessive is not the preferred option in other languages, such as English and Spanish.

definiteness uses, is hypothesised to presuppose uniqueness. In order to control for the confound introduced by the possessive, several measures were taken. First, other types of part-whole relations were examined, such as events and their participants: the idea was that these relations would be less likely to be linguistically expressed in the form of a possessive. Second, similar part-whole pairs (neck-goat, roof-building, ...) were tested, but a sentence was introduced between the two elements. The point was to dissuade from the use of a possessive, which introduces an explicit anaphoric link, by adding distance beween the two noun phrases. Finally, the constructions were also modified somewhat. Indeed, (81) seems to involve a serial verb construction, in which, possibly, the only way to link the two events would be to use the possessive. Similarly, (82) was also rejected by some of Arkoh and Matthewson's consultants because it seems to involve a truncated structure. The sentences tested here were simpler SVO structures.

The overall generalisation is that *nó* is indeed possible in part-whole bridging, although the possessive is still obligatory in some relations. First, *nó* can be used without problems in relations involving events and their parts/actors (wedding-bride; funeral-coffin). Below are some examples:[34]

(83) Kwaku kɔ-ɔ *awareɛ bi*. Na **ɔwarefoɔ no** hyɛ-ɛ atadeɛ
Kwaku go-PST wedding INDEF. And bride DEF wear-PST dress
fufuo.
white
'Kwaku went to a wedding. The bride was wearing a white dress.'

(84) Yaw kɔ-ɔ *ayie bi*. ɔ-duru-u hɔ no, ɔ-hu-u
Yaw go-PST funeral INDEF. 3SG-arrive-PST there DEF, 3SG-see-PST
sɛ **funuadaka no** wɔ edan bi mu.
that box DEF COP room INDEF in
'Yaw went to a funeral. When he arrived, he saw that the coffin was in a room.'

Further, *nó* was also accepted in some of the modified examples from Arkoh and Matthewson (2013) involving more "standard" part-whole relations (church-bell, building-roof). (85) below is an adaptation of example (82), and (86) is an adaptation of (81). In these exaple, the possessive was also accepted.

(85) Na yɛ-te *asɔredan* mu. Mmrɛ kakra akyi, **adoma no** hyɛ-ɛ aseɛ
PST 1PL-sit church in. Little bit after, bell DEF start start
bɔ-yɛ.
hit-PST

[34]The below sentences were only elicited with *nó* and *saa... nó*, but not systematically with the possessive.

'We sat in a church. After a bit, the bell started ringing.'[35]

(86) Yɛ-wura-a *ɛdan dadaa bi* mu wɔ ekurasi hɔ. Na nsuo
we-enter-PST building old INDF in COP village there. And water
ta-a fɔm hɔ. **(Ne) nkyensi no** atu, nti nsuo ta-a
lie-PST floor there. POSS roof DEF broke, so.that water fall-PST
kɔ-ɔ mu.
go-PST in
'We entered an old building at a village. There was water on the floor. The roof was broken, so that rain had fallen in.'

What the contrast between these sentences and Arkoh and Matthewson's examples suggest is that the preference for the possessive is partly modulated by the type of syntactic construction in which the noun phrase appears.

In contrast to what we find for *nó*, *saa... nó* was either rejected or dispreferred in the contexts (83)-(86).[36] Below is an example:

(87) #Kwaku kɔ-ɔ *awareɛ bi.* Na **saa ɔwarefoɔ no** hyɛ-ɛ
Kwaku go-PST wedding INDF. And DEM bride DEF wear-PST
atadeɛ fufuo.
dress white
'Kwaku went to a wedding. That bride was wearing a white dress.'
Comment: *It's too much with the 'saa'.*

As a final comment, the preference for the possessive could not always be overridden: for some kinds of part-whole relations, it seems to be obligatory. This is the case for (88) below:

(88) Akosua abusuafoɔ kuu *aponkye baako* bronya yi. Na ɛyɛ
Akosua family killed goat one Christmas this. And it.was
dɛ paa. Obiara dii bi.
sweet very. Everyone ate some
'Akosua's family killed a goat this Christmas. It was very nice. Everyone ate a bit.'

a. #Akosua wɛ-ɛ **kɔn no**.
Akosua chew-PST neck DEF
'Akosua chewed the neck.'

[35]One speaker was asked later on how many bells a church has, to which he replied that it has only one.

[36]The contrast between the two determiners here was more difficult to elicit than in larger situation uses. In some instances, the demonstrative was accepted or the speakers did not notice that there was a demonstrative there.

b. Akosua wɛ-ɛ **ne** **kɔn (no)**.
Akosua chew-PST 3SG.POSS neck DEF
'Akosua chewed its neck.'

In spite of the modifications, *nó* was consistently judged as unacceptable in this example, to the extent that one of the speakers did not understand the sentence. The other speaker automatically corrected it when it was presented to him, by adding the possessive. One possible explanation for this pattern is that certain relational nouns (here: *kɔn*, 'neck') cannot appear without their relatum argument in Akan. This claim (to be investigated further) is based on the fact that *nó* with the *goat-neck* pair was rejected also in other types of uses, as in (89) below:

(89) Context: You and your spouse buy a goat neck at the market. When you go back home, you leave it on the kitchen table to cook it later. Then you leave for a meeting. When you come back, you realise that the neck has gone missing. You say:

a. #**Kɔn no** wɔ hɛn?
neck DEF COP where
'Where is the neck?'

b. **Ne** **kɔn no** wɔ hɛn?
3SG.POSS neck DEF COP where
'Where is the neck?'

c. **Aponkye kɔn no** wɔ hɛn?
goat neck DEF COP where
'Where's the goat neck?'

In the above example, based on Barlew (2014: 626), the relevant noun phrase (*kɔn* 'neck') was unique with respect to a situation salient to both interlocutors, namely the one corresponding to them going together to the market. Thus, *nó* should have been licensed. However, even in complete absence of a "whole" antecedent, this determiner was rejected, and the possessive accepted. One speaker suggested the alternative in (89c) (which was then tested with and accepted by the second main consultant). What differences the two acceptable sentences from the unacceptable one is that they both overtly encode the possessor of *neck*, which suggests that representing this argument is obligatory with this noun.[37] This all confirms the possessive confound for certain types of part-whole relations.

[37]See Barlew (2014: 17) for similar bridging data in Bulu.

Relational bridging To remind the reader, relational bridging typically involves a producer-produced relation (such as *book-author*), where the producer, which is a relational noun, is used with a definite, as shown below:

(90) Hans entdeckte in der Bibliothek *einen Roman über den Hudson.*
Hans discovered in the library a novel about the Hudson.
Dabei fiel ihm ein dass er vor langer Zeit einmal
In.the.process remembered him part that he from long time once
einen Vortrag #**vom** / **von dem Autor** besucht hatte
a lecture by.the / by the author visited had
'Hans discovered a novel about the Hudson in the library. In the process, he remembered that he had visited a lecture by the author a long time ago.' cf. (38)

According to Schwarz (2009), relational bridging is a context in which anaphoricity but not uniqueness is satisfied. What makes the context anaphoric is the presence of the relatum argument of *Autor* 'author' in the previous sentence (the novel about the Hudson), which works as a special type of antecedent. On the other hand, uniqueness is supposedly not met because not all situations containing a book also contain an author. Since anaphoricity, but not uniqueness, is satisfied, relational bridging supposedly licenses strong articles, but not weak articles.

According to Arkoh and Matthewson (2013), this is the pattern that is apparently found in Akan. Their prediction is that *nó*—which is analysed as a strong article—will be licensed in relational bridging, whereas the bare noun—which performs the role of the weak article—is not. This is what we seem to find in (91) below, which involves the pair *dance-lead drummer*: *ayırbɔ penyın* 'lead drummer' has to take *nó*, whereas the equivalent expression with a bare noun, while acceptable, seems to only receive an indefinite reading.

(91) a. *Asaw nʊ* yɛ-ɛ fɛw ɔhın nɔ ara ma
dance FAM do-PAST chief FAM beautiful just COMP
ɔ-kyɛ-ɛ **ayırbɔ penyın nʊ** adzı.
3SG.SUBJ-give-PAST drummer lead FAM thing
'The dance was so beautiful that the chief gave the lead drummer a gift.'

b. *Asaw nʊ* yɛ-ɛ fɛw ɔhın nɔ ara ma
dance FAM do-PAST chief FAM beautiful just COMP
ɔ-kyɛ-ɛ **ayırbɔ penyın** adzı.
3SG.SUBJ-give-PAST drummer lead thing
'The dance was so beautiful that the chief gave a lead drummer a gift.'

(A&M, p. 15)

However, this account of the contrast in (91) is not without problems: concretely, there are reasons to doubt that relational bridging is the mechanism behind this minimal pair. The doubts stem from the fact that exactly the same pattern (use of *nó*, indefinite interpretation of the bare noun) arose in the part-whole relations that we saw in the previous section. Further, the other examples that are presented by Arkoh and Matthewson (2013) as relational bridging also seem to involve parts and their wholes: flowers of a tree in (92), and the cutlass in a cutting event in (93).

(92) Kwamɪ twa-a *dua nʊ*, **hyiren** # (**nʊ**) a-mpʊrʊw.
Kwame cut-PAST tree FAM flowers FAM PFV-fall.off
'When Kwame cut the tree the flowers did not fall off.' (indefinite reading without *nó*)

A&M, p. 15

(93) Kwamɪ yɛ-ɛ dɛɛ o-ru-twa dua nʊ, **adar** # **(nʊ)**
Kwame do-PAST COMP 3SG.SUBJ-PROG-cut tree FAM cutlass FAM
e-n-tum e-n-twa.
PFV-NEG-power PFV-NEG-cut
'Kwame tried cutting the tree but the cutlass could not cut it.' (indefinite reading without *nó*)

(A&M, p. 15)

Both examples are presented by Arkoh and Matthewson as additional evidence for relational bridging in Akan, and, by extension, for their analysis of *nó* as a strong article. However, this analysis of the data is somewhat forced considering that strong articles in German are consistently excluded from like the ones above. Further, the proposal is even less tenable under the observation that the nouns in these examples "not inherently relational" (Arkoh and Matthewson 2013: 15), as the authors note in a footnote.

Given these problems, an alternative hypothesis can be formulated to explain the pattern in (91) (and also (92) and (93)): relational bridging is not active in Akan, and what licenses *nó* in the previous examples is uniqueness. In other words, the reason why *nó* is accepted above is the same why it is found in the part-whole examples from the previous section. The hypothesis seems plausible on theoretical and empirical grounds: first, we saw in §2.6.2 how the distinction between relational bridging and part-whole bridging is not clear even in the language for which it was first formulated, German; second, so far, *nó* has been shown to be licensed in other uniqueness environments, such as situational uses and part-whole bridging.

This hypothesis was evaluated by controlling for the presence of a relational antecedent: for a sentence containing the "producer"/relational noun with *nó*, two context sentences were constructed, one containing a potential antecedent

(e.g. *school* for target *headmaster*), and the other just introducing the situation ('school situation') without mentioning the relevant nouns.[38] On Arkoh and Matthewson's (2013) analysis, *nó* should be allowed in the first type of context, in which an antecedent is made available, but not in the second one, in which only uniqueness is met. However, as can be seen in (94) and in (95), *nó* was possible in both context types, which supports the hypothesis that it is uniqueness, and not the presence of an antecedent, that licenses the determiner.

(94) a. Context I (relational antecedent):

Afia kɔ-ɔ Tema lorry station sɛ ɔ-kɔ Kumase.
Afia go-PST Tema bus station COMP 3SG-go Kumasi
Ɔ-duru-yɛ no, ɔ-tɔ-ɔ ne ticket ɛna
3SG-arrive-PST 3SG-buy-PST 3SG.POSS ticket DEF and
ɔ-foro-o *lorry no.*
3SG-climb-PST bus DEF
'Afia went to Tema bus station to go to Kumasi. When she arrived, she bought her ticket and got onto the bus.'

b. Context II (no relational antecedent)

Afia kɔ-ɔ Tema lorry station sɛ ɔ-kɔ Kumase.
Afia go-PST Tema bus station COMP 3SG-go Kumasi
Ɔ-foro-oyɛ no, ɔtɔ-ɔ ne ticket ɛna ɔ-tena-a
3SG-climb-PST DEF 3SG-buy-PST 3SG.POSS ticket DEF and
ne seat so.
3SG-sit-PST 3SG.POSS seat on
'Afia went to Tema bus station to go to Kumasi. When she got on, she bought her ticket and sat down on her seat.'

Drobani no ɛbɔ-ɔ dehoro ɛna akwantuo no hyɛ aseɛ.
driver DEF hit-PST announcement and trip DEF start start

'The driver made an announcement and the trip started.'

(95) a. Context I (antecedent)

Akua yɛ ɔkyerɛkyerɛni ɛna w-a-nya adwuma foforo.
Akua COP teacher and 3SG-PFV-get job new.
Ɔ-duru-u *sukuu foforo hɔ* no
3SG-arrive-PST school new there DEF

[38] Ideally, one should have tested the dance example in (91). However, the author of this text found it difficult to construct a context in which the uniqueness of the lead drummer was met without mentioning the dance in the previous sentence. A possibility what was attempted was to have a sentence in which dancing was introduced as a verb, rather than as a noun. However, the author could not make sure whether in Akan the infinitival form that was used could also be interpreted as a noun.

'Akua is a teacher and she got a new job. When she arrived to **the school**, the headmaster welcomed her.'

b. Context II (no antecedent)

Akua yɛ ɔkyerɛkyerɛni ɛna w'anya adwuma foforo. ɛda
Akua COP teacher and 3SG-PFV-get job new. Day
ɛdikan no...
first DEF
'Akua is a teacher and she got a new job. On the first day, ...'

...**headmaster no** ma-a no akwaaba.
headmaster DEF give-PST her welcome.

'...the headmaster welcomed her.'

That uniqueness is what licenses *nó* in the above examples is supported by the fact that equivalent expressions but with *saa... nó* were at least dispreferred with *nó*, or accepted only with an affective reading of the entity the definite noun phrase refers to, as in (96). This was true for both contexts types. If *saa... nó* is analysed as a demonstrative, this is expected: the contexts provide uniqueness, but they do not provide an antecedent, which makes the expression infelicitous (unless some affective content is added).

(96) #...**saa headmaster no** ma-a no akwaaba.
DEM headmaster DEF give-PST her welcome
'...that headmaster welcomed her.'

Comment: *It is a little bit rude, because there's only one headmaster. You could not use the 'saa' unless there is a meeting and there are several headmasters and you are talking about a particular one.*

A comment is in order before carrying on: in the last examples, it was unclear whether the target nouns (*headmaster, driver, trainer*) are relational or not, which, as we saw, is a requirement for relational bridging. This is because the test for relationality proposed in Schwarz (2009)—checking whether a possessive-of construction is natural (*composer of the symphony*, but **songwriter of the melody*)—did not yield consistent responses across speakers. Not knowing whether the nouns are truly relational or not is more problematic for Arkoh and Matthewson (2013) than for the present proposal: if the nouns end up not being relational, this would speak even more against the idea that Arkoh and Matthewson (2013)'s examples involve part-whole, rather than relational bridging.

Summary An overview of the bridging results is found in Table 14 below:

Schwarz's classification	PART-WHOLE			RELATIONAL	
other subdivisions	parts of body *goat-neck*	other parts *church-bell*	event *wedding-bride*	antecedent *driver-bus*	no antecedent *driver - bus sit.*
POSS	✓	✓	-	-	-
Nó	✗	✓	✓	✓	✓
Saa. . . nó	✗	✗	✗	✗	✗

Table 14: Overview of bridging results for Akan.

Based on the data presented here, there is no evidence for a distinction between part-whole and relational bridging, as patterns cross-classify the two bridging types distinguished by Schwarz (2009). Specifically, the situation is similar to that found in English, where *the* (uniqueness) is the default in bridging and *that* is only used contrastively or when marked. The possessive constitutes a competing structure which may or need to appear in certain relations. Assuming that uniqueness is involved in all bridging contexts, the picture is consistent with the view of *nó* as a uniqueness definite.

4.3 Conclusion and analysis

This section started out with the question whether *nó*, like *saa. . . nó* is a demonstrative, or whether it is a definite article, in the sense of the strictly binary view on definiteness presented previously in §2. The predictions in each case were as follows:

	Bridging	Large/Global Sit.	Imm. Sit.	Anaphora	Deixis
ART	✓	✓	✓	✓	✗
DEM	✗	✗	✓	✓	✓

Table 15: Distribution of demonstratives and definite articles.

The quantitative experiment in §4.1—which examined the determiners in bridging and anaphora—did not yield a clear-cut results. However, as its discussion should have made it clear, the experiment was confounded by various methodological problems. Overall, the data were compatible with any of the two hypotheses and suggested that the research question was worth investigating further.

The qualitative data yielded the following distribution:

	Bridging	Large/Global Sit.	Imm. Sit.	Anaphora	Deixis
NÓ	✓	✓	✓	✓	✗
SAA. . . NÓ	✗	✗	✓	✓	✓

Table 16: Distribution of Akan *nó* and *saa. . . nó*.

The pattern is entirely parallel to that of Table 15, with *nó* behaving like a definite article, and *saa... nó* like a demonstrative.

Based on the qualitative data, the semantic analysis follows straightforwardly: *nó* is a definite article and *saa... nó* a demonstrative. The respective definitions (to be interpreted following the discussion in §2.3 and §2.4) are as follows:

(97) $[\![\textit{nó}]\!] = \lambda s \lambda P\text{: } \exists! x\ (P(x)(s)).\ \iota x\ [P(x)(s)]$

(98) $[\![\textit{saa... nó}]\!] = \lambda s \lambda P . \lambda y\text{: } !\exists x\ [P(x)(s) \wedge x = y].\ \iota x\ [P(x)(s) \wedge x = y]$

In the first place, the analysis of proposed here involves a re-analysis of the determiner *nó*: contrary to what was argued by Arkoh and Matthewson (2013), it does not presuppose an antecedent, but uniqueness—*nó* is a uniqueness definite. At a higher level, the analysis comes with a different understanding of what uniqueness and antecedent definites do than that assumed by Arkoh and Matthewson, namely that of the strictly binary view on definites. Analysing a determiner as definite article assigns it a uniqueness meaning, while aknowledging the anaphoric uses of the determiner. In turn, labeling a different determiner as a demonstrative captures the idea that the same definite that is used for pointing can also be used in anaphora, an idea which is captured by the presupposition that there has to be an immediate antecedent for the expression, regardless of whether it is anaphoric or deictic. This view is the one which allows us to capture the present data most straightforwardly: *nó* and *saa... nó* present precisely this cluster of properties. Overall, then, although the quantitative data would need a revision, with *nó* as article and *saa... nó* as demonstrative, it seems that the strictly binary view is a viable option not just for languages like Czech or English, but also for the "third language type" defined in §2.7.

5 Conclusion and outlook

This thesis has re-investigated the definiteness system of Akan. In a first theoretical part, one prominent definiteness theory, developed by Schwarz (2009, 2013), was reviewed. In spite of its initial appeal, the theory, which assumes three definiteness forms (weak articles, strong articles and demonstratives), was argued not to capture German and cross-linguistic data parsimoniously. In response to this, an alternative proposal was put forward: the strictly binary view on definites, according to which languages lexicalise at most two definites, which take the form of demonstratives and definite articles. After rejecting the previous formal analysis of definiteness in Akan (Arkoh and Matthewson 2013), the thesis re-investigated the Akan determiner *nó* (in comparison to *saa... nó*) against the background of this strictly binary approach. While the experimental results were difficult to interpret (due to methodological problems), the qualitative data

speak strongly in favour of a definite article of *nó* and a demonstrative analysis of *saa... nó*, which were analysed accordingly in §5.1.

Acknowledging the limitations of the experimental data, but also the clarity of the direct elicitation, the conclusion was that the binary view can be extended to Akan. Indeed, Akan would fit into the class of languages which, like English, lexicalise the two determiners made available by the theory. However, leaving this description as it stands would be misleading: although *nó* seems to be a definite article, it does not appear whenever we see it in English. This has to do with fact that Akan has a third option to express definiteness: the bare noun. The availability of this NP-type raises a number of questions: what determines the alternation between *nó* and the bare noun, both of which seem to express an iota type shift? And how can this alternation be integrated into the strictly binary view on definiteness? This section concludes the paper by tentatively addressing these issues, whose detailed investigation is left for future research.

5.1 The definite bare noun in Akan

This section explores preliminary data (i.e., data tested less systematically than previously) on the *nó*-bare noun alternation, with a focus on subject position. The empirical generalisation that can be made is that the two NP-types overlap partially in their distribution. The overlap concerns larger and global situation uses: here, both forms seem to be allowed. Indeed, the examples of these uses that were presented in the main body of this thesis seemed to be possible also without *nó*:

(99) Afia is on a bus, when a woman she doesn't know sits down beside her. The woman says:

a. **Awia** abɔ ɛnne, oo.
sun hit today, oo
'The sun is shining today.'

b. **Awia no** abɔ ɛnne, oo.
sun DEF hit today, oo
'The sun is shining today.'

Comment: *There's only one sun, so it also works without* nó[39]

cf. (73)

(100) Context: There is a new teacher at a school. A colleague is explaining to him how everything works:

[39]For some reason, in an equivalent sentence with *moon*, one speaker strongly preferred the variant with *nó*.

a. **Headmaster** bɛ-ma wo timetable.
headmaster FUT-give 2SG timetable
'The headmaster will give you a timetable.'

b. **Headmaster no** bɛ-ma wo timetable.
headmaster DEF FUT-give 2SG timetable
'The headmaster will give you a timetable.'

Comment: *He* [the colleague] *knows that there is one headmaster in the school, with or without the* nó.

cf. (71)

The author of this thesis was not able to identify any factor regulating the (non-)insertion of *nó*. Generally, the speakers provided the variant with the article in translation, but, when asked about it, they also accepted the bare noun in the same context. Further, and in contrast to *saa... nó*, inserting *nó* did not seem to add any emphasis or affectivity to the statement. Another factor that has been argued to license definite articles in languages with bare nouns is salience. As defined by Barlew (2014), a salience definite is one that is inserted if the speaker can assume that the entity in question is being attended to by the hearer, or is relevant to her aims and goals. In Akan, the bare noun and *nó* were accepted in contexts where the entity in question was salient ((101a)—where there is evidence that the hearer is attending to the sun) and in those in which it was not ((101b)—where there is no such evidence).

(101) a. Context: Afia is on a bus, when a woman she doesn't know sits down beside her. The woman draws the window shade, letting in the sunlight. The woman says:

b. Context: Afia is on a bus, when a woman she doesn't know sits down beside her. The woman says:

Awia (no) a-bɔ ɛnne (oo).
sun DEF PRF-hit today (oo)
'The sun is shining today.'

(after Barlew 2014: 627)

So, no contrast could be elicited along the salience parameter. Based on the data available, the situation seems to be one of true optionality, where either *nó* or the bare noun can be used in larger situations and global situations without affecting the interpretation of the sentence.[40]

[40]Cf. Renans (2016a) for similar observations for the article-bare noun alternation in Ga.

However, the optionality concerns only larger/global situations: *nó* and the bare noun are each found in contexts in which the other form is not allowed, and vice-versa. On the one hand, speakers rejected the bare noun in anaphora:[41]

(102) Me-tɔ-ɔ *atadeɛ bi*. **Atadeɛ #(no)** yɛ fɛ.
1SG-buy-PST dress INDF dress DEF COP beautiful
Intended: 'I bought a dress yesteday. The dress is beautiful.'

On the other hand, singular reference to kinds obligatorily takes the bare noun: inserting *nó* leads to an object-level interpretation. The pattern is illustrated in (103) below:

(103) Context: You are reading a biology book for children. The book describes animals of different types - mice, rats, pigs.... Then dogs are described:

a. **Kraman** wɔ enan nan.
SG.dog COP legs four
'The dog has four legs.'

b. #**Kraman no** wɔ enan nan.
Dog DEF COP legs four
'The dog has four legs.'

Comment: *You are talking about a particular dog.*

How can these data be explained? First, the availability of the bare noun in definiteness uses suggests that, similar to what happens with Czech or Mandarin Chinese, it can express an iota type shift. This statement does not require too much clarification for global/larger situations, which we have already discussed at length in previous sections. Turning to kinds, Dayal (2004, 2011) analyses English and Hindi singular kind reference as also involving an iota type shift.

(104) **The lion** is likely to become extinct. (Dayal 2004)

(105) **Kutta** aam jaanvar hai.
dog common animal is.
'The dog is a common animal.' Hindi (Dayal 2004: 402)

According to Dayal, the noun phrases in (104) and (105) involve taxonomic readings, i.e. reference in the domain of kinds. In this domain, common nouns denote properties of kinds, and the determiners they combine with retain their

[41]However, in order to make sure that the bare noun is indeed totally excluded from anaphora, one would need to try other configurations, i.e. with the bare noun as topic. As discussed in §2.4, the use of uniqueness definites in anapora may be restricted, with topics being one of the preferred possibilities.

usual meaning, but operate on kinds and subkinds, rather than ordinary properties/individuals. For instance, in (106) below, universal quantification ranges over different types of whale, listed in the parenthesis.

(106) **Every whale** (from the pigmy whale to the blue whale) is protected by law.

(Krifka et al. 1995: 74)

Following the same reasoning, *the* and the bare noun in (104) and (105) combine with nouns that denote properties of kinds, but they retain their usual uniqueness meaning, i.e. they encode an iota type shift (overt in English, covert in Hindi). So, the noun phrase in (104) refers to the individual kind "lion", which is unique among mammals. This analysis can be extended to Akan: the singular bare noun in (103), like its Hindi equivalent, probably involves a covert iota type shift.

Based on these data, it would seem that Akan has two ways of expressing iota, which raises a number of questions regarding the distribution of the two forms. First, it is unclear why the bare noun is available at all: according to Chierchia's (1998) Blocking Principle ('Type Shifting as Last Resort'), if a determiner in a language lexicalises a particular type shift, the same type shift cannot be expressed covertly. This generalisation does not seem to hold in Akan, which has an overt (*nó*) and a covert (bare noun) variant of iota. Second, assuming that the alternation is possible, the particular pattern of partial overlap has to be explained: Why is the bare noun ruled out from anaphora? Why is there optionality in larger situations? And why is *nó* not found with kind reference? These are issues that the analysis we have proposed for Akan has to deal with. In what follows, some tentative solutions are proposed, intended as starting point for future research. Given the exploratory nature of the investigation, we focus only on larger situations and kinds.

Let us start with a more detailed description of the problem: the optionality of *nó* in larger situations, and its unavailability in kind reference, are both unexpected if *Maximize Presupposition* is active in Akan. *Maximize Presupposition* was introduced by Heim (1991) precisely in the context of definiteness, to explain why indefinites are infelicitous and definite articles obligatory in contexts where uniqueness is met, as in (107a)-(107b).

(107) a. #**A father of the victim** arrived at the crime scene.
b. **The father of the victim** arrived at the crime scene.

(Bade 2016: 22)

In one of its formulations (Chemla 2008), the principle states that the sentence with the strongest presupposition has to be used out of a set of alternatives. In (107), the set of alternatives contains (107a) and (107b). Out of these two alternatives, (107b) presupposes more, in that it contains a definite article with a

uniqueness presupposition, which the indefinite in (107a) lacks. This uniqueness presupposition is met in the context, since the victim only has one father. So, the variant with *the* is preferred.[42] The same argumentation could be applied to Akan: in larger situations and kind reference, uniqueness is met, and so *nó* should be obligatorily inserted, in that its presupposition is necessarily stronger than the underspecification of the bare noun. What we get, however, is optionality in larger situations, and an obligatory bare noun for kinds.

These issues, however, are not unsurmountable. First, the optionality of *nó* in larger situations can be explained by the nature of the alternation: that of a form (*nó*) with a "non-form" (the bare noun). Concretely, it has been argued that the zero form does not constitute a real alternative to the overt form, making *Maximize Presupposition* without effect. The original argumentation stems from the domain of tense, and was developed by Bochnak (2016) to explain the optionality of the past tense morpheme in Washo (Hokan/isolate). Bochnak (2016) argues that tenseless sentences do not encode a tense feature, which suffices for them not to be considered as presuppositional alternatives to tensed sentences, which do encode such feature. His reasoning can easily be extended to the nominal domain, since sentences with *nó* and with the bare noun also involve different syntactic structures: with *nó*, D is being projected, whereas this is not the case with the bare noun. Further, under the analysis that has been proposed, *nó* is not a simple iota type shift: its denotation also contains a syntactically represented situation pronoun that picks out the resource situation. This could count as another another syntactic difference between (103a) and (103b) that would neutralise *Maximize Presupposition*.

What about reference to kinds? Here we also have to explain why *Maximize Presupposition* does not apply, but the explanation will have to be different from that of larger situations: here we do not have optionality, but an obligatory bare noun. A possible starting point is another condition of *Maximize Presupposition*: in order for this principle to apply, the presupposition trigger has to be met in the context. Applying the reasoning backwards, perhaps *nó* cannot be used with reference to kinds because its uniqueness presupposition is not met. At first, this may seem at odds with the analysis of the English data: in this language, *the* is used in singular kind reference, which Dayal (2004) takes as evidence that uniqueness is satisfied in this use. The key to this puzzle lies in the way uniqueness is met. When referring to object-level individuals, uniqueness holds in its most prototypical form. By contrast, reference to individuals in the taxonomic domain seems to be a conceptual extension of the notion of uniqueness: kinds are less prototypically unique individuals than object-level individuals. The upshot is that languages may impose different cut-off points in the degree of prototypicality at which uniqueness has to be met. In the case of English, a low degree of prototypicality will suffice for *the* to be inserted. On the other hand, for Akan kinds are not sufficiently unique for the presupposition of *nó* to

[42] This part of the argumentation follows closely the one in Mucha (2015: 132–133).

be met, such that the bare noun has to be used. This explanation is in line with Dayal's observation that the shift to the taxonomic domain in examples such as (104) are "a repair option" (Dayal 2004: 435), rather than the standard use of *the*. The explanation also makes sense from a diachronic perspective: the extension of uniqueness presupposition from more prototypical (object-level individuals) to less prototypical (kinds, mass terms) has been observed in the historical development of the French definite article (Simonenko and Carlier 2016). Overall, then, the explanation does not seem too far-fetched.

These are just examples of how the *nó*/bare noun alternation can be dealt with assuming the analysis of Akan definites proposed in §4.3. It remains to be seen whether similar explanations can be extended to cover anaphora (where the bare noun does not seem to be possible), and, more generally, how Chierchia's Blocking Principle is circumvented in Akan. Investigating the behaviour of the bare noun in object position is also left to future research.

5.2 Cross-linguistic variation

In this final section, we return to the larger topic of this thesis, namely the question of how definiteness is expressed across languages. Having re-analysed the Akan system, what does this language tell us about definites cross-linguistically? First of all, the results (at least the qualitative ones) confirmed the validity of the strictly binary view on definites for yet another language. Indeed, as the theory states, Akan encodes two different definiteness meanings. Further, the theory posited variation at the level of lexicalisation: some languages only have demonstratives, whereas others additionally encode definite articles. Based on the analysis proposed here, Akan belongs to the second category of languages, lexicalising both meanings in the determiners *nó* and *saa... nó*. The significance of this conclusion is that the theory can be extended to languages which, like Akan, have an argumental bare noun—the "third language type" defined in §2.7. On the other hand, what has become clear from §5.1 is that variation in the domain of definiteness is not limited to the boundaries imposed by the strictly binary view. Concretely, cross-linguistic differences in the behaviour of determiners seem to go beyond the lexicalisation parameter of this theory: Akan, like English, has a definite article, and yet *nó* does not have the same distribution as English *the*.

What the discussion in §5.1 has suggested is that this additional variation is due to the interaction of two factors. One factor is, evidently, the availability of the bare noun in argumental position, which can co-exist with the two overt determiners defined by the strictly binary view. The availability of such underspecified "non-forms" is generally attributed to parameters at the syntax/semantics interface. One well-known parameter of this sort is Chierchia's influential Nominal Mapping Parameter (Chierchia 1998), which regulates what types of denotations noun phrases a particular language may have (are they

predicative or argumental?) depending on other features of the language (e.g. does the language have a singular-plural distinction?). It is an open question how exactly Akan fits Chierchia's typology. However, what is clear is that one defining feature of this language (as opposed to English) is it has the bare noun as a syntactic possibility.

The second point of variation are principles of lexical competition and blocking. Essentially, once the bare nouns is allowed by the syntax, competition arises between this (non-)form and the definite article. A possible way in which this competition may work has already been sketched in §5.1 for Akan. However, examining other analyses of "third type" languages, it seems that the factors regulating the alternation go beyond *Maximize Presupposition*, and vary considerably across languages. For instance, Wespel (2008) compares the distribution of the definite article in two closely related French lexifier creoles (Mauritian Creole and Haitian Creole). These two languages have the same definiteness inventory as Akan, and yet they show different distributional patterns. In Mauritian Creole, the insertion of the definite article seems to indicate a situation shift: it is inserted only in case the topic situation and the resource situation are not the same. In Haitian Creole, the definite article is inserted only if the uniqueness of the referent does not rely on mutual knowledge, but is determined linguistically (e.g. through a relative clause). What this comparison shows us is that, in order to determine the full range of variation in the domain of definiteness (particularly, the distribution of definite articles and bare nouns) different pragmatic principles need to be taken into account.

In sum, and overall, the lexicalisation patterns defined by the strictly binary view have helped us establish which forms are available in Akan, and what denotation they have. However, there is more variation in the domain of definiteness that what is defined by this theory, a lot of which seems to depend on syntactic parameters and pragmatic factors regulating lexical competition. Determining how they work in Akan, and whether this approach overall can be applied to other "third type" languages is left for future work.

References

Afriyie, J. (2014). *Syntagmatic relations of noun modifiers in Akan.* Master's thesis, University of Ghana.

Amfo, A. A. and Fretheim, T. (1995). Reference, determiner and descriptive content. *Working Papers ISK*, 2:87–112.

Amfo, A. N. (2009). Akan demonstratives. *Selected Proceedings of the 37th Annual Conference on African Linguistics*, pages 134–148.

Appah, C. K. I. (2003). *Nominal derivation in Akan: A descriptive analysis.* Master's thesis, Norwegian University of Science and Technology.

Arkoh, R. (2011). *The semantics of Akan* bi *and* nʊ. Master's thesis, University of British Columbia.

Arkoh, R. and Matthewson, L. (2013). A familiar definite article in Akan. *Lingua*, 123:1–30.

Bade, N. (2016). *Obligatory Presupposition triggers in discourse - Empirical foundations of the theories Maximize Presupposition and Obligatory Implicatures.* PhD thesis, University of Tübingen.

Barlew, J. (2014). Salience, uniqueness, and the definite determiner *-te* in Bulu. *Semantics and Linguistic Theory*, 24(0):619–639.

Bearth, T., Eichholzer, E., Hirzel, H., and Frempong, J. (1999). Ali akan: Introduction to Akan - Language and Linguistics: A teleteaching course. Retrieved from `http://akan.org` (28th July 2017).

Bochnak, M. R. (2016). Past time reference in a language with optional tense. *Linguistics and Philosphy*, 29(4):247–294.

Bodomo, A. B. and Marfo, C. O. (2002). The morphophonology of noun classes in Dagaare and Akan. *Studi linguistici e filologici online*, 4(2).

Bosch, P. and Umbach, C. (2007). Reference determination for demonstrative pronouns. *ZAS Papers in Linguistics*, 48:39–51.

Cabredo-Hofherr, P. (2013). Reduced definite articles with restrictive relative clauses. In Cabredo-Hofherr, P. and Zribi-Herz, A., editors, *Crosslinguistic Studies on Noun Phrase Structure and Reference*, pages 172–211. Brill, Leiden.

Cabredo-Hoherr, P. and Schaden, G. (2012). Definite articles and restricive relative clauses: evidence from the Voralberg dialect. Talk held at the Workshop "Definite articles and restrictive modification", Paris.

Chemla, E. (2008). An epistemic step for anti-presuppositions. *Journal of Semantics*, (25):141–173.

Chierchia, G. (1998). Reference to kinds across languages. *Natural Language Semantics*, 6(4):339–405.

Christaller, J. (1875). *A Grammar of the Asante and Fante Language Called Tshi*. Basel Evangelical Missionary Society, Basel.

Christensen, R. H. B. (2015). ordinal—Regression Models for Ordinal Data. R package version 2015.6-28. `http://www.cran.r-project.org/package=ordinal/`.

Dayal, V. (2004). Number marking and (in)definiteness in kind terms. *Linguistics and Philosophy*, 27:393–450.

Dayal, V. (2011). Bare noun phrases. In Maienborn, C., von Heusinger, K., and Portner, P., editors, *Semantics: An International Handbook of Natural Language Meaning*, pages 1087–1108. De Gruyter, Berlin, Boston.

Dolphyne, F. A. (1988). *The Akan (Twi-Fante) language*. Accra University Press, Accra.

Duah, R. A. (2013). *Force Dynamics and causation in Akan*. PhD thesis, University of Ghana.

Dudenredaktion, editor (2016). *Die Grammatik. Unentbehrlich für richtiges Deutsch (9th edition)*. Dudenverlag, Berlin.

Ebert, K. (1971). *Referenz, Sprechsituation und die bestimmten Artikel in einem Nordfriesischen Dialekt (Fering)*. PhD thesis, Christian-Albrechts-Universität zu Kiel.

Elbourne, P. (2008). Demonstratives as Individual Concepts. *Linguistics and Philosophy*, 31(4):409–466.

Fretheim, T. and Amfo, N. A. A. (2008). Reference, determiners and descriptive content. In Müller, H. H. and Kling, A., editors, *Essays on Nominal Determination*, Studies in Language Companion Series 99, pages 337–364. John Benjamins, Amsterdam.

Grubic, M. (2015). *Focus and alternative sensitivity in Ngamo (West-Chadic)*. PhD thesis, University of Potsdam.

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

Hartmann, D. (1982). Here and There–Cross-linguistic studies on deixis and demonstration. In Weissborn, J. and Klein, W., editors, *Deixis and anaphora in German dialects: The semantics and pragmatics of two definite articles in dialectal varieties*, pages 187–208. John Benjamins Publishing Company, Amsterdam and Philadelphia.

Hawkins, J. (1978). *Definiteness and Indefiniteness: A study in reference and grammaticality prediction*. Croom Helm, London.

Heim, I. (1982). *The semantics of definite and indefinite noun phrases*. PhD thesis, University of Massachussets Amherst.

Heim, I. (1991). Artikel und Definitheit. In von Stechow, A. and Wunderlich, D., editors, *Semantics: An international handbook of contemporary research*, pages 487–535. De Gruyter, Berlin.

Heim, I. and Kratzer, A. (1998). *Semantics in Generative Grammar*. Blackwell Publishers, Oxford.

Heinrichs, H. M. (1954). *Studien zum bestimmten Artikel in den germanischen Sprachen*. Wilhelm Schmitz Verlag, Giessen.

Himmelmann, N. P. (1997). *Deiktikon, Artikel, Nominalphrase: Zur Emergenz syntaktischer Struktur*. Niemeyer, Tübingen.

Ingason, A. K. (2016). *Realizing morphemes in the Icelandic Noun Phrase*. PhD thesis, University of Pennsylvania.

Jenks, P. (2015). Two kinds of definites in numeral classifier languages. *Semantics and Linguistic Theory*, 25(0):103–124.

Jenks, P. (2017). Articulated definiteness without articles. To appear in Linguistic Inquiry. Retrieved from `http://linguistics.berkeley.edu/~jenks/images/definiteness2-distrib.pdf` (25th July 2017).

Konoshenko, M. and Shavarina, D. (2016). Patterns of noun class attrition in Kwa. Talk held at "Towards Proto-Niger-Congo: Comparison and Reconstruction" (2nd International Congress), Paris.

Kratzer, A. (1989). An investigation of the lumps of thought. *Linguistics and Philosophy*, 5(12):607–653.

Krifka, M., Pelletier, F. J., Carlson, G. N., ter Meulen, A., Link, G., and Chierchia, G. (1995). Genericity: an introduction. In Carlson, G. N. and Pelletier, F. J., editors, *The Generic Book*, pages 1–124. The University of Chicago Press, Chicago.

Löbner, S. (1985). Definites. *Journal of Semantics*, 4(4):279–326.

Matthewson, L. (2004). On the methodology of semantic fieldwork. *International Journal of American Linguistics*, 70(1):369–415.

Mucha, A. (2015). *Temporal interpretation and cross-lingusitic variation*. PhD thesis, Universität Potsdam.

Ofori, E. A. (2016). Distributed Morphology of Akan-Twi plurals. *International Journal of Language and Linguistics*, 4(2):57–60.

Osam, E. K. (1993). The loss of the noun class system in Akan. *Acta Linguistica Hafniensia*, 17(2):81–105.

Prince, E. F. (1981). On the inferencing of indefinite-this NPs. In Joshi, A. K., Webber, B. L., and Sag, I. A., editors, *Elements of discourse understandings*, pages 231–250. Cambridge University Press, Cambridge.

Renans, A. (2016a). A cross-categorial definite determiner: evidence from Ga (Kwa). *Semantics and Linguistic Theory (SALT) 26*, pages 23–42.

Renans, A. (2016b). *Exhaustivity. On exclusive particles, clefts, and progressive aspect in Ga (Kwa)*. PhD thesis, Universität Potsdam.

Roberts, C. (2002). Demonstratives as definites. In van Deemter, K. and Kibble, R., editors, *Information sharing*, pages 1–48. CSLI, Stanford, CA.

Roberts, C. (2003). Uniqueness in definite noun phrases. *Linguistics and Philosophy*, 26:287–350.

Robinson, H. M. (2005). *Unexpected (in)definiteness: Plural generic expressions in Romance*. PhD thesis, Rutgers University.

Schwarz, F. (2009). *Two Types of Definites in Natural Language*. PhD thesis, University of Massachusetts Amherst.

Schwarz, F. (2013). Two kinds of definites cross-linguistically. *Language and Linguistics Compass*, 7(10):534–559.

Schwarz, F. (2016). Weak vs. strong definites - meaning and form across languages. Invited Talk presented at the workshop on "Definiteness Across Languages", Universidad Autónoma de México and El Colegio de México, México City.

Šimík, R. (2014). Definiteness and articleless languages. Handout of Letní škola lingvistiky, Dačice, 22nd August.

Šimík, R. (2016). On pragmatic demonstratives: The case of pragmatic discourse anaphora in Czech. In Bade, N., Berezovskaya, P., and Schöller, A., editors, *Proceedings of Sinn und Bedeutung 20*, pages 640–657.

Simonenko, A. (2014). *Grammatical ingredients of definiteness.* PhD thesis, McGill University.

Simonenko, A. and Carlier, A. (2016). The evolution of the French definite article: from strong to weak. Talk held at "Going Romance", Frankfurt.

Simons, G. F. and Fennig, C. D., editors (2007). *Ethnologue: Languages of the World, Twentieth edition.* SIL International, Dallas, Texas.

Studler, R. (2008). *Artikelparadigmen. Form, Funktion und syntaktisch-semantische Analyse von definiten Determinierern im Schweizerdeutschen.* PhD thesis, Universität Zürich.

Wespel, J. (2008). *Descriptions and their domains. The patterns of definiteness markings in French-related Creoles.* PhD thesis, University of Stuttgart.

Wiltschko, M. (2012). What does it take to host a (restrictive) relative clause? *Papers of the Linguistics Circle of the University of Victoria*, (21):100–145.

Wolter, L. (2006). *That's that: the semantics and pragmatics of demonstrative noun phrases.* PhD thesis, University of California Santa Cruz.

Appendices

A Experimental items

1. *Kofi kɔɔ kasakyerɛ bi. ɔkɔtenaa ɔkasafoɔ bi nkyɛn/mmaa bi nkyɛn. Mmrɛ tiawa bi akyi, ɔkasafoɔ no/saa ɔkasafoɔ no hyɛɛ kasa ase.*

   Kofi went to a talk. He sat down near a speaker/some women. After a bit, the/that speaker started a speech.

2. *Adelaide foroo trotro bi. ɔkɔtenaa mate bi/mmɔfra bi nkyɛn. Mmrɛ kakra akyi, mate no/saa mate no gyee sika.*

   Adelaide took a trotro. She sat down near a mate/some children. After a bit, the mate collected the money.

3. *Kwasi kɔɔ asɛmdibia. ɔkɔtenaa ɔtɛmmuafoɔ bi/nkasamafoɔ bi nkyɛn. Akyire no, ɔtɛmmuafoɔ no/saa ɔtɛmmuafoɔ no buu atɛm.*

   Kwasi went to a trial. He sat down near a judge. Later, the judge made a judgement.

4. *Akosua kɔɔ suapɔn nkyerɛkyerɛ bi. ɔkyeaa ɔkyerɛkyerɛni bi/asuafoɔ bi. Mmrɛ tiawa bi akyi, ɔkyerɛkyerɛni no/saa ɔkyerɛkyerɛni no hyɛɛ adekyɛre ase.*

   Akosua went to a university class. She greeted a professor/some students. A bit later, the professor/that professor started teaching.

5. *Kwaku kɔɔ ntadeɛ setɔɔ. ɔkyeaa setɔɔwura bi/nkurɔfoɔ bi. Mmrɛ kakra akyi, setɔɔwura no/saa setɔɔwura no de ntadeɛ bae.*

   Kwaku went to a clothes shop. He greeted a shopkeeper/some people. After a bit, the shopkeeper/that shopkeeper brought some dresses.

6. *Yaa kɔɔ adidibea bi. ɔkyeaa waiter bi/ɔkyeaa mmarima bi. Mmrɛ tiawa bi akyi, waiter no/saa waiter no de menu baako bae.*

   Yaa went to a restaurant. She greeted a waiter/some men. A bit later, the

waiter/that waiter brought a menu.

7. *Prosper kɔɔ asɔre. ɔne ɔsofo bi/nwomotofoɔ bi kasae. Mmrɛ kakra akyi, ɔsofo no/saa ɔsofo no hyɛɛ aseɛ bɔɔ mpaye.*

   Prosper went to church. He talked to a pastor/some singers. After a bit, the pastor/that pastor started praying.

8. *Serwaa foroo wiemhyɛn bi. ɔhuu wiemhyɛnkafoɔ bi/akwantufoɔ bi. Akyire no, wiemhyɛnkafoɔ no/saa wiemhyɛnkafoɔ no maa nkaebɔ*

   Serwaa took a plane. She saw a pilot/some travellers. Later, the pilot made an announcement.

9. *Priscilla kɔɔ ɔmanpanin adwumabea. ɔne ɔtwerɛfoɔ bi/mmrahyɛbedwafoɔ bi kasae. Akyire no, ɔtwerɛfoɔ no/saa ɔtwerɛfoɔ no de nkrataa bae.*

   Priscilla went to a president's office. She talked to a secretary/some parlamentarians. Later, the secretary/that secretary brought some papers.

10. *Abigail kɔɔ pharmacy. ɔne pharmacist bi/ayarefoɔ bi kasae. Akyire no, pharmacist no/saa pharmacist no de nnuro bi bae.*

    Abigail went to a pharmacy. She talked to a pharmacist/some patients. Later, the pharmacist brought some medicines.

11. *Edmund kɔɔ suaa amammerɛ asa bi. ɔhuu ɔkyerɛfo bi/atentebenfoɔ bi. Mmrɛ kakra akyi, ɔkyerɛfo/saa ɔkyerɛfo no firi ase saa.*

    Edmund went to learn a traditional dance. He saw a trainer/some flutists. A bit later, the trainer started dancing.

12. *Reggie kɔɔ baa bi. ɔhuu baaman bi/nnamfoɔ bi. Mmrɛ tiawa bi akyi, baaman no/saa baaman no hwiee nsa kakra.*

    Reggie went to a bar. He saw a bartender/some friends. After a bit, the bartender/that bartender poured some drinks.

B Sample questionnnaire **(First two pages, layout adapted)**

Questionnaire (1)

Version (1)

Native language(s) (language(s) that your parents spoke to you as a baby):

Sex:

Age:

Department:

Level:

*****PLEASE READ CAREFULLY*****

TASK:

In what follows, you will read some short stories or situations. Each situation is composed of a context, followed by a sentence (in bold). Your task is to judge whether the sentence sounds good given the context. "Good" means that you or your Twi-speaking friend could say that sentence as a continuation of the context.

Note that:
3 = acceptable
2 = inbetween
1 = not acceptable

SOME HINTS:

- **Do:** To give the sentence a rating, you can imagine yourself telling the story to a friend. How does the continuation sound in the context? Is there anything strange in the way things are said?

- You should **not** judge how normal or common the stories are, or whether they are complete. Instead, we are interested in how the language sounds to you.

- You should **not** judge the spelling. Feel free to change any spelling mistakes, but they should be irrelevant for your judgement.

1.
Mary foroo taxi. ɔne taxidrobani bi kasae. **Akyire no, taxi drobani bi bɔɔ ɛboɔ a ɛda fɔm.**

(not acceptable)	1	2	3	(acceptable)

2.
Nathaniel kɔɔ sukuu. ɔhuu headmaster bi. **Mmrɛ kakra akyi, headmaster bi de no kɔɔ adesuadɛm.**

(not acceptable)	1	2	3	(acceptable)

3.
Akosua kɔɔ suapɔn nkyerɛkyerɛ bi. ɔkyeaa asuafoɔ bi. **Mmrɛ tiawa bi akyi, saa ɔkyerɛkyerɛni no hyɛɛ adekyɛre ase.**

(not acceptable)	1	2	3	(acceptable)

4.
Kwadwo foroo lɔɔre. ɔkɔtenaa lɔɔre drobani bi akyi. **Mmrɛ kakra akyi, lɔɔre drobani bi tuu lɔɔre no.**

(not acceptable)	1	2	3	(acceptable)

5.
Abena kɔɔ hwehwɛɛ ne nnamfonom. ɔduruu hɔ no, ɔkyeaa wɔn. **Akyire no, wɔkɔɔ hwɛɛ kasanfoni.**

(not acceptable)	1	2	3	(acceptable)

6.
Serwaa foroo wiemhyɛn bi. ɔhuu akwantufoɔ bi. **Akyire no, ɛwiemhyɛnkafoɔ no maa nkaebɔ.**

(not acceptable)	1	2	3	(acceptable)

Zusammenfassung in deutscher Sprache

Die zentrale Fragestellung dieser Arbeit ist, wie Definitheit sprachübergreifend ausgedrückt wird. Als Beispiel dient die Sprache Akan (Kwa, Niger-Kongo). In der Literatur wird diese Frage oft als eine Opposition zwischen zwei Typen von Determinierern dargestellt: solche, die Einzigkeit ausdrücken einerseits (schwache Artikel), und anaphorische Determinierer andererseits (starke Artikel) (Schwarz 2009, 2013). Die Annahme dabei ist, dass diese zwei Artikel neben einer dritten definiten Form existieren, nämlich Demonstrativa. Die Relevanz von Akan in dieser Debatte ist, dass sie diese Unterteilung des Raums der definiten Determinierer in drei Klassen zu unterstützen scheint: In der einzigen formalen Untersuchung des Definitheitssystems von Akan analysieren Arkoh and Matthewson (2013) den Determinierer *nó* als ein starker Artikel, und das definite bloße Nomen als schwacher Artikel; dabei nehmen sie eine dritte Form an, das Demonstrativum *saa... nó*.

In dieser Arbeit wird eine andere Perspektive auf Definitheit: In dieser Theorie lexikalisieren Sprachen höchstens zwei Definitheitsformen, nämlich definite Artikel (die Einzigkeit präsupponieren) und Demonstrativa (die ein deiktisches oder anaphorisches Antezedens präsupponieren). Der theoretische Teil der Arbeit zeigt, wie diese strikt binäre Perspektive auf Definitheit das Verhalten von Determinierern in unterschiedlichen Sprachen erklärt—sogar im Deutschen, welches die Grundlage von Schwarz' Theorie bildet. Gleichzeitig demonstriert die Arbeit, dass Schwarz' Theorie die empirischen Fakten im Akan nicht problemfrei modellieren kann. In dieser Folge wird Akan aus der strikt binären Perspektive auf Definitheit untersucht. Die Forschungsfrage, die mit quantitativen und qualitativen Feldforschungsmethoden erforscht wird, ist dabei, ob es sich beim Determinierer *nó* um einen definiten Artikel, oder, wie *saa... nó*, um ein Demonstrativum handelt.

Obwohl die quantitativen Ergebnissen asu methodologischen Gründen nicht eindeutig sind, weist die qualitative Forschung stark darauf hin, dass *nó* ein definiter Artikel und *saa... nó* ein Demonstrativum ist. Insgesamt wird argumentiert, dass die strikt binäre Perspektive auch auf Sprachen angewandt werden kann, bei denen bloße Nomina argumental gebraucht werden können. Dies wirft die neue Frage auf, wie diese Null-Form in die strikt binäre Perspektive auf Definitheit integriert werden kann.

Selbständigkeitserklärung

Hiermit versichere ich, dass ich die vorliegende Arbeit selbstständig und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Alle Stellen, die wörtlich oder sinngemäß aus veröffentlichten oder nicht veröffentlichten Schriften entnommen sind, sind als solche kenntlich gemacht.

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