DE GRUYTER MOUTON

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What is finiteness in Dagaare?

Abstract: Although the notion of finiteness has been much debated from different theoretical perspectives, little is known beyond Indo-European languages. The present study examines finiteness in the Lobr dialect of Dagaare (Niger-Congo: Mabia) from a systemic functional typological point of view. The study contributes to debates on whether finiteness is a discrete system or a cline. The study first distinguishes between semantic and grammatical finiteness. The analysis then show that Dagaare has a grammaticalised binary system of FINITENESS in the verbal group, encoded by four kinds of finiteness markers: (i) tense-mood-polarity, (ii) modality, (iii) habitual tense, and (iv) remoteness particles. Also, the Dagaare verbal group embodies disassociated systems of TENSE, comprising FUTURITY, HABITUALITY, and REMOTENESS and choices from each of these systems result in multiple Finite elements in the verbal group. On the other hand, clausal finiteness in Dagaare is a semantic cline that depends on the system of FREEDOM. Specifically, a clause is finite or less finite depending on whether it combines a finite verbal group with clause final negotiation or information focus. The article provides finer criteria for distinguishing between semantic and grammatical finiteness that can be used for the description and typology of finiteness across languages.

Keywords: Dagaare; finiteness; Mabia languages; systemic functional linguistics; verbal group

1 Introduction

The notion of "finiteness" has attracted much debate in contemporary research in the language sciences. Scholars across different theoretical traditions tend to agree that finiteness has to do with the status of the clause in terms of FREEDOM (Anderson 2007, 2011: 234–289, 290–356; Givón 1990; Halliday 1985: 217–218; Huang 2022; Matthiessen and Thompson 1988; Wurmbrand et al. 2020). Free clauses exhibit characteristics that can be referred to as finite while bound (or dependent) clauses tend to exhibit characteristics that can be referred to as non-finite. The pursuit of a

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morphosyntactic definition of finiteness that is valid across all languages has, however, led to several controversies in the literature (Nikolaeva 2007, 2010). It has also been shown that, in some languages, including English, bound clauses show a finite/non-finite dichotomy. This situation suggests that although finiteness has some relationship with the FREEDOM of a clause, it embodies other meanings.

Contemporary research on a wide range of languages has further challenged the traditional conception of finiteness in terms of verbal morphology, showing that finiteness is a universal tendency in clauses that is encoded differently across the grammar of languages (e.g. Chamoreau 2016; Comrie 2016; Estrada-Fernandez 2016; Nikolaeva 2007). For instance, it has been shown that in Chinese that has no verbal inflection, finiteness is still a valid category in its grammar (Huang 2022; Zhang 2019). The crosslinguistic variations in the encoding of finiteness have led to attempts to provide a typology of finiteness (Nikolaeva 2010).

One challenge to typological research on finiteness, however, is the typological and areal range of languages in which finiteness has been examined and a lack of an explicit definition of finiteness. Much of our knowledge of finiteness come from European languages (Anderson 2007; Perlmutter 2007; Wurmbrand et al. 2020; Yang 2004) with some attention given to Asian languages (Huang 2022; Kornfilt 2007; Kothakonda 2021; Zhang 2019), Oceanic (Comrie 2016), and American languages (Chamoreau 2016). There has been little attention given to African languages, and notably, there is a lack of research on finiteness in Mabia languages. Focusing on the Lobr dialect of Dagaare (Niger-Congo: Mabia),[1] the present study examines finiteness from the perspective of systemic functional linguistics (SFL) (Martin 2013; Matthiessen and Halliday 2009; Matthiessen and Teruya 2024; Mwinlaaru and Xuan 2016). The study uses the Dagaare data to provide a distinction between FINITENESS as a system, i.e. a dedicated grammatical domain in particular languages, and finiteness as a semantic property of clauses. Notably, the study will account for the interaction between finite markers in the Dagaare verbal group (i.e. tense, mood, polarity, and modal particles) and other finiteness indicators in the Dagaare clause (i.e. focus and clause final negotiation particles). The study also sheds new light on the cross-linguistic debate on whether finiteness should be considered a binary system or a cline by showing that Dagaare displays both perspectives and that binarity and cline should be considered as complementary points of view on finiteness.

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1 Dagaare (or Dagara) is spoken in the intersection of three West African countries, namely southern Burkina Faso, north-eastern Ivory Coast (Côte d'Ivoire), and north-western Ghana. It consists of six principal dialects: Lobr, Northern Birifor, Southern Birifor, Central Dagaare, Wule, and Waali. All data in this article are from the Lobr dialect. Speakers of Lobr are found in Burkina Faso, around Dissin, Maria Tang, and Nyebo (all in the Ioba Province), and in Ghana, around Lawra, Nandom, and Hamele (all in the Upper West Region).

The data for the study consists of a text archive of the Lobr dialect of Dagaare compiled by the author and reported in several previous studies (e.g. Mwinlaaru 2017, 2018, 2021; Mwinlaaru and Yap 2021). Texts in the archive represent a range of registers, comprising recreational discourse, radio interviews, reports, biblical narratives, and casual conversations.

The rest of the article is organised as follows. Section 2 provides a conceptual background on finiteness. Section 3 gives a definition of finiteness that is valid across languages and serves as a working definition for the present study. Section 4 examines finiteness in Dagaare, first presenting a general overview of the interpersonal structure of the Dagaare clause, and then focusing on FINITENESS as a system of the verbal group (Section 4.1). Section 4.2 examines clausal finiteness in Dagaare. Section 5 provides a general discussion of the findings and concludes the article.

2 Conceptual background

The conceptual background of the study consists of the notion of finiteness in research across languages (Section 2.1) and the descriptive insights on finiteness in SFL language description (Section 2.2).

2.1 The notion of finiteness across languages

According to Nikolaeva (2007: 1), the term "finite" originates from the Latin word *finitus*, the perfect of the verb *finio* 'finish, set bounds to, circumscribe, bring to a close'. This etymology suggests that Classical grammarians used the term "finite" to indicate a property of clauses that characterised them as complete in terms of making a determined proposition or proposal. So far as Latin is concerned, the Classical grammarians were arguably right to identify inflectional categories of the verb such as tense, mood, and agreement features as markers of finiteness in the verbal domain since, in Latin, these grammatical categories sufficiently circumscribed clauses as full propositions.

The absence of these lexicogrammatical categories in languages other than the Standard Average European (SAE) languages has led some linguists to question whether finiteness should be considered a distinct grammatical system across languages (Bisang 2007). It has been argued that finiteness is an epiphenomenon of verb inflection or other grammatical categories rather than a distinct system in its own right (Cristofaro 2007). Others have contended that finiteness has an important role in the syntactic and semantic structure of clauses and should be considered a distinct grammatical system (Klein 2006: 2).

Several proposals have been offered to explain finiteness as a grammatical system. It has been considered as "a functional tendency defined by a cluster of correlating parameters" (Nikolaeva 2010: 1176, see also Cristofaro 2007). Across languages, parameters that have been identified include tense, aspect, modality, verbal modes, mood, person, agreement, politeness/honorification, and switch reference (see e.g. Estrada-Fernandez 2016; Nikolaeva 2010). Other parameters are assertion and information structure (Kalinina and Sumbatova 2007; Klein 2006). Important to the present study, Zhang (2019) identifies clause final aspect particles (CFAPs) as markers of finiteness in Mandarin Chinese. He provides robust evidence for the distinction between finite and non-finite clauses in Chinese: clauses that allow CFAPs behave like finite clauses in other languages and clauses that disallow CFAPs behave like non-finite clauses in other languages. Chinese finite clauses (i.e. clauses with CFAPs) are typically independent, allow pro-drop, allow speaker-oriented adverbs and epistemic modals, and their clause boundaries may be visible for binding. On the other hand, clauses that disallow CFAPs are intrinsically embedded, ban pro-drop, disallow speaker-oriented adverbs and epistemic modals, and their clause boundaries may be invisible for binding.

If one considers the grammatical resources associated with finite categories across languages, one will realise that they are resources that characterise the clause as an interactive unit, a move in exchange. They encode interpersonal meaning and ground the clause as something that can be argued about or negotiated (Halliday and Matthiessen 2014: 144). In other words, finiteness is often associated with obligatory categories that "locate the state of affairs being described with respect to the speech act situation" (Cristofaro 2007: 92). Sybesma (2017: 233) similarly defines a finite clause as a clause "that enables one to make a connection with the non-linguistic outside world".

Unsurprisingly, the free declarative clause has been identified across languages as the prototype of finite clauses (Anderson 2011: 234–356; Nikolaeva 2010) since it is free clauses that have a full interactive potential in exchange. Thus, many studies on finiteness show that finiteness relates to the semantics of FREEDOM in the clause and that reduction in finiteness is a signal of dependence on the textual context (Givón 1990: 853, see also Nikolaeva 2010). It has however been argued that in some languages (e.g. English and Tundra Nenets), forms associated with finiteness such as tense and agreement markers occur in both free and bound clauses (Anderson 2011: 234–356; Nikolaeva 2010). Indeed, across languages, there is the tendency that while non-finite forms are associated with bound clauses, finite forms may be found in both free and bound clauses. A counterargument is that finite bound clauses often require an additional marking through subordinators or some other binding items (Anderson 2011: 290–356; Matthiessen and Thompson 1988). In English, for instance, hypotactic finite clauses are always marked by a subordinator, while non-finite ones

such as infinitival clauses normally do not require subordinators (Halliday 1985: 217–218; Matthiessen and Thompson 1988).

While some scholars (e.g. Bisang 2007) consider finiteness to be a discrete binary system of finite/non-finite, many studies maintain that finiteness is a cline, a scalar property characterised by a correlation of parameters (Anderson 2011: 290–356; Chamoreau 2016; Comrie 2016; Givón 1990). The cline or scalar view is that "finiteness and non-finiteness are scalar categories defined in terms of a variety of properties that may combine in different ways from one construction to another" (Cristofaro 2007: 92). This view is exemplified by Givón (1990: 852–860), who considers finiteness as a gradual category, namely a construction is "more or less" finite based on the number of properties it possesses that deviate from the pattern of prototypical free clauses.

Another issue has been the appropriate unit of analysis for finiteness. While some studies have considered it as a property of verbs (Anderson 2011: 357–395), others have analysed finiteness as a clause rank system (Anderson 2011: 234–356, see Nikolaeva [2010] for an overview). Sells (2007) makes a crucial distinction between finiteness as a property of the clause and its overt morphological form. He distinguishes among: (i) finite as a value of a form feature that verbs and possibly a few other lexical items have; (ii) finite as a formal grammatical property of clauses normally encoded by a Finite form or by other means); (iii) finite as a formal property that certain categories may be sensitive to, notably agreement, complementizers, and negation; and (iv) finite "as a property of clauses used to make an assertion" (Sells 2007: 86). Maas (2004) similarly makes a distinction between semantics finiteness and morphological finiteness using data from across languages. He characterises semantic finiteness as "the *grounding* of the sentence" (Maas 2004: 361). He explains further that semantic finiteness is the condition for an independent interpretation of a sentence (or clause) and concerns all questions of reference or deictic binding. Morphological finiteness, on the other hand, is marking of the verb, "the analysis of grammaticization in morphology" (Maas 2004: 381).

The present study is guided by insights from the crosslinguistic research on finiteness. Notably, it contributes to the dynamic or multifaceted perspectives on finiteness (see e.g. Maas 2004; Sells 2007). It however goes beyond morphological marking to provide a broader definition of grammatical finiteness and outline more explicit criteria in distinguishing between semantic finiteness and grammatical finiteness by further using insights from SFL language descriptions (see Section 3). I relate these criteria to the controversial issue of whether finiteness is binary or a cline, focusing on Dagaare.

2.2 The notion of finiteness in systemic functional language description

In SFL, finiteness is a descriptive concept rather than a theoretical concept. It is a concept that emerges from the empirical description of particular languages and from crosslinguistic comparison and not an *a priori* category given by the theory. Indeed, although finiteness has featured prominently in SFL language description, there is little dedicated SFL research on finiteness (see e.g. Yang 2004, 2022). The discussion of finiteness in SFL has rather largely been related to the description of MOOD in Indo-European languages. A possible explanation for this typological concentration is that most of SFL descriptions have focused on clause systems and finiteness tends to play a more crucial role in the MOOD systems of the Indo-European languages described (e.g. Bartlett 2021; Caffarel 2006; Figueredo 2021) than in the MOOD systems of other languages described in systemic functional terms (e.g. Akerejola 2005; Kim et al. 2023; Rose 2021; Teruya 2006; Wang 2021; Zhang 2020a, 2020b: 157–238).

In M. A. K. Halliday's description of the English MOOD system (e.g. Halliday and Matthiessen 2014, see also Matthiessen 1995), he identifies a **Finite operator** that combines with the Subject of the clause to constitute the Mood (see e.g. Examples 1–3).[2] Mood (with initial caps) is defined as the arguable or interactive component of the clause. Also, in a Mood Tag, it is the Finite and the Subject that are selected to appendage the clause as an interpersonal finale (see e.g. Examples 1–3). The indicative mood type in English is identified by the presence of Subject + Finite (e.g. ***She is*** *coming here*) and the imperative is identified by the absence of these two elements (e.g. *Come here*). Within the English indicative, the declarative is identified by Subject ^ Finite order (as in: ***She is*** *coming here*) while the interrogative is identified by Finite ^ Subject order (e.g. ***Is she*** *coming here*?).

(1)

He	**answers**	the	phone,
Subject	**Finite**/Predicator	Complement	
Mood		Residue	
nominal group	verbal group	nominal group	
Thing	**Finite**/Event	Deictic	Thing
pronoun	verb	determiner	noun

doesn't	he?
Finite	Subject
Mood Tag	
verbal group	nominal group
Finite	Thing
auxiliary verb	pronoun

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2 Initial capital letters are used in this article to indicate functional labels (e.g. Finite, Subject, Predicator, etc.).

(2)

He	**is**	answering	the	phone,
Subject	**Finite**	Predicator	Complement	
Mood		Residue		
nominal group	verbal group		nominal group	
Thing	**Finite**	Event	Deictic	Thing
pronoun	auxiliary verb	verb	determiner	noun

isn't	he?
Finite	Subject
Mood Tag	
verbal group	nominal group
Finite	Thing
auxiliary verb	pronoun

(3)

He	**should**	answer	the	phone,
Subject	**Finite**	Predicator	Complement	
Mood		Residue		
nominal group	verbal group		nominal group	
Thing	**Finite**	Event	Deictic	Thing
pronoun	modal verb	verb	determiner	noun

shouldn't	he?
Finite	Subject
Mood Tag	
verbal group	nominal group
Finite	Thing
auxiliary verb	pronoun

The English Finite has been defined as the element that circumscribes the proposition and brings it down to earth as something that can be argued about. In other words, it relates the proposition to its context in the speech event by combining polarity with the specification of either temporal or modal reference (Halliday and Matthiessen 2014: 145). As Example (1) shows, in English, the Finite can be conflated with the Predicator when tense is realised by verbal inflection. Halliday and Matthiessen (2014: 396–398, 396) also posit Finite as an element of the English verbal group and identify a **finite verb** at word rank. Thus, in English grammar, the system of FINITENESS involves "**double agnation**" (Christian M. I. M. Matthiessen personal communication), defined in the context of the present discussion as a situation where a system of a higher rank such as the clause can also be posited as a system of a lower

rank such as the group or word.[3] At clause rank, Halliday and Matthiessen (2014: 162) posit FINITENESS as a delicate system of bound clauses since it is bound clauses in English that truly show a dichotomy between finite (e.g. *What **she should** say*) versus non-finite (e.g. *What to say*). Finite bound clauses are identified by the presence of Finite and Subject. All free clauses (e.g. *She said it right*) are naturally finite. The more fundamental point, however, is that, in English, a binary system of finiteness can be identified for the clause, verbal group, and the verb such that we can distinguish between finite clauses and non-finite clauses, finite verbal groups and non-finite verbal groups, and finite verbs and non-finite verbs. Martin et al. (2021) use the specific terms "Tense" and "Modal" as functional labels in place of Halliday and Matthiessen's (2014) verbal group Finite. We can consider the term Finite in this context to be a higher level of abstraction combining "Tense" and "Modal".

Fawcett (2000a, 2000b) challenges the representation of the interpersonal structure of the English clause by M. A. K. Halliday. He replaces the term Finite with Operator, which he defines as the element that expresses "the MOOD meaning of 'polarity seeker'" in the clause (Fawcett 2000a: 172). Finiteness, according to Fawcett (2000a) is "time reference position" and is either encoded in the Operator (e.g. *is* in *It is* working well) or in the Main Verb/Predicator (e.g. *It **works** well*). One essential difference between Fawcett's (2000a, 2000b) and Halliday and Matthiessen's (2014) accounts is that Fawcett neither recognises the verbal group nor the concept of rank scale. Thus, the issue of finiteness serving as agnate systems across ranks does not arise in Fawcett's version of the interpersonal structure of the English clause.

In Romance languages, typological differences have been identified in the encoding of finiteness. In French, Caffarel (2006: Ch. 3) identifies a Finite element as a constituent of the interpersonal structure of the clause. Like English, the order of the Finite in relation to the Subject shows a distinction between declarative (Subject ^ Finite) and polar interrogative (Finite ^ Subject) clauses although mood distinction in French can alternatively be indicated by intonation. The French Finite can also be conflated with the Predicator through verb inflection. In Portuguese, as Figueredo (2021: 209) shows, "the presence or absence of the Finite is the most important distinction between an indicative and an imperative clause". Thus, in both French and Portuguese, the Finite is an integral component of the nego-tiability of the clause and is essential in making mood distinctions at clause rank.

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3 In SFL theory, a system is associated with a class (e.g. major clause, nominal group, or verbal group) of a particular rank (e.g. clause, group, or word) and this class serves as the point of origin of the system. E.g. across languages, MOOD is typically a system of major clauses. The notion of double agnation describes systems that operate in more than one rank. The term also applies to systems that operate in more than one stratum (e.g. LOGICO-SEMANTICS can be posited at both the semantics and lexicogrammar strata. Double agnation is reflected in the *Introducing Functional Grammar* account of FINITENESS in English (compare system networks for the clause and the verbal group in Halliday and Matthiessen 2014: 162, 410).

Like English, both languages also allow Mood tagging involving Finite ^ Subject at the end of a declarative clause.

Spanish is typologically different from French and Portuguese. Quiroz (2008, 2021) provides an extensive discussion of finiteness in Spanish. According to her, the Finite is not a discrete element of the clause in Spanish (see also Lavid et al. 2010). For instance, the language does not allow Mood tagging involving a Finite element. Rather, "the Predicator is the fundamental function grounding the Spanish clause to the speech event" (Quiroz 2021: 56). Spanish has rich verbal morphology and the verb realising the Predicator is inflected for person, mood, and tense. Quiroz (2021) thus identifies the Finite as an element of the verbal group, where it is always conflated with the Event, the verbal group function of the lexical verb. Bartlett (2021) shows that, in Gaelic (Celtic), a Finite can combine with any attendant Mood clitic to constitute the negotiation component of the clause, though, like English and French, the Gaelic Finite can be conflated with the Predicator.

It can be concluded that in most of the Indo-European languages described in SFL terms, the Finite is a crucial element in the modal structure of the clause and is essential in determining the mood type of a clause. The present study will show that Dagaare is typologically different from the Indo-European languages in the encoding of finiteness. Like Spanish, there is no justifiable reason for identifying a Finite element in the international structure of the Dagaare clause. Unlike Spanish, however, in the Dagaare verbal group, a Finite element is realised by a particle and Finite does not conflate with Event. The details will be discussed in Section 4.

3 Definition of finiteness

Following the literature reviewed in the preceding sections, I define finiteness from two points of view:

 (i) **From the point of view of semantics** – Finiteness is the aggregate of linguistic resources that are required to ground a proposition or a proposal to the speech event and/or its textual context as a move in exchange and a message.
(ii) **From the point of view of lexicogrammar** – FINITENESS is a grammaticalized system of the verbal domain that anchors a proposition or proposal to the speech event.[4] Grammaticalized FINITENESS can be encoded (a) at clause rank by a verbal constituent in the modal structure of the clause; (b) at group rank, e.g. by periphrasis in the verbal group, or (c) at word rank, by inflectional morphology.

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4 The term "lexicogrammar" is used in the sense of systemic functional linguistics to show that lexis and grammar form a continuum (see Halliday 1966, 2008: Ch. 2).

Following SFL conventions, I use small caps to indicate FINITENESS as a discrete system as opposed to finiteness as a general semantic property. The encoding of FINITENESS at clause rank, group rank or word rank is a tendency across languages. Languages (e.g. Spanish) with rich inflectional morphology do more grammatical work at word rank while relatively isolating and analytical languages (e.g. Dagaare) do more grammatical work at group or clause rank. The former group of languages will encode FINITENESS via verbal morphology while the latter group of languages will tend to encode finiteness at clause or group rank. English exemplifies languages that fall somewhere between the two groups and grammaticalizes FINITENESS at clause, group, and word rank.

Definition (i) has to do with the interpersonal and textual semantics of propositions and proposals and is arguably a universal property of languages. The specific realisation in particular languages will vary, comprising phenomena such as agreement, word order or switch reference, verbal morphology, information focus, modal assessment systems etc. Only languages that satisfy definition (ii) can be said to have a discrete system of FINITENESS (e.g. English, French, Spanish, Portuguese, Gaelic). In such languages, we should be able to identify a Finite element at either clause or group rank or a **finite marking** at word rank. In languages that satisfy definition (i) and not (ii), we will expect clauses to display a cline of finiteness based on the degree to which they are anchored to the speech event and/or textual context as propositions and proposals.

Among languages that satisfy definition (ii), we can make a further distinction between: (a) those that show a discrete system of FINITENESS at clause rank and possibly lower ranks (e.g. English, French, Portuguese, and Gaelic) and (b) those that show a discrete system of FINITENESS only at lower ranks such as by periphrasis in the verbal group and/or at word rank by verbal inflection (e.g. Spanish). In the (a) group of languages, clauses will show a clear dichotomy between finite and non-finite. In the (b) group of languages, on the other hand, we expect clauses to display a cline of finiteness.

In the rest of the article, we will show that Dagaare satisfies definition (ii) and is a group (b) language, encoding a system of FINITENESS only in the verbal group, with clausal finiteness being a semantic cline.

4 Finiteness in Dagaare

I begin the discussion of finiteness in Dagaare by giving an overview of the modal (or interpersonal) structure of the Dagaare clause (Section 4.1). The aim is to identify elements of the clause that are required for negotiation in exchange. I also show that a Finite operator is not a valid constituent in the modal structure of the Dagaare

clause. Following this, the section will consider finiteness in the verbal group (Section 4.2) and then in the clause (Section 4.3).

4.1 The modal structure of the Dagaare clause

One notable strategy for determining the negotiatory elements of the clause in SFL language description is to identify those elements that are "replayed and adjusted in responding moves" in dialogues (Quiroz 2021: 48). A second strategy is to identify elements that serve as Mood Tag since tagging involves intersubjective elements at risk in negotiating meaning. Dagaare does not allow Mood tagging per se, although a similar function is performed by clause final modal particles. When we observe exchanges in Dagaare discourse, the crucial negotiatory elements we identify are Subject, Predicator, Mood Marker, and Negotiator. Let's observe the dialogues in Examples (4) and (5) taken from a transcript of an unscripted play performed by school children:

(4) A: *Fʋ́*   *wõ̀*   *=n*   *à   lὲ*   [[*ʋ̀ nà yὲl*   *=á*]]?
         2SG   hear.PFV   =FOC   DEF DEM   3SG REL say.PFV =JUNC

Subject	Predicator	Mood Marker	Complement
	Mood Base		Residue
nominal group	verbal group		nominal group

     'You heard what she said?'

     B: *ĩ̀*   *wõ̀*   *à*   **(nà)*.
         1SG   hear.PFV   3PL.NHM   AFFR

Subject	Predicator	Complement	Negotiator
		Residue	
	Mood Base		
nominal group	verbal group	nominal group	

     'I heard it.'

(5) C: *Fʋ̀*   *bàw*   ***nɩ́***   *bòm   kǎw*?
         2SG   know.PFV   FOC   thing some

Subject	Predicator	Mood Marker	Complement
	Mood Base		Residue
nominal group	verbal group		nominal group

     'You know something?'

D:	ɪ̀̃		*bɛ́*	bàw	=*(ɛ́).

1SG		NEG.IND.NUFT know.PFV	=NAFFR

Subject	Predicator	Negotiator
	Mood Base	
nominal group	verbal group	

'I don't know.'

In the responding moves in these dialogues, certain elements are replayed and adjusted through choices in PERSON, POLARITY, and MOOD. In the responding moves in both Examples (4) and (5), the nominal groups realising the Subject are adjusted to show a shift in the modally responsible person in the clause, i.e. a shift from addressee (*Fʋ*, 'you') to speaker (*ɪ̀̃*, 'I'). In Example (4), Speaker B repeats the verbal group (*wɔ̀̃*, 'hear') realising Predicator in Speaker A's utterance. The clause final modal particle *na* serving as Negotiator asserts the proposition; it is an interpersonal finale. The Negotiator is obligatory in the clause structure as has been indicated by the asterisk against the brackets. It should be noted that there is a correspondence between the focus particle *nɩ* (clitic forms = *n,* = *ɩ*) in Speaker A's question and the affirmative particle *na* in Speaker B's response. In Dagaare, the focus marker, in addition to signalling newsworthiness, also contributes to mood distinction. That is, the focus marker is restricted to "indicative: affirmative" clauses and neither occurs in "indicative: non-affirmative" clauses nor in "imperative" clauses. Thus, in the interpersonal structure of the clause, its function is Mood Marker. In the absence of explicit focus marking in the responding clause by Speaker B (the clause is all-new focus), the clause final particle *na,* i.e. the Negotiator, is used to assert or affirm the proposition.

In Example (5), Speaker D's responding clause shifts polarity, and negotiatory elements in the clause are appropriately adjusted. First, the verbal group serving as Predicator incorporates a negative particle *bɛ́*, which also marks mood (indicative) and tense (non-future). Crucially, the lexical verb *bàw* ('know') is maintained in the verbal group and the Complement is elliptied. Also, the clause ends with the non-affirmative Negotiator = *ɛ́*. It should be noted that the tense-mood-polarity (TMP) bearing particle *bɛ́* is an integral component of the Predicator rather than a separate constituent of the clause. Notably, it cannot combine with the Subject alone to indicate negation (**ɪ̀̃ bɛ́*) as it would be the case with a Finite in English (*No, I don't*). As the dialogues also show, in Dagaare, a Finite does not inverse with the Subject to distinguish between declarative and interrogative clauses. Thus, unlike most of the Indo-European languages (viz. English, French, Portuguese, and Gaelic) discussed in Section 2.2, there is no justifiable reason for positing a Finite element as a constituent of the Dagaare clause. Neither is the Predicator alone sufficient to enact negotiability

in the clause as it is the case in Spanish (Lavid et al. 2010; Quiroz 2008, 2021). The negotiatory load of the clause is carried by the Subject, Predicator, and Negotiator or Mood Marker, whichever is present. These elements have been collectively labelled as the Mood Base in the analysis in Examples (4) and (5).

4.2 Finiteness in the Dagaare verbal group

This section proceeds to examine FINITENESS in the Dagaare verbal group. The verbal group functions as the Predicator/Process in the Dagaare clause, as Example (6) illustrates.

(6)

À		*bìe*	*nà*	*tí*		*dì*
DEF		child	FUT.IND.POS	DIST		eat.PFV
Subject			Predicator			
Actor			Process: material			
nominal group			verbal group			
Deictic		Thing	Finite		Extension	Event
determiner		noun	particle		particle	verb

=n	*à*		*sàab.*
=FOC	DEF		food
Mood Marker	Complement		
	Goal		
	nominal group		
	Deictic		Thing
particle	determiner		noun

'The child will eat the food (at some distant place).'

The Dagaare verbal group has a nucleus element in its structure, namely the Event, realised by the lexical verb serving as Head of the group (e.g. *dì*, 'eat' in Example 6). This nucleus can be expanded by the addition of modifying particles, which I categorise into Finite elements (e.g. the TMP marker *nà* in Example (6) and Extensions (e.g. the directionality marker *tí* in 6).[5] The full structure of the Dagaare verbal group is posited as follows: (Finite ^) (Extension ^) Event (^ Extension), where the caret indicates that the elements are ordered, and the brackets indicate optional elements.

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5 My use of the term "Extension" is related to the use of verbal "extensions" in Bantu linguistics although in Bantu, the term is restricted to affixes attached to the verb to increase its valency. I use the term here as a label of a function, indicated by initial caps and this function is realised by both valence markers and non-finite verbal particles.

This structure can be expanded by additional Finite and Extension elements. Examples (7) to (9) provide illustrations – the first row after the morpheme-to-morpheme interlinear glossing presents functional labels (i.e. Finite, Extension, Event) while the second row identifies the word class (e.g. particle, verb) of the items realising the functions. The final row indicates word rank functions of items in the verbal group.

(7)   *nà*   *wá*   *cén*   *=í*
       POS.IND.FUT   EVT   go.PFV =COM

Finite	Extension	Event	Extension
particle	particle	verb	particle
Polarity/mood/tense: future	Eventuality	Root	Comitative

       'will eventually go with (it)'

(8)   *bɛ́*   *mí*   *tì*   *cérè*   *ní*
       NEG.IND.NFUT   HAB   PST.RM   go.IPFV COM

Finite	Finite	Finite	Event	Extension
particle	particle	particle	verb	particle
Polarity/mood/tense: non-future	Tense: habitual	Tense: remote past	Root	Comitative

       'used not to go with (it)'

(9)   *nàá*   *mí*   *tí*   *cén*   *=í*
       MOD.POS   HAB   PST.RM   go.PFV =COM

Finite	Finite	Finite	Event	Extension
particle	particle	particle	verb	particle
Modal/polarity	Tense: habitual	Tense: remote past	Root	Comitative

       'would have been going with (it)'

As illustrated in Examples (8) and (9), the Dagaare verbal group can take multiple Finite elements in its structure (up to three elements). When a Finite is present in the verbal group, it is placed at the initial position of the group and is realised by particles indicating polarity, mood, tense, and modality. In Example (7), the Finite is the particle *na,* which encodes future tense, positive polarity and indicative mood. It contrasts with *bɛ* in Example (8), which indicates non-future tense, negative polarity and indicative mood. Example (8) has three Finite elements, namely the TMP particle *bɛ́* and the habitual (*mɪ*) and remote past (*tɪ*) tense markers. In Example (9), the Finites are the modality particle *naa,* which encodes desirability and positive polarity, and the habitual (*mɪ*) and remote tense (*tɪ*) markers. The Finite enacts the verbal group as an interactive bundle in the clause. It grounds the clause in the temporal space of the speech event and (inter)subjectively through choices in POLARITY, MOOD, TENSE, and MODALITY.

The verb serving as Event is obligatorily marked for ASPECT, the grammaticalization of the internal temporal structure of events (Comrie 1976: 6, cf. Dahl and Velupillai 2013). ASPECT in Dagaare is an opposition between perfective and imperfective and it is encoded by verbal inflection. While the perfective is realised covertly (Examples 10a, 11a, and 12a), the imperfective is overtly marked by the suffix *-rɛ/re* (Examples 10b, 11b, and 12b), which has eleven allomorphic variants conditioned by various vowel and consonant harmony systems (see Mwinlaaru 2017: 74–79).

(10)   a.   *Ʋ̀̃*   **kʋ̀**   *mɛ̀*   *nà.*

         3SG   give.PFV   1SG.ACC   AFFR

Subject	Predicator	Complement	Negotiator
nominal group	verbal group	nominal group	
Thing	Event	Thing	
pronoun	verb	pronoun	particle

         'S/he has given (it) to me.'

      b.   *Ʋ̀̃*   **kʋ̀-rɛ̀**   *mɛ̀*   *nà.*

         3SG   give.IPFV   1SG.ACC   AFFR

Subject	Predicator	Complement	Negotiator
nominal group	verbal group	nominal group	
Thing	Event	Thing	
pronoun	verb	pronoun	particle

         'S/he is giving (it) to me.'

(11)   a.   *Ʋ̀̃*   **tǒ**   *mɛ̀*   *nà.*

         3SG   send.PFV   1SG.ACC   AFFR

Subject	Predicator	Complement	Negotiator
nominal group	verbal group	nominal group	
Thing	Event	Thing	
pronoun	verb	pronoun	particle

         'S/he has sent me.'

      b.   *Ʋ̀̃*   **tǒ-nɛ̀**   *mɛ̀*   *nà.*

         3SG   send.IPFV   1SG.ACC   AFFR

Subject	Predicator	Complement	Negotiator
nominal group	verbal group	nominal group	
Thing	Event	Thing	
pronoun	verb	pronoun	particle

         'S/he is sending me.'

(12)   a.   *Ʋ̀*   ***cén***   *nà.*

                 3SG   go.PFV   AFFR

Subject	Predicator	Negotiator
nominal group	verbal group	
Thing	Event	
pronoun	verb	particle

                 'S/he has gone.'

      b.   *Ʋ̀*   ***cérè***   *nà.*

                 3SG   go.IPFV   AFFR

Subject	Predicator	Negotiator
nominal group	verbal group	
Thing	Event	
pronoun	verb	particle

                 'S/he is going.'

Since aspect marking is obligatory for every verb serving as Event irrespective of whether the clause in which it occurs is free or bound, aspect does not differentiate between finiteness and non-finiteness in Dagaare. There is thus no basis for distinguishing between finite and non-finite verbs in Dagaare. In other words, finiteness is not a word rank system in Dagaare.

     Extensions are realised by verbal particles that contribute to meaning in the verbal group in one of two ways: they either extend the meaning of (i) the Finite (if it is present) or (ii) the Event (see Table 1). Particles that contribute to the meaning of the Finite comprise directionality, eventuality, and conditionality particles. These items are semantically similar to the finite markers in the sense that they relate to deicticity (directionality) or modal assessment (conditionality). Although eventuality is a non-deictic category, it shares a similar semantic space with tense by indicating temporality.

     Extensions that contribute to the meaning of the Event are realised by the polysemous particle *nɪ,* indicating causative, comitative, transitivising, and instrumentality meaning. Interestingly, Extensions that contribute to the meaning of the Finite precede the Event, where they occur together with the Finite (if present) and those that contribute to the meaning of the Event follow the Event, sometimes forming one phonological word with the lexical verb as clitics (Examples 13b and 14b).[6] They contribute to the valency of the lexical verb. In Table 1, I characterise

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6 I make a distinction between grammatical words and phonological words in Dagaare. A grammatical word is "(i) a free morph, or (ii) a clitic, or (iii) a root or a compound possibly augmented by nonrequired affixes and augmented by required affixes if there are any" (Haspelmath 2023: 285). A

Table 1: Grammatical meaning of particles that occur in the Dagaare verbal group.

Finiteness	Grammatical features	Particles		
		Pre-verb	Post-verb	
			Full	Clitic
Finite	Positive future	*na*		
	Negative future	*kŏ*		
	Negative non-future	*bɛ*		
	Prohibitive: immediate	*ta*		
	Prohibitive: non-immediate	*taa*		
	Habitual	*mí*		
	Remote past	*tɩ*		
	Eventuality	*wa*		
	Directionality: distant	*tɩ*		
Non-finite	Directionality: proximal	*wa*		
	Conditionality: realis	*tɩ*		
	Conditionality: irrealis	*wa*		
Afinite (valence makers)	Causative		*nɩ*	=n; =ɩ
	Transitiviser		*nɩ*	=n; =ɩ
	Comitative		*nɩ*	=n; =ɩ
	Means ('instrumentality')		*nɩ*	=n; =ɩ

these valence particles as ***afinite*** forms since they are not relevant to the differentiation between a finite verbal group and a non-finite verbal group. The widespread morphological similarity between the particles in the Dagaare verbal group as set up in Table 1 suggest that they most possibly share common grammaticalisation sources (Heine et al. 1991; Kuteva et al. 2019, see also Mwinlaaru and Yap [2017] on grammaticalisation in Dagaare).

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phonological word is a unit of phonology and may be comprised of one or more grammatical words. A phonological word can be a free morph plus a clitic or plus an adjoining particle or some other item. In Dagaare, harmony is required among the vowels in a phonological word: all the vowels must either have the feature [+ATR] or [–ATR]. i.e. [+ATR] vowels and [–ATR] vowels do not mix in the same word. When two grammatical words coalesce into a single phonological word, the vowel(s) in one of the words, often the second, is/are assimilated by the other. For example, in example (14), *kvɔr* 'weed' and the comitative clitic = *ɩ* (cliticised form of the particle *nɩ*) constitute one phonological word although they are two separate grammatical words. The glide /vɔ/ in *kvɔr* and the clitic *ɩ* /ɪ/ are both [–ATR]. In Examples (7) and (9), on the other hand, the comitative clitic = *ɩ* is assimilated by the preceding word *cen* 'go' so it assumes [+ATR] vowel quality /i/, although this sound change is not reflected in the orthography.

(13) a. *Ʋ̀*   *wà*   *nà.*
3SG   come.PFV   AFFR

Subject	Predicator	Negotiator
nominal group	verbal group	
Thing	Event	
pronoun	verb	particle

'S/he has come.'

b. *Ʋ̀*   *wà*   *=**n***   *ní*   *à*   *gàn.*
3SG   come.PFV =TRAN   FOC   DEF   book

Subject	Predicator		Mood Marker	Complement	
nominal group	verbal group			nominal group	
Thing	Event	Extension		Deictic	Thing
pronoun	verb	particle	particle	particle	noun

'S/he has brought the book.'

(14) a. *Ʋ̀*   *kʋ̀ɔr*   *=à.*
3SG   farm.IPFV   =AFFR

Subject	Predicator	Negotiator
nominal group	verbal group	
Thing	Event	
pronoun	verb	particle

'He is farming.'

b. *Ʋ̀*   *kʋ̀ɔr*   *=í*   *ní*   *à*   *bíbììr.*
3SG   farm.IPFV =COM   FOC   DEF   children

Subject	Predicator		Mood Marker	Complement	
nominal group	verbal group			nominal group	
Thing	Event	Extension		Deictic	Thing
pronoun	verb	particle	particle	determiner	noun

'He is farming with the children.'

The placement of elements in the verbal group arguably follows the principle of iconicity (Haiman 1985). The Finite and other particles semantically related to it are thematically placed at the beginning of the verbal group to orient the interpretation of the verbal group. Elements that contribute to valency are placed after the Event where they are closer to the participants serving as complementation of the verb.
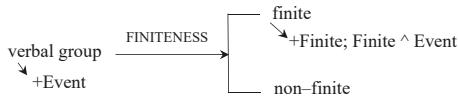
Figure 1: FINITENESS in the Dagaare verbal group represented as a system network.

In summary, the verbal group in Dagaare can be said to be finite or non-finite depending on whether a Finite (i.e. a TMP, modality, habitual, or remote tense particle) is present in its structure. A binary system of FINITENESS can thus be posited for the verbal group as represented in Figure 1.

The section will proceed to discuss the items realising the elements in the verbal group in more detail to throw further light on FINITENESS.

4.2.1 The obligatory finiteness markers

A minimal realization of a finite verbal group in Dagaare will be Finite ^ Event (Example 15). The non-finite verbal group has the Event as the only obligatory element (e.g. *wa,* 'come' in Example 16). As will be noted frequently in subsequent discussion, the Finite can be covert in the structure of the verbal group (e.g. as indicated in Example 16 by the null symbol).

(15)   *Dèr*   **nà**   **kɷ́**   *nà.*
       NAME   FUT.IND.POS   kill.PFV   AFFR

Subject	Predicator		Negotiator
nominal group	verbal group		
Thing	Finite	Event	
noun	particle	verb	particle

'Der will kill (it).'

(16)   *Ʋ̀*   Ø   *nyɛ̃̀*   *nà*   [[*fʋ́*   **wà**]].
      3SG   NFUT.IND.POS   see.PFV   AFFR   2SG   come.PFV

Subject	Predicator		Negotiator	Complement	
nominal group	verbal group			nominal clause	
Thing	(Finite)	Event		Thing	Event
pronoun		verb	particle	pronoun	verb

'S/he saw (that) you have come.'

The obligatory finiteness markers in the Dagaare verbal group are the tense-mood-polarity (TMP) and modality particles as well as remote and habitual tense markers (see Table 1). Each of the TMP particles (e.g. *na, kɷ̃, bɛ*) encodes three grammatical systems simultaneously: FUTURITY (future vs. non-future), MOOD (indicative vs.

imperative), and POLARITY (positive vs. negative). FUTURITY in Dagaare is a contrast between future (marked by *na,* 'positive' and *kṽ,* 'negative') and non-future (marked by *bɛ* in the negative and covert in the positive). MOOD distinction in the verbal group, on the other hand, is between indicative (marked by *na, kṽ,* or *bɛ*) and imperative (marked by *ta* or *taa*). POLARITY is a contrast between positive (*na*) and negative (marked by *kṽ* or *bɛ* in the indicative and *ta* or *taa* in the imperative) (Tables 2 and 3).

The imperative-polarity markers **ta** and **taa** are finiteness markers that occur in the imperative clause. They correspond to the TMP particles *na, kṽ, bɛ* in indicative clauses. While *ta* carries the meaning of immediate prohibition (Examples 17 and 18), *taa* indicates non-immediate prohibition (Example 19). The former can combine with either the perfective (Example 17) or imperfective form of the verb in (Example 18). The latter, however, occurs with only the imperfective form (Example 19):

(17)   **Tá**   **tɛ́r**   =í   nír   sùur   =é!
         NEG.IMP.IM possess.PFV =COM   person   anger   NAFFR

Predicator			Complement	Complement	Negotiator
verbal group			nominal group	nominal group	
Finite	Event	Extension	Thing	Thing	
particle	verb	particle	noun	noun	particle

'Do don't have grudges against anybody!'

(18)   **Tá**   **yɛ́rɛ̀**   ní   mә̀̀á   =í!
         NEG.IMP.IM speak.IPFV =COM   1SG.EMP   =NAFFR

Predicator			Complement	Negotiator
verbal group			nominal group	
Finite	Event	Extension	Thing	
particle	verb	particle	pronoun	particle

'**Don't** talk to me!'

(19)   **Táa**   **yá-rɛ̀**   yél-fàa   sàn   =ɛ́!
         NEG.IMP.NIM pay-IPFV matter-evil debt   =NAFFR

Predicator		Complement		Negotiator
verbal group		nominal group		
Finite	Event	Classifier	Thing	
particle	verb	noun	noun	particle

'**Don't** pay back evil! (= Never pay back evil!)'

The use of a modality particle (specifically, *naa, kṽv*) in realizing the Finite in the verbal group is normally mutually exclusive with the use of the TMP particles (*na, kṽ,*

Table 2: Realisation of polarity in the indicative clause.

Polarity	Futurity								
	Non-future				Future				
Positive	*Dèr*	*cén*	*nì*	*súkùul.*	*Dèr*	*nà*	*cen*	*nı*	*súkùul*
	NAME	go.PFV	FOC	school	NAME	FUT.IND.POS	go.PFV	FOC	school
	'Der's gone to school.'				'Der will go to school.'				
Negative	*Dèr*	*bɛ̀*	*cén*	*súkùul=é.*	*Dèr*	*kʋ̃́*	*cɛ́n*	*súkùul=é.*	
	NAME	NFUT.IND.NEG	go.PFV	school=NAFFR	NAME	FUT.IND.NEG	go.PFV	school=NAFFR	
	'Der didn't go to school.'				'Der won't go to school.'				

Table 3: Realisation of polarity in the imperative clause.

Polarity	Immediacy			
	Immediate		Non-immediate	
Positive	*Cén*!		–	
	go.PFV 'Go!'			
Negative	***Tá***	*cén = é*!	***Táa***	*cérè = í*!
	NEG.IMP.IM	go.PFV=NAFFR	NEG.IMP.NIM	go.IPFV=NAFFR
	'Don't go!'		'Don't go (when he asks you out)!'	

bɛ). The exception is the median modality particle *taa*, which can occur with the TMP particles *na, kṽ, bɛ* (see Example 25 where modal *taa* co-occurs with positive future marker *na*). MODALITY in Dagaare is a system of ***possibility*** and ***desirability***. Possibility is the modalisation of propositions, distinguishing between what is likely and what is unlikely. The clauses in Examples (20) to (22) indicate different polarity values of possibility.

(20)

Dèr	***nàá***	*wá*	*kṹ-rè*	*ní*	*bʋ̀ɔ.*
NAME	MOD.POS	EVT	kill-IPFV	FOC	goat.

Subject	Predicator			Mood Marker	Complement
nominal group	verbal group				nominal group
Thing	Finite	Extension	Event		Thing
noun	particle	particle	verb		noun

'Der **may** be killing (a) goat.'

(21)

Dèr	***kʋ̃́ʋ́***	*wá*	*kṹ-rè*	*bʋ̀ɔ*	*=í.*
NAME	MOD.NEG	EVT	kill-IPFV	goat	=NAFFR.

Subject	Predicator			Complement	Negotiator
nominal group	verbal group			nominal group	
Thing	Finite	Extension	Event	Thing	
noun	particle	particle	verb	noun	particle

'Der **may not** be killing (a) goat.'

(22)

Dèr	***táa***	*wá*	*kṹ-rè*	*bʋ̀ɔ.*
NAME	MOD	EVT	kill-IPFV	goat.

Subject	Predicator			Complement
nominal group	verbal group			nominal group
Thing	Finite	Extension	Event	Thing
noun	particle	particle	verb	noun

'Der **might** be killing (a) goat.' ('= in case Der is killing a goat')

Naa in Example (20) encodes positive possibility – 'it is possible that Der will be killing a goat'. The clause also has a focused element, indicated by the focus particle *nɩ,* highlighting what the listener should consider as newsworthy. Modality particle *kv̀v́* in Example (21) encodes negative possibility; it is the proposition that is negated: 'it is possible that Der will not be killing a goat'. Example (22) indicates a median value of possibility, the speaker enacts an uncommitted middle ground, making no claim to the polarity value of the proposition. The clause has a reduced assertion since there is no focus marker nor a clause final Negotiator. The speaker suspends asserting the proposition, a strategy used to show weak possibility.

Desirability, on the other hand, is the modulation of proposals, characterising them as either desirable or undesirable. Examples (23) to (25) illustrate the encoding of desirability in Dagaare:

(23)   *ɩ̀*   **_nàá_**   *tí*   *tèr*   *ʋ̀*

     1SG   MOD.POS   PST.REM   possess.PFV   3SG

Subject	Predicator			Complement
nominal group	verbal group			nominal group
Thing	Finite	Finite	Event	Thing
pronoun	particle	particle	verb	pronoun

     nɩ́   *à*   *ɩ̀*   *zìe*   *kà.*

     FOC   DEF   1SG   place   here

Mood Marker	Adjunct	
	adverbial group	
	Deictic	Location
particle	determiner	adverb complex

'I should have liked to keep him here with me.' (Bible.is, Fɩlɩmɔ 1: 13a)

(24)   *Fʋ̀*   **_kv̀v́_**   *cén*   *=é.*

     2SG   MOD.NEG   go.PFV   =NAFFR

Subject	Predicator		Negotiator
nominal group	verbal group		
Thing	Finite	Event	
pronoun	particle	verb	particle

'I **wish** you don't go.'/'I **wish** you hadn't gone'.

(25)   *Nɩ̀*   *táa*   *nà*   *zì*   *v́?*

     2PL   MOD   FUT.IND.POS   sit.PFV   INT

Subject	Predicator			Negotiator
nominal group	verbal group			
Thing	Finite	Finite	Event	
pronoun	particle	particle	verb	particle

'You may want to sit down?'/'I don't know if you want to sit down'

Negative desirability Example (23) is a negation of the proposal and not the modality – 'I wish you don't go' – and the modal particle *taa* encode weak desirability (Example 24), the speaker is not committed to the desire for the actualisation of the proposal or otherwise. It is up to the addressee to decide (Example 25).

Tense markers other than those encoding FUTURITY consist of the habitual (*mí*) and remote past marker (*tɩ*) and I will call them secondary tense markers because they are placed after the future/non-future (encoded by *na, kṽ,* and *bɛ*). My use of the term secondary tense is thus different from its use for English (Halliday and Matthiessen 2014: 396–410) where it implies a hypotactic relationship between a primary tense marker and a secondary tense marker. Habitual and remote tense markers can co-occur with the primary tense or futurity markers (*na, kṽ,* and *bɛ*), as shown in Example (26). Also, both the habitual marker *mí* and remoteness marker *tɩ* can co-occur in the same verbal group (Example 26):

(26)

ĩ̀	*bɛ̃́*	*mí*	*tí*	*cén*	*=ɩ́*
1SG	NFUT.IND.NEG	HAB	PST.RM	go.PFV	=COM

Subject	Predicator				
nominal group	verbal group				
Thing	Finite	Finite	Finite	Event	Extension
pronoun	particle	particle	particle	verb	particle

líbìr	*=é.*
money	=NAFFR

Complement	Negotiator
nominal group	
Thing	
noun	particle

'I used not to go with money.'

The habitual marker *mí* can occur in imperative clauses as well (Example 27):

(27)

Mɩ́	*bín*	*dàɩ*!
HAB	put.PFV	fermented local beer

Predicator		Complement
verbal group		nominal group
Finite	Event	Thing
particle	verb	noun

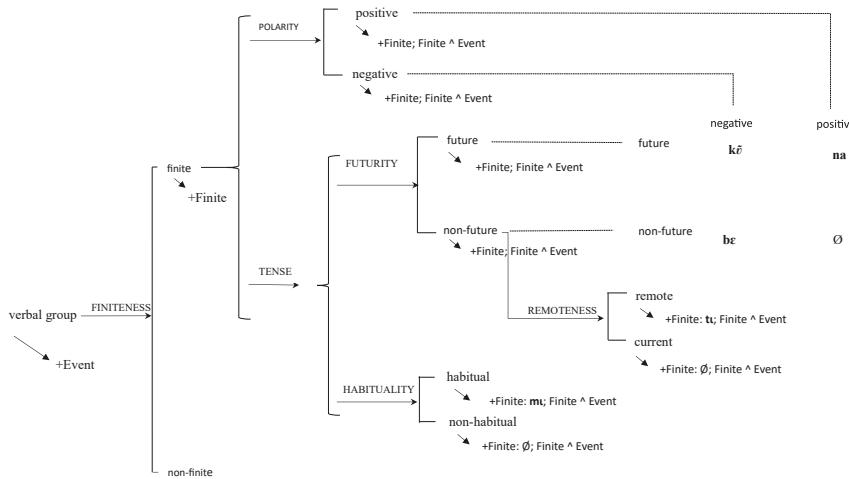'Always reserve fermented beer/pito (for us)!'

Figure 2: A system network of TENSE and its interaction with POLARITY in the Dagaare verbal group.

The fundamental point in the use of multiple Finite elements in the Dagaare verbal group structure is that Dagaare grammar has evolved disassociated systemic variables of TENSE, namely FUTURITY, REMOTENESS, and HABITUALITY. Since these temporal variables are disassociated, they must be realized by different grammatical items (see also Mwinlaaru [2021] on an analogue of multiple Deictic elements in the Dagaare nominal group). As Example (26) illustrates, it is essentially choices from the three TENSE systems, or their combination with MODALITY, that results in multiple Finite elements in the verbal group. Choices from each of the three TENSE systems together ground the clause to the temporal context of the speech situation. I illustrate this point in the system network presented in Figure 2. The figure shows that while FUTURITY and HABITUALITY are simultaneous systems, REMOTENESS is a delicate system available after the choice of non-future.

4.2.2 Non-finite extensions

The particles serving as Extension in the verbal group are non-finite markers (Table 1). These include eventuality, directionality, and conditionality markers, as well as valency markers. I will limit the discussion here to markers other than valency markers. As mentioned earlier, the eventuality marker *wa* has a non-deictic temporal reading. It indicates that something eventually happened or will happen eventually. When the remoteness marker *tɩ* occurs with the eventuality marker *wa*,

the eventuality marker precedes the remoteness particle (Example 28). However, when habitual marker *mí* occurs with the eventuality marker, the eventuality particle follows the habitual (Example 29):

(28)   *Bè*   *wá*   *tí*   *sòr*   *ʋ*

      3PL.HM   EVT   PST.RM   count.PFV   3SG

Subject	Predicator			Complement
nominal group	verbal group			nominal group
Thing	Extension	Finite	Event	Thing
pronoun	particle	particle	verb	pronoun

      ní   *à*   *bè.*

      FOC   DEF   there

Mood Marker	Adjunct	
	adverbial group	
	Deictic	Location
particle	determiner	adverb

      'They eventually counted him/her there.'

(29)   *Bè*   *mí*   *wá*   *wá*   *=n*

      3PL.HM   HAB   EVT   come.PFV   =FOC

Subject	Predicator			Mood Marker
nominal group	verbal group			
Thing	Finite	Extension	Event	
pronoun	particle	particle	verb	particle

      kà.

      here

Adjunct
adverbial group
Location
adverb

      'They come here by-and-by.'

The directionality markers *wa* (proximal) and *tɩ* (distal) are spatial deixis in the verbal group and they share the same form with the eventuality (*wa*) and remoteness (*tɩ*) markers respectively (see Table 1). The proximal marker *wa* indicates that the event is near the speaker while the distal *tɩ* indicates that the event is away from the speaker. Both the proximal (Example 30) and distal (Example 31) markers can co-occur with the habitual marker *mí*, but none can occur with the remoteness marker *tɩ* in the same verbal group (Examples 32 and 33).

(30) |||*Kòglé   nà   ʋ̀   lέ   wàar.* ||| **Ʋ̀mí**
        PLACE   IDENT   3SG ADV   come.IPFV   3SG   HAB
        wá   *tő̌ =n*   *tòmè   à   kà.*|||
        PROX   work.PFV=FOC   work   DEF   here
        'It is Kogle that s/he is coming again. S/he comes here to work.'

(31) |||*Kòglè   nà   ʋ̀   lέ   cérè.* |||*Bὲ*   **mí**
        PLACE   IDENT   3SG ADV   go.IPFV   3PL.HM   HAB
        tí   *kʋ̀   ʋ̀   ní   líbir   à   bὲ.*|||
        DIST   give.PFV   3SG FOC   money   DEF   there
        'It is Kogle that s/he is going again. They give her/him money over there.'

(32)   *Ʋ̀   (*tí)   **wá**   tő̌ =n   tòmè   à   kà.*
        3SG PST.RM   PROX   work.PFV=FOC   work   DEF   here
        'S/he came here to work.'

(33)   *Bὲ   (*tí)   **tí**   kʋ̀   ʋ̀   ní   líbir   à   bὲ.*
        3SG PST.RM   DIST   give.PFV   3SG FOC   money   DEF   there
        'They gave her/him money there.'

The directionality markers very often occur in clause complex constructions, where they introduce subordinate clauses (see Ameka [2008] on Ewe). Since directionality is deictic, one would assume that they are finite markers. The use of Dagaare directionality markers essentially as clause subordinators characterise them as rather non-finite.

(34) |||*Ì̀   zȁa   wà   nà* || **wá**   *nyȇ   à*
        1SG   yesterday   come   AFFR   PROX   see.PFV   DEF
        ì̀   pɔ̀w–yàa   ʋ́   bìεrὲ.|||
        1SG   daughter   3SG   be:sick.IPFV
        'I came yesterday to see that that my daughter was sick.'

(35) |||*Bὲ   mí   cén   nà* || **tí**   *zànì*
        3PL.HM   HAB   go.PFV   AFFR   DIST   learn.PFV
        bȁwfʋ̀   kàw   zìe   kàw.|||
        knowledge   some   place   some
        'They go to learn some knowledge somewhere.'

The clauses introduced by these directionality markers as in Examples (34) and (35) are bound clauses and their verbal groups are infinitival (see Section 4.3). Also, unlike tense, mood, and modality, at least one of which is required in a free Dagaare clause,

directionality is an optional system. When the directionality markers occur in subordinate clauses, they can also denote temporal range (Examples 36 and 37).

(36) |||*Bádɛ̀r*   *zɔ̀-rɛ̀*   *nà* || *zìe*   ***wá***   *vīɛ.*|||
            NAME   run-IPFV   AFFR   place   PROX   clear
            'Badɛr was running **when** day broke/Badɛr was running **and then** day broke.'

(37) |||*Bádɛ̀r*   *zɔ̀*   *nà* || *zìe*   ***tí***   *vìɛ.*|||
            NAME   run.PFV   AFFR   place   DIST   clear
            'Badɛr ran **until** the day broke.'

Further, the two conditional markers *wa* and *tɪ* (Table 1) contrast as realis (Example 38) and irrealis (Example 39). The realis marker (*wa*) is morphologically similar to both the eventuality marker (*wa*) and proximal marker (*wa*) while the irrealis (*tɪ*) is similar to the remote past (*tɪ*) and the distal marker (*tɪ*). Both conditional markers occur in the protasis of a conditional construction and therefore serve as subordinate clause markers. The subordinate status of the clauses in which they occur is also indicated by the clause juncture subordinating clitic =*a*.

(38) |||*Nùm*   ***wá***   *bɔ̀br*   *mɛ̀*   =*á,* || *nì*   *wà*
            2PL.EMP   COND   want.IPFV   1SG.ACC   JUNC   2PL   come.PFV
            ɩ̃̀   *sàamìnɛ̀*   *zìe!*|||
            1SG   fathers   place
            'If you want to marry me, you (should) come and see my fathers!'

(39) |||*Nùm*   ***tí***   *bɔ̀br*   *mɛ̀*   =*á,* || *nì*   *nàá*
            2PL.EMP   COND   want.IPFV   1SG.ACC   JUNC   2PL   MOD.POS
            wà =*n*   *ɩ̃̀*   *sàamìnɛ̀*   *zìe!*|||
            come.PFV=FOC   1SG   fathers   place
            'If you wanted to marry me, you would have come to see my fathers!'

The conditional markers are modal assessment devices in the sense of laying down conditions. However, they subordinate clauses and reduce their assertion, making them dependent on the textual context of the main clause for their interpretation.

4.3 Finiteness in the semantics of the Dagaare clause

This sub-section proceeds to discuss finiteness at the clause rank in Dagaare. As already mentioned, finiteness is not a grammaticalized system of the Dagaare clause.

Finiteness in the Dagaare clause is rather a fuzzy semantic category, which we defined as the aggregate of linguistic resources that are required to ground a proposition or a proposal to the speech event and/or its textual context as a move in exchange and a message (Section 3). Clausal finiteness in Dagaare therefore has to do with interpersonal and textual semantics and clauses form a cline from finite to non-finite. Since the free indicative clause has been identified crosslinguistically as the prototype finite clause (Anderson 2011: 234–356; Nikolaeva 2010), we will first identify the obligatory grounding devices of this prototype finite clause. In Dagaare MOOD system, the "indicative" is a supercategory consisting of declarative and interrogative clauses, i.e. "indicative": "declarative"/"interrogative" (see Mwinlaaru 2017: 138–161; Mwinlaaru et al. 2018).[7]

Three indicators of finiteness can be identified in the free indicative clause in Dagaare: (i) a finite verbal group, i.e. a verbal group with a Finite in its structure; (ii) clause final negotiation, and (iii) information focus or the presence of a Mood maker. These are characterised as indicators of finiteness in the clause because they are required in the clause to ground it as a free or an independent unit. As Examples (40) and (41) show, the clause final Negotiator and information focus marking (or the presence of Mood Marker) are mutually exclusive.[8]

(40)

	Fʋ̀	*nà*	*tà*	*nà.*
	2SG	FUT.IND.POS	reach.PFV	AFFR
interpersonal function:	Subject	Predicator		**Negotiator**
textual function:	New			
group class:	nominal group	verbal group		
group function:	Thing	Finite	Event	
word class:	pronoun	particle	verb	particle

'You will reach.'

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7 As mentioned earlier, the indicative mood is indicated by TMP particles functioning as Finite in the verbal group. The interrogative sub-type of the indicative mood is then further distinguished by clause final interrogative particles (for yes/no interrogatives) or elemental question items (for *wh*-interrogatives).

8 The focus particle *nʋ* (or its clitic forms = *n* and = *ʋ*) indicate information focus on the item it precedes. It does not occur in negative clauses. Its absence does not necessarily mean there is no information focus in the utterance. In free clauses where there is no explicit focus marking, the utterance normally carries all-new (or broad) focus (see Mwinlaaru 2017: 223–228, 247–251, for details).

(41)　 *Fʋ̀*　　　　　**nà**　　 *tà*　　　 *=n*　　　　*pɔ́w*　　*kúlù.*
　　　　2SG　　　　FUT.IND.POS　reach.PFV　=FOC　　　woman　marriage

Subject	Predicator		Mood Marker	Complement	
Given			**New**		
nominal group	verbal group			nominal group	
Thing	**Finite**	Event		Classifier	Thing
pronoun	particle	verb	particle	noun	noun

　　　　'You will reach the age of marriage.'

A more extended discourse example of focus and negotiation as markers of semantic finiteness is given in (42), taken from a film:

(42)　201　001　Yezu:　|||***Bʋ̀ʋ nʋ̀*** *fʋ̀ bɔ̀br kɛ́* || *ι í Kʋ̌ =b*?|||
　　　　　　　　　　　　What　IDENT.SG　2SG　want.IPFV　PROJ　1SG　do.PFV　give.PFV=2SG.ACC
　　　　　　　　　　　　'What is it that you want me to do for you?'

　　　　202　002　Batolemi:　|||*Ì̀ bɔ̀br =* ***à*** *kɛ́* || *í̂ lɛ́ nyɛ́rɛ̀.*|||
　　　　　　　　　　　　　　1SG　want.IPFV=AFFR　PROJ　1SG　ADV　see.IPFV
　　　　　　　　　　　　　　'I want to see again.'

　　　　203　003　Yezu:　||| *Nyɛ́rɛ̀!* ||| *À fʋ̀ Nàaŋmìn sáwfʋ̀ sánì fʋ̀* ***nà.***|||
　　　　　　　　　　　　　see.IPFV　DEF　2SG　God　　　faith　heal.PFV　2SG　AFFR
　　　　　　　　　　　　　'See! Your faith in God has healed you.'

　　　　204　004　Batolemi:　|||*Ì̀ nyɛ́rɛ̀* ***nà!*** ||| *Ì̀ nyɛ́rɛ̀* ***nà!*** *Ì̀ nyɛ́rɛ̀* ***nà!***
　　　　　　　　　　　　　　1SG　see.IPFV　AFFR　1SG　see.IPFV　AFFR　1SG　see.IPFV　AFFR
　　　　　　　　　　　　　　'I see! I see! I see!'

Line 001 in this dialogue is a biclausal construction. The initial clause is the main clause, and it is a finite indicative clause. Focus is placed on the *wh-* item (*Bʋʋ*) through a cleft-construction (see Mwinlaaru 2017: 234–237). The verbal group include a covert Finite, indicating non-future tense and positive polarity in the indicative mood. The complement clause, on the other hand, is non-finite, the verbal group is also non-finite, and neither is there independent focus marking or clause final negotiation. Also, the initial clause in the clause complex in line 002 is a projecting desiderative clause and takes the clause final Negotiator = *a*. The projected proposal is an imperative clause. The declarations made by the excited Batolemi who has been healed of his blindness in lines 003 and 004 all end with a clause final Negotiator. The verbal groups in these clauses all have a covert Finite, indicating non-future tense and positive polarity. The crucial role of the clause final modal particle in indicating clausal finiteness in Dagaare makes Dagaare typologically similar to Chinese where clause final aspect particles are noted to encode finiteness (Zhang 2019).

Now the question is how do other clause patterns fit into the characteristics of the free indicative clause in Dagaare? I outline the characteristics of various clause patterns in Dagaare below, showing the extent to which they are semantically finite.

4.3.1 The imperative clause

First is the imperative clause (Nikolaeva 2007: 148). It has already been discussed that the imperative clause takes a Finite polarity element in its verbal group, overtly indicated in the prohibitive type (Examples 43–44) but often covert in the non-prohibitive type (Example 45) and that the imperative also shows contrast in habituality (Example 46).

(43)   **Tá**   *yérè*   *ní*   *m̀àá*   *=í*!

NEG.IMP.IM   speak.IPFV   COM   1SG.EMP   =NAFFR

Predicator			Complement	Negotiator
verbal group			nominal group	
Finite	Event	Extension	Thing	
particle	verb	particle	pronoun	particle

'**Don't** talk with me!'

(44)   **Tá**   **mí**   *yèl*   *à*   *lὲ*   *=í*!

NEG.IMP.IM   HAB   say.PFV   DEF   that   =NAFFR

Predicator			Complement		Negotiator
verbal group			nominal group		
Finite	Finite	Event	Deictic	Thing	
particle	particle	verb	determiner	demonstrative	particle

'**Don't** be saying that!'

(45)   *Yérè*   *ní*   *tì*!

speak.IPFV   COM   1PL

Predicator		Complement
verbal group		nominal group
Event	Extension	Thing
verb	particle	pronoun

'Keep speaking to us!'

(46)   a.   *Bín   dàɩ*!
            put.PFV   fermented local beer

Predicator	Complement
verbal group	nominal group
Event	Thing
verb	noun

            'Reserve fermented beer/pito (for us)!'

       b.   ***Mí***   *bín*   *dàɩ*!
            HAB   put.PFV   fermented local beer

Predicator		Complement
verbal group		nominal group
Finite	Event	Thing
particle	verb	noun

            'Always reserve fermented beer/pito (for us)!'

As Examples (43) and (45) show, the prohibitive imperative takes clause final Negotiator as well. Thus, imperative clauses in Dagaare are semantically finite clauses. The imperative realises proposals and host interactive resources as a move in exchange. The finiteness status of the imperative has been contested by studies on different languages (e.g. Anderson 2011; Heine 2016), unsurprisingly, because the imperative normally displays verbal forms distinct from the indicative clause, whose characteristics are considered the prototype of finiteness. According to Halliday (1984: 20), "the imperative is at best a fringe category, teetering between finite and non-finite (in languages which make the distinction), having either no distinct clause or verb form or else one that is only minimally distinguished". This observation and similar discussions of the finiteness of the imperative are situated in grammaticalized finiteness. By distinguishing between semantic and grammatical finiteness, the present study demonstrates that the imperative can be semantically finite by hosting negotiatory resources as a move in exchange even if it does not host a grammaticalised system of finiteness.

4.3.2 Hypotactic clauses

Hypotactic clauses in Dagaare, on the other hand, are not uniform in terms of finiteness. They can either be semantically finite or 'semi-finites'. While conditional clauses and hypotactic clauses introduced by directionality particles are typical examples of non-finite clauses in Dagaare, temporal adverbial clauses are normally partially finite (Example 47).

(47) |||*À Érɔ̀dì ná tì ì à tèw*
DEF Herod ADVLZ PST.REM be.PFV DEF town
ná –kpɛ̃̀ɛ–lìɛrɛ̀ à Gálílé =á, || bɛ̀ tì
governor DEF Galilee JUNC 3PL.HM PST.REM
nyɔ̀w ní à Zầ || tí páw.|||
catch.PFV FOC DEF John DIST jail.PFV
'**When Herod was the governor of Galilee**, they arrested John **to jail (him)**.'

In Example (47), the temporal hypotactic clause beginning the clause complex is reduced in finiteness. It has a Finite in its verbal group and its tense selection is "non-future: remote past". However, the clause lacks other interactive resources of the Dagaare clause that would characterise it as a move in exchange, namely final negotiation, or information focus. Rather it takes the adverbializer *na* and the juncture subordinator *=a*, both of which bind it to the following main clause. On the other hand, the infinitive clause *tı pàw* ('to jail') at the end of the clause complex is non-finite. It does not admit any of the finiteness markers and does not serve as a move in exchange.

Also, while Dagaare conditional clauses are normally non-finite (Example 48), they can increase in finiteness when they are modalised (Example 49) as the modality encodes a Finite function and adds some negotiability to the clause. In Example (49), although the clause is modalised, it still takes the clause juncture subordinator *=a*. It is not independently grounded to the speech event as a move in exchange.

(48) *Ǹʊm wá cén =á* …
1SG.EMP COND go.PFV =JUNC

Subject	Predicator	
nominal group	verbal group	
Thing	Extension	Event	
pronoun	particle	verb	particle

'If you go …'

(49) *Ǹʊm nàá wá cén =á* …
1SG.EMP POS.MOD COND go.PFV =JUNC

Subject	Predicator		
nominal group	verbal group		
Thing	Finite	Extension	Event	
pronoun	particle	particle	verb	particle

'If you would go …'

4.3.3 Nominal and relative clauses

Dagaare nominal and relative clauses tend to have reduced finiteness as well. That is, they can take a Finite in the verbal group but lack information focus or clause final negotiation. The bound clauses highlighted in Examples (50a) and (51a) are the corresponding positive clauses of the bound negative clauses highlighted in Examples (50b) and (51b) respectively. The verbal group in each of the positive clauses has a covert Finite in its structure, indicating positive polarity and non-future. The corresponding bound negative clauses in Examples (50b) and (51b), on the other hand, have an overt Finite realised by *bè*. None of these clauses is however completely finite since they lack illocutionary force and information focus. That is, they lack the full relevant resources to serve as a move in exchange and independent messages.

(50) a. [[À ***Érɔ́dì   ná   ì   à   tèw   ná-kpɛ̃̀ɛ-lìɛrɛ̀   à***
         DEF Herod NMLZ be.PFV DEF town chief-big-representative DEF
         Gálílé =á]] *ì =n*   *níbɛ̀*   *nɔ́-ɓàan.*
         Galilee JUNC be.PFV=FOC people mouth-coldness.
         '**That Herod is the governor of Galilee** is a surprise to people.'

     b. [[À ***Érɔ́dì   nà   bɛ́   ì   à   tèw***
         DEF Herod NMLZ NEG.IND.NFUT be.PFV DEF town
         ná-kpɛ̃̀ɛ-lìɛrɛ̀   à   Gálílé   =á]] *ì =n*   *níbɛ̀*
         chief-big-representative DEF Galilee JUNC be.PFV=FOC people
         nɔ́-ɓàan.
         mouth-coldness
         '**That Herod is not the governor of Galilee** is a surprise to people.'

(51) a. *À   bàa   nɛ̀*   [[*nà   bè   à   ká   =á*]] *ì =n*   *sɛ̀là.*
         DEF dog DEM REL be:at.PFV DEF here JUNC be=FOC black
         'The dog that is here is black.'

     b. *À   bàa nɛ̀* [[*nà   **bɛ̀**   bè   à   ká   =á*]] *ì =n*   *sɛ̀là.*
         DEF dog DEM REL NEG.IND.NFUT be:at.PFV DEF here JUNC be=FOC Black
         'The dog that is not here is black.'

4.3.4 Projected clauses

Finally, projected (i.e. quoted or reported) major clauses in Dagaare are finite clauses (see Examples 52 and 53). These are typically clauses whose Process represents verbs of saying (e.g. *yèl*, 'say', *mànì*, 'explain', *sɔ̀w*, 'respond', and *sòwrì*, 'ask'), cognition (e.g. *bã̀w*, 'know', *mànè*, 'assume', *tìɛrɛ̀*, 'think'), desire (*bɔ̀br*,

'want-IPFV'), or relation (*sèw*, 'be appropriate', *fèr*, 'be necessary', and *wùl*,'show'). The tendency of verbs of saying and cognition to project finite clauses has also been noted for Chinese (Zhang 2019) and may be a crosslinguistically robust phenomenon. As Example (53) shows, in Dagaare, nouns denoting naming (e.g. *yuor*, 'name'), thought processes (e.g. *tìɛrʋ̀*, 'thought', *màǹʋ̀*, 'thought/assumption') or facts (e.g. *pɛ̀r*, 'meaning') serving as Thing in nominal groups can also project finite clauses (Mwinlaaru and Matthiessen forthcoming).

(52)

Ʋ̀	*yèl*	*=à*	*kɛ́*	*fʋ̀*	*wà*	*nà.*
3SG	say.PFV	=AFFR	QUOT	2SG	come.PFV	AFFR
Subject	Predicator	Negotiator	Linker	Subject	Predicator	Negotiator
nominal group	verbal group			nominal group	verbal group	
Thing	Event			Thing	Event	
pronoun	verb	particle	particle	pronoun	verb	particle

'S/he said that you have come.'

(53)

Tì	*tìɛrʋ̀*	*ní*		*kɛ́*
1SG	thought	COP.FOC		PROJ
Token		Process: relational		
nominal group				
Deictic	Thing			
pronoun	noun	particle		particle

'Our hope is that'

à	*nà*	*nyɛ̀*	*ní*	*màalʋ̀.*
3PL.NHM	POS.IND.FUT	see.PFV	FOC	well
Value/projected clause				
nominal group	verbal group			nominal group
Thing	Finite	Event		Thing
pronoun	particle	verb	particle	noun

'it will be well.'

In Example (52), both the reporting clause and the reported clause are semantically finite. Each of them has separate finite verbal groups (the Finite is covert in positive clauses), and they each has a separate clause final negotiation (*na, = a*). In fact, it is possible for the reporting clause to stand alone as a free clause and make meaning, with the projection ('quotative') particle *kɛ́* being the only signal of a reporting discourse (Mwinlaaru and Matthiessen forthcoming):

(54) *kɛ́*   *fʋ̀*   *wà*   *nà.*
       PROJ   2SG   come.PFV   AFFR

	Subject	Predicator	Negotiator
	nominal group	verbal group	
	Thing	Event	
particle	pronoun	verb	particle

'(I'm told/I have heard that) you've come.'

For a detailed discussion of projection in Dagaare, see Mwinlaaru and Matthiessen (forthcoming, see also Arús-Hita et al. [2018] for a comparison with other languages).

5 Discussion and conclusion

To recapitulate, the preceding sections have examined the phenomenon of finiteness in Dagaare. It has shown that finiteness has to do with the textual and interpersonal meaning of the clause as a message and a move in exchange respectively. Crucially, a distinction is made between semantic finiteness and grammatical finiteness although the two are related in the sense that grammatical finiteness is a grammaticalisation of interpersonal semantics in the verbal domain. In Dagaare, only the verbal group has a grammaticalised system of FINITENESS. The implication is that verbal groups in Dagaare show a clear dichotomy between finite and non-finite forms based on the presence or absence of a Finite (realised by TMP, modality particles, and secondary tense markers). On the other hand, finiteness is not a discrete lexicogrammatical system at the clause rank in Dagaare and the presence of a finite verbal group alone is not enough to make a clause finite. Rather clausal finiteness in Dagaare is a combination of a finite verbal group either with negotiation or information focus (cf. Table 4).

Using data from Chinese, Yang (2022) identifies moodlessness, clause dependency and incompleteness as defining indicators of non-finiteness in non-inflectional

Table 4: Differences between semantically finite and non-finite clauses in Dagaare.

Number	Finite clause	Non-finite clause
1	Requires a Finite element in the verbal group	Does not include a Finite element in the verbal group
2	Requires a Negotiator or the presence of information focus/Mood Marker	Neither takes a Negotiator nor marks information focus

languages. Yang (2022) also observes that incompleteness is not obligatory for non-finiteness in inflectional languages, notably English. These criteria are largely supported by the characteristics of clausal non-finiteness in Dagaare (see Table 4). On the other hand, completeness (or freedom) is however not a requirement for the grammatical finiteness that is encoded in the Dagaare verbal group. It is the presence of the Finite element, either covertly or overtly encoded, that is required in a Dagaare finite verbal group. By making a distinction between grammatical finiteness and semantic finiteness in the present study, the insights in Yang (2022) can be modified as follows. In languages where finiteness is not grammaticalised at clause rank, moodlessness, clause dependency and incompleteness indicate clausal non-finiteness. Clausal dependency and incompleteness, however, do not necessarily mean non-finiteness in categories where finiteness is a grammaticalised system. This modification frees grammatical finiteness or non-finiteness from verbal inflection and allows other means of grammaticalising finiteness as illustrated for Dagaare in the present study. A strict dichotomy between inflectional and non-inflectional languages can also be problematic since languages form a continuum in the degree to which they are inflectional or not. Dagaare, for instance, lies somewhere in the middle, minimally using verbal and nominal inflection and mostly using particles in encoding grammatical meanings.

Also, the parameters of clausal finiteness identified for Dagaare above can be related to the notion of grounding (Cristofaro 2007; Langacker 1991). The Finite in the Dagaare verbal group constitutes a ground that combines polarity and mood with either temporal or modal reference to situate the utterance in relation to the speaker here-and-now. Other verbal categories such as directionality, eventuality, and conditionality that have been described as Extensions are part of the profiled situation, the conceptual content of the verbal group (Boogart and Fortuin 2016: 523). On the other hand, the obligatory clause final particles that realise the Negotiator have to do with factuality – the speaker potentially hands over the turn by assessing the polarity value of the clause (Mwinlaaru 2018). Thus, there is a 'prosodic' relationship, a kind of grammatical resonance, between the Finite and the Negotiator, particularly in terms of polarity. In the affirmative clause, the Negotiator element is realised by the clause final particle *na*. For the non-affirmative, on the other hand, the Negotiator is realised by one of three phonetically variable final particles, = *e*, = *ɛ*, or = *ɩ*, whose specific choice depends on tongue root vowel harmony (advanced tongue root harmony).[9] Placing the Negotiator at the clause final position has (inter)subjective

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9 A note on the plausible diachronic source of the clause final mood clitics = *é*, = *ɛ́*, and = *ɩ́* may be helpful. The full form of the original particle from which they are cliticised is apparently **bɛ́* (asterisks here means "reconstructed morpheme" as it is no more used in its full form). One language internal evidence is that the projection particle *kɛ́* in Dagaare (Lobr) also has = *é*, = *ɛ́*, and = *ɩ́* as its clitic

meaning. The final position of the clause is potentially the point where the speaker is handing over the turn to the addressee, and this juncture position is therefore at 'risk' for hosting interpersonal meanings in the exchange (Mwinlaaru 2018). Information focus also grounds the clause to its textual context, pointing to the listener what part of the message should be considered as newsworthy.

Altogether, there is some redundancy in the combination of finiteness markers in the Dagaare clause. For example, the TMP Finite element in the verbal group and the obligatory clause final modal particles (serving as Negotiator) are redundant by enacting the same polarity: positive/affirmative versus negative/non-affirmative. We also witness a similar redundancy in the combination of the TMP particle *na* (positive indicative) serving as Finite in the verbal group and the Mood Marker (cum information focus particle) *nɪ*, which also encodes both indicative and positive polarity. This redundancy displayed by the parameters of finiteness in the clause is typical of interpersonal resources in general; interpersonal resources often permeate and scope over whole propositions. It is in this sense that Halliday characterises interpersonal resources as prosodic (e.g. Halliday 2008: 63, 2009).

The absence of the Negotiator element or information focus/Mood Maker in a clause which has a Finite in its verbal group leads to a reduction in clausal finiteness in Dagaare (see Anderson 2011: 290–356; Givón 1990: Ch. 19 on reduced finiteness). Such clauses lack assertion and are not anchored to the speech event. Clauses with reduced finiteness in Dagaare are typically relative and nominal clauses as well as some hypotactic clauses. In the words of Anderson (2011: 290), these are "demoted finites".

The Dagaare data thus suggest that binarity or scalarity in relation to finiteness, in the first place, can be viewed as a complementarity between grammatical finiteness and semantic finiteness rather than opposing points of view (see Halliday [2008] on complementarity). A view "from above" in the semantics stratum provides fuzzy categorisations in finiteness and a view from lexicogrammar in languages that grammaticalise finiteness reveals a discrete system. In the lexicogrammar of

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forms (Mwinlaaru and Matthiessen forthcoming). Thus, we can generalise that a Dagaare particle with a CV structure where the vowel is /ɛ/ can be cliticised as = *e,* = *ɛ,* or = *ɪ,* depending on its phonetic environment. Clause final **bɛ́* most likely evolved from the negative TMP particle *bɛ́* possibly through the process of polarity tagging or perhaps double negative marking. In clause final position, polarity tag **bɛ́* gradually got reanalysed as an obligatory non-affirmative mood marker. Comparative evidence shows that, at least one other dialect, Central Dagaare, does not have the non-affirmative clause final particle. This suggest a Pre-Dagaare stage in the evolution of Dagaare/Dagara where there was no non-affirmative clause final particle. Although the clause final affirmative particle *nà* in the Lobr dialect is also homonymous with the positive TMP particle *nà* (see Example 40), it is doubtful it followed a similar diachronic pathway as clause final **bɛ́* (see Mwinlaaru and Yap [2017] for a discussion).

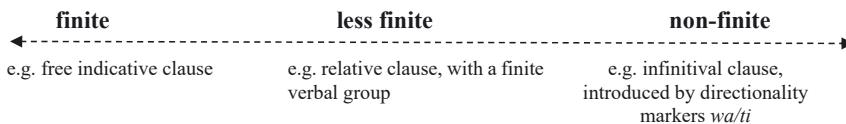| finite	less finite	non-finite
e.g. free indicative clause	e.g. relative clause, with a finite verbal group	e.g. infinitival clause, introduced by directionality markers *wa/ti*

Figure 3: The cline of finiteness in the Dagaare clause.

Dagaare, a view below the clause, at the group rank, reveals a discrete binary system of FINITENESS while a view above, at the clause rank, reveals finiteness as a semantic cline (see Figure 3).

Secondly, the binary versus cline perspectives of finiteness reflects a typological variation across languages. In Dagaare, where clauses do not have a system of FINITENESS, clausal finiteness becomes a fuzzy semantic concept and is essentially an epiphenomenon of the system of FREEDOM (see Figure 4). Free indicative clauses, imperative clauses and projected clauses are identified as finite in Dagaare because they are free clauses that are fully grounded to the speech event and serve as complete messages. Bound clauses are however characterised as either reduced finites or non-finite clauses. In languages where a system of FINITENESS can be identified at clause rank (e.g. English), clausal finiteness is discrete, and bound clauses can explicitly be identified as either finite or non-finite (Halliday and Matthiessen 2014: 162). Thus, FINITENESS and FREEDOM are disassociated systems in these languages, with FINITENESS normally serving as a delicate system of bound clauses. Another typological variable of FINITENESS identified in the present study is a consideration of whether it is a system of a single rank, such as the verbal group in Dagaare, or whether it is implicates more than one rank (clause, group and/or word), as in
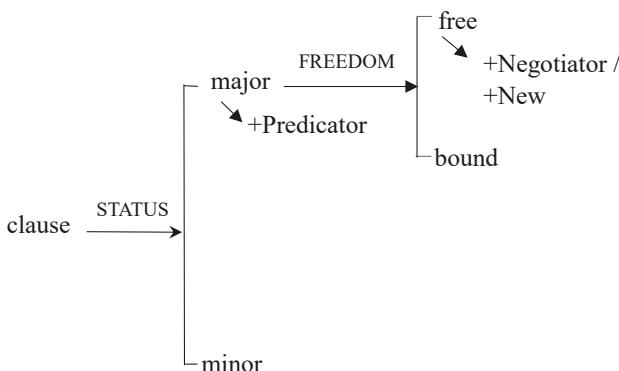
Figure 4: The system of FREEDOM in the Dagaare clause.

English. The latter has been called an instance of "double agnation" and further research is needed to examine the typology of this phenomenon (Christian M. I. M. Matthiessen personal communication).

In conclusion, the present study has provided a more explicit definition of finiteness and illustrated how this definition applies to a single language. The criteria identified in examining grammatical and semantic finiteness can serve as a guide in the description and typology of finiteness across languages.

Appendix: List of abbreviations and symbols

1	first person
2	second person
3	third person
ACC	accusative
ADV	adverbial particle
ADVLZ	adverbializer
AFFR	affirmative
CAUS	causative
COM	comitative
COMP	complementiser
COND	conditional
DEF	definite
DEM	demonstrative
DIST	distal
EMP	emphatic
EVT	eventuality marker
FOC	focus
FUT	future
HAB	habitual
HM	human
IDENT	identifying pronoun
IND	indicative
IM	immediate
IMP	imperative

INT	interrogative marker
IPFV	imperfective
JUNC	juncture subordinator
MOD	modal
NAFFR	non-affirmative
NEG	negative
NFUT	non-future
NIM	non-immediate
PFV	perfective
PL	plural
POS	positive
PST	past
REL	relativizer
PROJ	projection marker
PROX	proximal
QUOT	quotative
REM	remote
SG	singular
TRAN	transitiviser
=	clitic
|||	external clause boundary
||	internal clause boundary
[[ ]]	embedded/downranked clause

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