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A grammar of Tagdal: a Northern Songhay language
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Chapter 3

3.0 Morphology

This chapter deals with the morphology of Tagdal, starting with the noun, the pronoun and the NP in Section 3.1. Section 3.2 will cover when Tagdal utilises Tuareg versus Songhay vocabulary. Section 3.3 discusses modifiers, followed by a brief discussion of adpositions in Section 3.4. Finally, Section 3.5 includes a description of the verb morphology, ending with a brief discussion of the Dative case and of the Verb Phrase, which will be completed in the following chapter. Throughout this chapter it will be demonstrated that in many cases, vocabulary of Songhay etymology and vocabulary of Tuareg etymology behave very differently from each other in Tagdal, especially at the level of the prosodies. This is reminiscent of Kossmann's (2010) idea of parallel system borrowing in Tasawaq and Tadaksahak.

3.1 Nouns

Section 3.1.1 will discuss the pronominal sub-system of Tagdal. This includes both the independent pronouns, as well as clitics with pronominal function. In Section 3.1.2 the morphology of the noun will be discussed. This will introduce for the first time the differences in etymological behaviour between Songhay and Tuareg cognates in Tagdal. Finally, Section 3.1.3 will discuss how verb roots are nominalised, depending on their etymologies.

3.1.1 Pronominal subsystem

The Tagdal pronominal sub-system consists of two types of items with pronominal function. First, independent pronouns, which do not attach to any other item in the clause. Second, pronominal clitics, effectively bound morphemes which attach onto various elements of the clause. Each of these will be discussed below.

Independent pronouns

The pronouns in Tagdal tend to be differentiated based on person, first and second, and number, either singular or plural. Table 3-1 describes these.

Table 3-1, independent pronouns

	singular	plural
first person	yaay	íiri
second person	nin	ánzi
third person	án̄ga	ín̄ga / ín̄gi ³⁴

³⁴ The Abargan and kəl Ilokkod varieties use the third person plural pronoun *ín̄gi*, while the kəl Amdid, Ibarogan and Tarbun varieties use *ín̄ga*.

Most nouns of Songhay origin begin with a consonant other than /t/ and will have either one or two syllables. When it is pluralised with the suffix *-én*, two things occur. First, if the noun in the singular has a CVC syllable pattern, which is very common, the vowel in the initial syllable lengthens, so that the CVC pattern now has a CV:CVC pattern in the plural. Second, stress will shift to the plural suffix *-én*. Table 3-3 demonstrates some common nouns of Songhay etymology with CVC patterns.

Table 3-3 nouns of Songhay origin, CVC pattern in singular form

	Singular		Plural	
1	ber	'older sibling'	beerén	'older siblings'
2	ben	'finishing'	beenén	'instances of finishing'
3	boy	'moving'	booyén	'instances when one moved'
4	dab	'cloth'	daabén	'clothes'
5	dam	'shameful thing'	daamén	'shameful things'
6	dor	'pain'	doorén	'hurt feelings'
7	ɖos	'touch'	ɖoosén	'touches'
8	dut	'pounding millet'	duutén	'instances of pounding millet'
9	fad	'thirst'	faadén	'thirsts'
10	fun	'keyhole'	fuunén	'keyholes'
11	fus	'swelling'	fuusén	'swellings'
12	har	'praise'	haarén	'praises'
13	haw	'attachement'	haawén	'attachements'
14	hin	'power'	hiinén	'powers'
15	kar	'hitting'	kaarén	'individual blows'
16	kaw	'removal'	kaawén	'removals'
18	koy	'master'	kooyén	'masters'
19	kud	'herding'	kuudén	'instances of herding'
20	man	'name'	maanén	'names'
21	nam	'bite'	naamén	'bites'
22	qos	'cut'	qoosén	'cuts'
23	ʃab	'shaving'	ʃaabén	'instances shaving'
24	ʃaw	'call'	ʃaawén	'calls'
25	tan	'chasing down'	taanén	'instances chasing down'
27	teʒ	'falling down hard'	teeʒén	'times of falling down hard'
28	tuk	'hidden thing'	tuukén	'hidden things'
29	waw	'insult'	waawén ³⁸	'insults'

³⁸ In Tadaksahak (Christiansen-Bolli 2010:107) in the case of *waw* 'insult' stress does not shift as it does in Tagdal.

30	way ³⁹	'woman'	wayyén	'women'
31	zoq	'fight'	zooyén ⁴⁰	'fights'

It is also common for nouns of Songhay origin to have two syllables, with a CV̇:CV or CV̇:CVC pattern in the singular. Like the examples in Table 3-3, when the plural suffix *-én* is present, stress shifts to the final syllable. Furthermore, the final vowel in the singular is elided in the presence of the plural suffix. Table 3-4 demonstrates.

Table 3-4 nouns of Songhay origin, stress on penultimate syllable in singular form

	Singular		Plural	
1	bayna	'slave'	baynéen	'slaves'
2	báaya	'love'	baayén	'loves'
3	báari	'horse'	baarén	'horses'
4	béena	'top'	beenén	'tops'
5	bóora	'person'	boorén	'people'
6	bóofĩ	'ashes'	boofén	'types of ashes'
7	géeri	'saddle for camel'	geerén	'saddles, camels'
8	gúusu	'hole'	guusén	'holes'
9	háabu	'single strand of hair'	haabén	'hair'
10	háamu	'meat'	haamén	'types of meat'
11	híimi	'cleaning'	hiimén	'instances of cleaning'
12	húuru	'fire'	huurén	'fires'
13	húuwa	'milk'	huuwén	'types of milk'
14	kúuru	'skin'	kuurén	'skins'
15	kúusu	'cooking pot'	kuusén	'cooking pots'
16	qóora	'toad'	qoorén	'toads'
17	ʃáana	'small person'	ʃaanén	'small people'
18	sáawa	'resemblance'	saawén	'resemblances'
19	táasu	'meal'	taasén	'meals'

Table 3-5 demonstrates nouns of Songhay origin which have CVCCV or CVCCVC patterns in their singular form. In these nouns, stress will typically, but not always, fall on the penultimate syllable in the singular. However, like in the examples in the previous tables, it will shift to the syllable with the plural suffix *-én* in the plural form. In addition, if the singular form ends in a vowel, it will elide before the plural suffix.

³⁹ The nouns *bay* 'know' and *way* 'woman' in present an interesting exception, where instead of lengthening the initial vowel, it is the final consonant *y* that is lengthened in the plural, forming a CVC:VĊ pattern.

⁴⁰ It is very common in Tagdal for the voiceless obstruent *q* to become the voiced fricative *y* intervocallically.

Table 3-5 nouns of Songhay origin, CVCCV and CVCCVC patterns

	Singular		Plural	
1	fárka	'donkey'	farkén	'donkeys'
2	gánda	'country'	gandén	'countries'
3	gárgor	'laughing'	gargoorén	'laughs'
4	gónjĩ	'snake'	gonjén	'snakes'
5	hámni	'fly'	hamnén	'flies'
6	hánzi	'month'	hanzén	'months'
7	hánjĩ	'dog'	hanjén	'dogs'
8	hárhor	'game'	harhoorén	'games'
9	háyni	'millet'	haynén	'kinds of millet'
10	híyaw	'wind'	hiyaawén	'winds'
11	záyzi	'day'	zayzén	'days'
12	kámba	'hand'	kambén	'hands'
13	káyna	'younger sibling'	kaynén	'younger siblings'
14	káyne	'jackal'	kaynén	'jackals'
15	kónda	'ant'	kondén	'ants'
16	márwa	'knot'	marwén	'knots'
17	sárho	'favour'	sarhén	'favours'

A number of Songhay nouns do not follow the typical pattern. In Table 3-6, nouns already place stress on the final syllable in the singular form. Therefore, when the plural *-én* is present, stress remains on the final syllable.

Table 3-6 nouns of Songhay origin, stress on final syllable

	Singular		Plural	
1	aaró	'man'	aarén	'men'
2	baŋgú	'well'	baŋgén	'wells'
3	banjó	'head'	banjén	'heads'
4	bundú	'stick'	bundén	'sticks'
5	dayná	'forgetting'	daynén	'instances of forgetting'
6	fanjí	'basket'	fanjén	'basket'
7	fijí	'sheep'	fijén	'sheep PL'
8	fuufú	'cold'	fuufén	'instances of cold'
9	fuunús	'lighting a fire'	fuunusén	'instances of lighting fires'
10	gungú	'belly'	gungén	'bellies'
11	haŋgá	'ear'	haŋgén	'ears'
12	hinjiiní	'goat'	hinjiinén	'goats'
13	hiirí	'necklace'	hiirén	'necklaces'
14	huunú	'exit'	huunén	'exits'
15	ziidá	'walk'	ziidén	'walks'
16	zirbí	'year'	zibrén	'years'

17	zuulá	'making a deal'	zuulén	'instances of making a deal'
18	karfó	'rope'	karfén	'ropes'
19	korrá	'heat'	korrén	'instances of heat'
20	kuudú	'blood'	kuudén	'types of blood'
21	laabó	'mud'	laabén	'types of mud'
22	maaní	'odour'	maanén	'oudours'
23	naasó	'fat'	naasén	'types of fat'
24	niiná	'mother'	niinén	'mothers'
25	nuunú	'smoke'	nuunén	'types of smoke'
26	ʃiɪɹí	'night'	ʃiɪɹén	'nights'
27	ʃiirí	'salt'	ʃiirén	'salts'
28	wayní	'sun'	waynén	'suns'

Table 3-7 demonstrates nouns with CVC patterns, where in the plural form the initial vowel does not become longer. Instead, it is the final consonant of the singular form which elongates. In each of these cases, the vowel and consonant combination is /ay/, pronounced [ej].⁴¹ However, when combined with the plural suffix *-én*, instead of being pronounced [ba:j'en] and [wa:j'en] as one would expect, they are instead pronounced [bej:'en] and [wej:'en], represented here as bayyén and wayyén. This likely because Tagdal does not allow the long vowel ['ba:] and ['wa:] with closed syllables.⁴² Therefore, Tagdal speakers might find it easier to elongate the final consonant of the vowel in the presence of the plural *-én*. However, this question requires much more study.

Table 3-7 irregular nouns of Songhay origin, initial vowel does not elongate with plural

	Singular		Plural	
1	bay	'knowing'	bayyén	'things known'
2	hay	'birth (animal)'	hayyén	'births (animal)'
3	kay	'continuation'	kayyén	'continuations'
4	way	'woman'	wayyén	'women'
5	zay	'theft'	zayyén	'thefts'

In Table 3-8, the nouns in question have a CV pattern in the singular. Therefore, their plural form often does not add another syllable. The exception to this is Examples 2 and 5, where the plural *-én* does not seem to interact with the vowels /e/ and /i/ and requires an epenthetic /y/.

⁴¹ See discussion of /ay/ and /aw/ in the previous chapter.

⁴² For example, adding the third person singular proclitic =a to *zay* ['zej] chances pronunciation to *záy-a* 'steal it', pronounced ['za:ja] or to *báy-a* 'know it', pronounced ['ba:ja].

root is followed by the plural suffix, either *-an*, *-en*, *-wan* or *-tan*, as Figure 3-3 shows.

FIGURE 3-3 structure of the noun, Tuareg origin, plural

PL prefix	Root	PL suffix
i-		-an, -en, -wan, -tan

In nouns of Tuareg origin certain rules apply to all vocabulary of Tuareg origin, regardless of grammatical category.⁴³ 1) Stress will always fall on either the penultimate or antepenultimate syllable, regardless of how many syllables the word may have after adding suffixes and prefixes.⁴⁴ 2) Typically, stress will remain on the same syllable of the root, unless the addition of prefixes and suffixes would cause it to occur before the antepenultimate syllable. In this case, stress would then shift to the antepenultimate. 3) If stress falls on the antepenultimate syllable, this will affect the penultimate in two ways: a) the vowel in the penultimate syllable will elongate, unless it is /ə/. b) The consonant in the penultimate syllable will also elongate, unless it is /r/, or unless the presence of other consonants in the same syllable prevents this. In this case, the lengthening will occur in the following consonant unless it is /r/, or unless contact with other consonants prevents this. Finally, 4) Stress occurring in the antepenultimate syllable prevents gemination from occurring. Table 3-10 demonstrates a few common nouns that begin with the singular *a-* and take the *-an* plural suffix.

Table 3-10 nouns of Tuareg origin, nominaliser *a-*, plural *-an*

	Singular		Plural
1	abbákkad	'sin'	ibákkaadan
2	abbárad	'young man'	ibáraadan
3	ábbar ⁴⁵	'deep scratch'	íbbaaran
4	abbárgan	'showing off'	ibárgaan
5	Abbarkóray	'man from Ibarkoraayan tribe'	Ibarkóraayan
6	Abbárog	'man from Ibaroogan tribe'	Ibároogan
7	abbəraybóray	'aplause'	ibəraybóraayan
8	áblay	'piece of clay'	íblaayan
9	abbóbaz	'male cousin'	ibóbbaaan
10	ábboora	'sorghum'	íbbooran
11	ábroy	'blanket'	íbrooyan
12	addággal	'father-in-law'	idággalan

⁴³ See, for example, Section 3.1.2 for a discussion of stress placement in verbs of Tuareg origin and Section 3.3 for adjectives of Tuareg origin.

⁴⁴ In words where the root has more than three syllables, the preponderance of the data shows a preference for antepenultimate stress.

⁴⁵ In the case of *ábbar* 'deep scratch' and others like it, in the singular form the initial long consonant is likely due to gemination, while in the plural it is likely due to elongation of the consonant due to stress occurring in the antepenultimate syllable.

13	addánay	‘force-fed noble woman’	idánaayan
14	áddaz	‘fatigue’	íddaazan
15	ádgag	‘leather jerkin’	ídgaagan
16	addíben	‘marriage’	idíbbeenan
17	affaddáyan	‘fat around stomach’	ifadáyyaanan
18	affántak	‘bed cover’	ifántaakan
19	affaráqqan	‘stick’	ifaráqqaanan
20	affáray	‘sick feeling’	ifáraayan
21	afáryas	‘desert tortoise’	ifáryaasan
22	áf fay	‘cleaning’	íffaayan
23	Affélan	‘Fulani man’	Iféllaanan
24	affógga	‘discovery’	ifóggaanan
25	áfraw	‘wing’	ífraawan
26	aggórmel	‘tick full of blood’	igórmeelan
27	aggə́rúrus	‘mewling of camel’	igə́rúruusan
28	aggódrar	‘dust’	igódraaran
29	aggóras	‘countryside’	igóraasan
30	ággoz	‘achilles tendon’	íggoozan
31	aggúggel	‘person without father’	igúggeelan
32	ayyálay	‘small secret’	iyállaayan
33	ayyázzar	‘small pool of water’	iyázzaaran
34	ayyábbber	‘hip’	iyábbeeran
35	áylal	‘valley’	íylaalan
36	áyyoora	‘morning’	íyyooran
37	ayyóraf	‘taking animals to well every 2 days’	iyyóraafan
38	áyrut	‘raven’	íyruutan
39	áhhhal	‘freckle, mole’	íhhaalan
40	áhhhol	‘advice’	íhhoolan
41	ahhúlel	‘young donkey’	ihúlleelan
42	a33ámar	‘lamb’	izámmaaran
43	a33ə́naɣ3ə́naɣ	‘trembling’	izə́naɣjə́nnaayan
44	a33óbar	‘evil spirit’	izóbbaaran
45	akkábar	‘bowl’	ikábbaaran
46	akkábkab	‘pre-adolescent boy’	ikábkaaban
47	akkámay	‘herd of mammals’	ikámmaayan
48	akkárban	‘grass hut’	ikárbaanen
49	akkárbay	‘trousers’	ikkárbaayan
50	akkáɟwar	‘mountain’	ikáɟwaaran
51	akkə́ŋkar	‘cockroach’	ikə́ŋkaaran
52	akólan	‘squirrel’	ikóllaanan
53	akkóm	‘grass tent’	ikkóman
54	akkótay	‘mouse’	ikóttaayan
55	akkúndur	‘rat’	ikúnduuran
56	alláday	‘pig’	iláddaayan
57	allámmad	‘teaching’	ilámmaadan

58	állawka	‘hammock’	íllaawkan
59	alláxar	‘tomb’	iláxxaaran
60	alhákim	‘governor’	alhákiiiman
61	alhízab	‘talisman, charm’	alhíz3aaban
62	alhísab	‘calculation’	alhíssaaban
63	ámmaasa	‘seed’	ímmaasan
64	ammakáfaw	‘iguana’	imakáf3aawan
65	ammánnay	‘diviner’	imánnaayan
66	amánkas	‘punch’	imánkaasan
67	ammanókal	‘chief’	imanókkakaan
68	ará33ad	‘diarrhea’	irá33aadán
69	aróggan	‘adult male camel in heat’	irógganaan
70	arkánay	‘suffering’	irkánnaayan
71	assáhar	‘entry’	issáhhaaran
72	assónóflay	‘comfort’	isónóflaayan
73	attágmi	‘something being sought’	itágmiiyan
74	attórmás	‘hostage’	ittóрмаasan
75	awwára	‘baby male camel’	iwáran
76	áwwas	‘urine’	íwwaasan
77	azzággaz	‘fenec fox’	izággaaзан
78	azzágraw	‘rainy season’	izágraawan

Table 3-11 demonstrates nouns of Tuareg origin with the Plural suffix *-en*.

Table 3-11 nouns of Tuareg origin, nominaliser a-, plural -en

	Singular		Plural
1	abbíyaw	‘teenage boy’	ibíyyaawen
2	ábbus	‘bleeding wound’	íbbuusen
3	ádday	‘half, part’	íddaayen
4	addáyas	‘colostrum’	idáyyaasen
5	adgáljæt	‘mid-morning’	idgáljaaten
6	áffud	‘knee’	íffuuden
7	ayázzira	‘curdled milk w/ dates and cheese curds’	iyázzireen
8	aggábal	‘plant stem’	igábbaalen
9	agámmam	‘small amount of chewing tobacco’	igámmaamen
10	Ágdal	‘man from Igdaalen tribe’	Ígdaalen
11	ágnaw	‘cloud’	ígnaawan
12	aggúlgul	‘meadow’	igúlguulen
13	áylam	‘mount’	íylaamen
14	áhhar	‘male lion’	íhaaren
15	a33ómar	‘forebearance’	izómmaaren
16	ázwal	‘locust’	ízwaalen
17	ákkaala	‘knot in camel’s nose’	íkkaalen
18	alláq	‘spear’	alláyen
19	állas	‘fight’	íllaasen
20	álham	‘anger’	álhaamen
21	alhókum	‘kingdom’	alhókkuumen
22	álmoḻ	‘sunset’	álmooḻen
23	amádhal	‘helper’	imádhaalen
24	ʕárab	‘Arab’	ʕáraaben
25	arídal	‘wolf’	iríddaalen
26	arríyal	‘single unit of currency’	arríyyaalen
27	assággay	‘baby gazelle’	isággayen
28	assáyfat	‘likeness’	isáyfaaten
29	aʃʃil	‘obligation’	iʃʃilen

Table 3-12 demonstrates nouns of Tuareg origin that take the Plural suffix *-wan*. These are not as common as those with *-an* and *-en*.

Table 3-12 nouns of Tuareg origin, nominaliser a-, plural -wan

	Singular		Plural
1	ammánsay	'food'	imánsaywan ⁴⁶
2	abbárkaw	'male calf'	ibárkaawan
3	ayrúru	'descent from mountain'	iyúruuwan
4	áknay	'twin boy'	íknaywan

Table 3-13 demonstrates some nouns of Tuareg origin with the plural suffix *-tan*. These are relatively uncommon in Tagdal, as *-tan* is often a plural marker used for foreign borrowings.

Table 3-13 nouns of Tuareg origin, nominaliser a-, plural -tan

	Singular		Plural
1	abbárziya	'street dog'	ibárziitan
2	aggánna	'side'	igánnaatan
3	aggórrri	'wisdom'	igórrriitan
4	ammízi	'separation'	imízziitan

When the vowel /ə/ is the nucleus of the stressed syllable, no vowel lengthening takes place. Still, the preceding consonant lengthens unless the presence of other consonants in that syllable prevents it. In those cases, it is the consonant in the following syllable that lengthens, unless the presence of other consonants prevents it. Table 3-14 provides examples where /ə/ in the stressed syllable does not lengthen.

Table 3-14 nouns of Tuareg origin, nominaliser a-, no vowel elongation in plural

	Singular		Plural
1	abbáydəg	'thief'	ibáydəggan
2	abbəwəl	'shallow hole'	ibəlwan
3	addələg	'decoration'	idələggan
4	addəmi	'gazelle'	iddəman
5	affərəkrək	'trembling'	ifərəkrəkkən
6	áftək	'clothing'	íftəkkən
7	aggərəd	'granary'	igərəddən
8	aggəzəl	'hard work'	igəzzələn
9	agírər	'gutter, stream'	iggírəran
10	aggərfək	'victim, evil eye'	igərfəkkən
11	ayyáraf	'celebration'	iyərəffən
12	ayyərreg	'animal dropping'	iyərregən

⁴⁶ *imánsaywan* 'foods' and Example 4 *íknaywan* 'twins' seem to be exceptions, since the vowel in the antepenultimate syllable does not lengthen. One possible explanation is that in both cases, the plural form is the default with, for example, the singular *amánsay* occurring only rarely. (*áknay* 'twin' is more common.) However, this requires more study.

14	áyrəm	‘town’	iyrəmman
15	ahhəlólklək	‘panting’	ihlólkləkkan ⁴⁷
16	ahhánəfa	‘whining’	ihánnəfen
17	allásəl	‘quantity’	ilássəlen
18	assəksəs	‘dance’	isəksəsən
19	assəməgɲi	‘preparation’	isəməggənan ⁴⁸
20	aʃʃikəl	‘voyage’	iʃʃikkəlen
21	əxlək	‘creation’	ixləkkan

Finally, Tables 3-15 through 3-20 provide examples of nouns of Tuareg etymology that for various reasons do not follow the typical pattern in their plural form. Most of these correspond to a series of nouns that, in mainstream Berber languages, have apophonic plural forms (see, for example, Kossmann 2011: 40, 2013: 204). Apophonic plural forms in Tagdal do not typically have a plural suffix, end with the vowel /a/ and often follow a pattern of alternating high vowels in the singular with low vowels in the plural form, or vice-versa. In Table 3-15, the vowels in both the singular and plural forms do not alternate from high to low, or from low to high in the plural form.

Table 3-15 apophonic nouns: no vocalic changes

1	ablóləg	‘large intestine’	iblóləg
2	áɣna	‘preference’	ígna
3	annáyan	‘eyebrow’	innáyan
4	annamátɰan	‘dead man’	innamátɰan
5	anəsduuban	‘young married man’	inəsduuban
6	ayədman	‘guarantee’	iyədman

In Table 3-16, the second vowel in the apophonic plural alternates from low in the singular form to high in the plural.

Table 3-16 apophonic plurals: vowel alternates from high to low, plus other vowel changes

1	abbágog	‘male adult sheep’	íbgag
2	abbáyoq	‘leather canteen’	ibbíyaq
3	ánnil	‘ostrich’	ínyal
4	aʃʃámmur	‘rebel’	iʃʃúmmar
5	aɖɖəwi	‘gerbil’	iɖɖəwa
6	ammízzir	‘abandoned town’	immízzar
7	assəkbəl	‘support’	issəkbəl
8	abbáykor	‘hunting dog’	ibbíkar
9	aggənágən	‘darkness’	iggunúgan
10	azzəɲgu	‘enemy’	ízzəɲga

⁴⁷ The initial ə is likely there for epenthetic purposes.

⁴⁸ A number of Tagdal speakers I have heard pronounce this *isəmməgɲan*. From what I could tell, it seems that both pronunciations seem to be more or less acceptable.

In Table 3-17, the initial vowel in the apophonic plural form alternates from low to high.

Table 3-17 apophonic nouns: low vowel to high vowel in plural

1	abbáŋkor	‘temporary well’	ibbíŋkar
2	abbáwan	‘leather sack’	ibbíwan
3	affákan	‘mat for covering food’	iffúkan
4	affakárkor	‘runt lamb’	iffəkárkar
5	akkáfar	‘infidel’	ikkúfar
6	allátam	‘side of body’	illútam
7	assámməd	‘leather sack’	issúmməd
8	aggáyəs	‘bustard’	iggúyəs
9	aggéləm	‘orphan’	iggúləm

Tables 3-18 through 3-21 demonstrate irregular nouns of Tuareg etymology of various kinds. The nouns in Table 3-18 do not take the suffix *i-* in their plural form.

Table 3-18 no *i-* in plural form

1	áadan	‘small intestine’	áadannan
2	áykar	‘male puppy’	áykaaran

The nouns in Table 3-19 take some kind of vowel reduction in their plural forms.

Table 3-19 vowel reductions in plural

1	áyǵəl	‘right hand’	íylan
2	addárəz	‘trace’	íddərzan
3	affárag	‘garden’	íffərgan
4	aggáraw	‘large body of water’	íggərwan
5	ahháket	‘leather tent’	íhhiktan
6	allággaz	‘watermelon’	íllagzen
7	awwáqas	‘wild animal’	íwwuysan
8	awwátay	‘year’	íwwutyán
9	addéggər	‘share’	íddegran

In Table 3-20, the vowels alternate from high in the singular form to low in the plural.

Table 3-20 high in singular to low in plural

1	ayǵáyi	‘cave’	iyǵáyan
2	akkézi	‘rooster’	ikkázan

In Table 3-21, the vowels alternate from low in the singular form to high in the plural. A few have other irregularities as well.

Table 3-21 nouns of Tuareg origin low vowels in singular, high in plural

1	áddəmən	‘guarantee’	áddumun
2	afféli	‘runt’	iffélian
3	afúruufu	‘imbecile’	ifíriiʃit
4	ahhórta	‘trace’	ihhórti
5	ákkaasa	‘rainy season’	ikássaaten
6	aʃʃáqey	‘brother’	iʃʃaqqéyan
7	áḍḍad	‘finger’	íḍḍdwan
8	addóləg	‘decoration’	idólləgan
9	abbəwəl	‘shallow hole’	ibbəlwan

Prefix *t-*

Many nouns of Tuareg origin in Tagdal begin with the prefix *t-* in their singular form. In plural nouns, *-t* also occurs, in cases where the noun ends with a vowel⁴⁹ or with /y/. In cases where a noun ends with /y/, interaction with *-t* changes the /y/ to /q/. For example *ammázaɣ* ‘Tuareg man’ would be *tammázaq* ‘Tuareg woman’.

In Tuareg languages, *t-* is a marker of the feminine gender and these nouns would require grammatical gender agreement.⁵⁰ The structure of the Noun with the nominaliser *t-* is given in Figure 3-4.

Figure 3-4 the structure of the noun, *t-*

t- ROOT -t

In the plural form, the *t-* occurs in the beginning of the noun, in its initial position, followed by the plural prefix *i-*. This results in the *t-* palatalising to [ʃ] before the *i-*.⁵¹ Finally, after the root the Plural suffix *-an*, *-en*, *-wan* or *-tan* appears. Figure 3-5 below demonstrates the structure of the noun of Tuareg origin with *t-* in its plural form.

Figure 3-5 the structure of the plural noun, *t-* nominaliser

t- i- ROOT -t -an, -en, -wan, -tan

The usual pattern of stress placement, consonant and vowel lengthening occurs in nouns with *t-*, as with all other vocabulary of Tuareg etymology (see Section 0 for a

⁴⁹ This is one area where Tagdal is different from Tadaksahak and from mainstream Tuareg languages, where nouns that begin with *t-* also end with *-t*. For example, *táɣrəm* ‘village’ in mainstream Tuareg languages and in Tadaksahak would be **táɣrəmt*, which in Tagdal would be incorrect.

⁵⁰ The *t-* also functions to distinguish feminine from masculine nouns, as well as large from small items in Tagdal. However, no grammatical agreement is required.

⁵¹ Palatalising *t-* to *ʃ-* before *i-* occurs in most varieties of Tagdal, though in the Abargan and Kəl Amdid varieties it occurs as affricativisation, with *t-* becoming *tʃ-*. In Tabarog, the *t-* fricativises instead, to *s-*.

description). Table 3-22 demonstrates a few of the more common nouns of Tuareg origin that take *t-*, along with the Plural suffix *-an*.

Table 3-22 nouns of Tuareg origin, nominaliser *t-*, plural *-an*

	Singular		Plural
1	tabbárar	‘girl’	ʃibáraaran
2	tabbútut	‘navel’	ʃibúttuutan
3	taddálat	‘river grass’	ʃidállaan
4	tággot	‘hard morning rain’	ʃíggootan
5	tágrak	‘polite burp after meal’	ʃígraakan
6	taggófut	‘sand dune’	ʃigóffuutan
7	tayyárit	‘shout’	ʃiyáriitan
8	tayyáassar	‘ruinous mess’	ʃiyáraasan
9	táyyer	‘small bowl’	ʃíyyeeran
10	tahhálkat	‘wild dog (<i>Lycaon pictus</i>)’	ʃihálkaatan
11	tahhírit	‘pre-adolescent cow’	ʃiháriitan
12	takkómar	‘cheese curds’	ʃikómmaaran
13	takkánar	‘forehead’	ʃikánnaaran
14	takkárbay	‘pants’	ʃikárbaayan
15	tákkay	‘conversation’	tákkaayan
16	támyar	‘old woman’	ʃimyaaran
17	tammédər	‘part of turban covering mouth’	ʃiméddəran
18	táymar	‘power’	ʃiymaaran
19	tarəmmaq	‘fear’	ʃirəmmaayan
20	tárkat	‘package’	ʃirkaatan
21	táwfooka	‘headless carcass’	ʃiwfookan
22	táwʃit	‘tribe’	ʃiwʃiitan
23	tazzárvat	‘string’	ʃizárkaatan

Table 3-23 demonstrates nouns that take the *-en* Plural suffix.

Table 3-23 nouns of Tuareg origin, nominaliser *t-*, plural *-en*

	Singular		Plural
1	tabbállit	‘shirt’	ʃibállitən
2	tabbárad	‘young woman’	ʃibáraaden
3	táblal	‘seed, grain’	ʃíblaalen
4	tabbólas	‘sack of grain’	ʃibóllaasen
5	taddáryal	‘gecko’	ʃidáryaalen
6	taffádak	‘irrigation near water geyser’	ʃifáddaaken
7	táffer	‘gift for rendering service’	ʃíffeeren
8	tafláwis	‘happiness’	ʃifláwiisen
9	taggáddal	‘wrestling’	ʃígáddaalen
10	tággal	‘bride price’	ʃíggaaalen
11	tágmar	‘hunt’	ʃígmaaren

12	tayyáyan	‘head of grain’	ʃiyáyyaanen ⁵²
13	táylal	‘small valley’	ʃíylaalen
14	táylam	‘caravan’	ʃíylaamen
15	tayyáyyay	‘small blanket’	ʃiyáyyaayen
16	táylam	‘young female camel’	ʃíylaamen
17	tahhárdan	‘taditional string lute-like instrument’	ʃihárdaanen
18	taʒʒárgan	‘filthiness’	ʃíʒárgaanen
19	takkáلكال	‘skinned animal carcass’	ʃíkálkaalen
20	takkárkar	‘coil of rope’	ʃíkárkaaren
21	takkáʃit	‘inheritance’	ʃíkáʃʃiiten
22	takəraməreemət	‘small temporary granary’	ʃíkəraməremmiiten
23	talhútbat	‘sermon’	ʃilhútbaaten
24	tammádnay	‘force-fed noble woman’	ʃimádnaayen
25	tammagégrət	‘barren woman’	ʃimaggérəten
26	tamállaaɣa	‘race’	ʃimállaaɣen
27	tammárwal	‘hare’	ʃimárwaaalen
28	tallábas	‘trick’	ʃilábbaasen
29	tamməgraw	‘supplication’	ʃiməgraawan
30	tammáddal	‘fine sand’	ʃimáddaalen
31	tammáwat	‘young girl’	ʃimáwwaaten
32	tammólat	‘serving spoon’	ʃimóllaaten
33	tannákbal	‘mid-wife’	ʃinákbaalen
34	táɲgal	‘parable’	ʃíɲgaalen
35	táɲkad	‘piece, meat cut off bone’	ʃíɲkaaden
36	tárray	‘path’	tárraayen
37	tassólbad	‘noise’	ʃisólbaaden
38	tazzáryaf	‘multi-coloured female animal’	ʃizáryaafen

Table 3-24 demonstrates a number of nouns of Tuareg etymology that take the suffix *-wan* in their plural form. Many of these, similar to *tayyáyan* ‘head of grain’, *takəraməreemət* ‘small temporary granary’ and *tammagégrət* ‘barren woman’ in Table 3-23, also undergo vowel changes, from low to high, in their plural forms.

Table 3-24 nouns of Tuareg origin, nominaliser t-, plural *-wan*

	Singular		Plural
1	tabbárday	‘rug’	ʃibárdiiwan
2	taddáɲgaw	‘granary made from mud bricks’	ʃidáɲgaawan
3	taffáski	‘Id al-Fitr holiday’	ʃifáskiiwan

⁵² A number of these examples, *tayyáyan* ‘head of grain’, *takəraməreemət* ‘small temporary granary’ and *tammagégrət* ‘barren woman’ also undergo vowel changes in their plural forms, with the vowel heightening from /a/ to /ə/ or from /ə/ and /e/ to /i/.

4	táyyalgay	‘eagle’	ʃiyálgiiwan ⁵³
5	tayyáwʃit	‘activity’	ʃiyáawʃiiwan
6	táyma	‘hip’	ʃiymaawan
7	táhhuude	‘oath’	ʃihíddaawan
8	takkárday	‘authorisation’	ʃikárdiiwan
9	tákkooba	‘sword’	ʃikábbiiwan
10	tamántaaka	‘army’	ʃimantákkiwan
11	táyte	‘intelligence’	táytiwan
12	taggétaw	‘cross’	ʃigíttaawan

Like nouns that begin with *a-*, there are cases of those with the *t-* where the stressed syllable has /ə/ in the nucleus, which is not lengthened. Table 3-25 demonstrates a few of these cases.

Table 3-25 nouns of Tuareg origin, nominaliser *t-*, no vowel elongation of /ə/ in plural

1	Singular		Plural
2	tádləm	‘persecution’	ʃídləm̄men
3	taggóltəm	‘trapping by upper arm or leg’	ʃigóltəm̄men
4	taggórəs	‘cold season’	ʃigórəssan
5	tággəzəl	‘kidney’	ʃíggəzəl
6	táyɾək	‘leather purse’	ʃiyɾəkken
7	tamózgəda	‘mosque’	ʃimózgəden
8	tasólləf	‘tick’	ʃisólləfen

In Tables 3-26 through 3-28, the nouns follow apophonic patterns of pluralisation. Table 3-26 gives examples of apophonic nouns where vowels shift from high in the singular to low in the plural form.

Table 3-26 apophonic nouns of Tuareg origin, nominaliser *t-*, high to low

	Singular		Plural
1	tannóm̄mer	‘thanks’	ʃinném̄mar
2	takkáffar	‘infidel woman’	ʃikkúffar
3	tannáflay	‘comfort’	ʃinnúflay
4	tazzəggəz	‘knife’	ʃizzəggaz
5	tammúysur	‘settling down’	ʃimmáysar

In Table 3-27, vowels shift from low in the singular to high in the plural form.

⁵³ *táyyalgay* ‘eagle’, *táhhuude* ‘oath’ and *taántaaka* ‘army’ present several of those rare instances where stress changes in the plural form, since keeping it in the same syllable as the singular would, after adding the various prefixes and suffixes, place stress before the antepenultimate.

Table 3-27 apophonic nouns of Tuareg origin, nominaliser *t-*, low to high

	Singular		Plural
1	taddóbut	‘bed’	ʃiddəba ⁵⁴
2	taggólmas	‘turban’	ʃiggólmas
3	talláyaq	‘suffering’	ʃillíyaq

In Table 3-28 the apophonic nouns all have multiple vowel shifts within a single word, from the singular to the plural form.

Table 3-28 apophonic nouns of Tuareg origin, nominaliser *t-*, other

	Singular		Plural
1	tawwágoz	‘field’	ʃiwwúggaz
2	takkarákid	‘shame’	ʃikkorókad
3	tamaxátir	‘difficulty’	ʃimməxútar

Finally, I only found a single example of a noun with apophonic plurals that starts with *t-*, where the vowels remain the same in both the singular and plural form, *tazzárdam* ‘scorpion’, *ʃizzárdam* ‘scorpions’.

Stress cannot shift to before the antepenultimate syllable. In fact, as the data demonstrate with cases such as *taṃantaaka* ‘army’ / *ʃimantákkiiwan* ‘armies’, if adding affixes to the noun would cause stress to fall before the antepenultimate syllable, it instead shifts to the antepenultimate in the plural form. Table 3-29 demonstrates additional cases of this. In many of these cases, vowel shift also occurs in the plural form.

Table 3-29 nouns of Tuareg origin, nominaliser *t-*, 3+ syllables in plural, stress shifts to penultimate

	Singular		Plural
1	tábbooqa	‘thin dust’	ʃibóqqaatan
2	táddaara	‘tree trunk’	ʃiddáaraan
3	táffaayat	‘rice’	ʃifáyyaaten
4	táffeeda	‘injury from carrying load’	ʃifáddiiwan
5	táyyalgay	‘eagle’	ʃiyálgiiwan
6	táyyaara	‘situation’	ʃiyáraatan
7	tággarʃak	‘evil eye’	ʃigárʃaaken
8	tággaaʒa	‘large well with collapsed mouth’	ʃigáʒziwan
9	tággəla	‘bread’	ʃigəllaawan
10	tágguuʒay	‘another place’	ʃigúʒaayen
11	táhhuude	‘oath’	ʃihíddaawan
12	tákkootay	‘offering, sacrifice’	ʃikóttaawan
13	tállaaqay	‘poor person’	ʃiləqqaawan

⁵⁴ *taddóbut* ‘bed’ is unusual in that stress changes to the antepenultimate syllable in the plural.

14	tamántaaka	‘army’	ʃimantákkiiwan
15	támməklaw	‘midday meal’	ʃiməklaawan
16	táraywat ⁵⁵	‘honey’	ʃiráywaatan
17	tássaaka	‘heifer’	ʃisákkaayen
18	táymaako	‘help’	taymákkootan

Tables 3-30 and 3-31 demonstrate cases of nouns with the *t*- nominaliser that behave irregularly. In Table 3-30, the *t*- in the plural form does not palatalise, likely due to the absence of *i*- in the plural form.

Table 3-30 nouns of Tuareg origin, nominaliser *t*-, irregular, *t*- does not palatalise in the plural

	Singular		Plural
1	táwit	‘chameleon’	táwwiiten
2	táayde	‘personality’	táaydeewan
3	taʃʃát	‘dark animal, white spots’	taʃʃáten ⁵⁶
4	táyɣam	‘footprint’	táyɣaamen
5	táyda	‘spear with stone tip’	táydiivan
6	tákkol	‘step’	tákkoolen
7	táylal	‘guinea fowl’	táylaalan

Table 3-31 demonstrates two examples of nouns that begin with *t*-, that do not conform to the normal pattern. *taddággal* ‘daughter in law’ seems to undergo some sort of consonant reduction in the plural form, with the loss of /g/, while *tawwáqqas* ‘small wild animal’ either has vowel alternation, from low in the singular form to high in the plural form, or, more likely, the vowel changes from /a/ in the singular to /ə/ in the plural, which then realises as /u/ in the presence of the preceding /w/. The latter is more likely, since the [u] in the penultimate syllable does not elongate, as it would normally do with stress on the antepenultimate.

Table 3-31 nouns of Tuareg origin, nominaliser *t*-, irregular other

	Singular		Plural
1	taddággal	‘daughter-in-law’	ʃíduulen
2	tawwáqqas	‘small wild animal’	ʃíwwuysan
3	táwʃit	‘tribe, species’	ʃiúʃʃiitan

⁵⁵ *táraywat* ‘honey’ is also unusual in that the vowel /a/ in the penultimate syllable remains short, resulting in /ay/, pronounced [ej], rather than /aay/ [aɛj].

⁵⁶ taʃʃát ‘dark animal with white spots’ is unusual on two counts. First, stress falls on the final syllable in its singular form. Second, in its plural form the initial *t*- does not palatalise, possibly because of the absence of *i*-.

3.1.3 Nominalisation, verbal nouns

This section contains discussions of how Tagdal nominalises verb roots, starting with those of Tuareg origin in Section 0, then continuing with Songhay cognates in section 0. By the end of this section, it will be clear that Tagdal has different strategies for nominalisation, depending on the etymology of the root in question.

Tuareg roots

Tagdal has various means of nominalising roots of Tuareg origin. The most common is by means of the prefixes *a-* and *t-*. Another common means is to utilise the Agentive prefix *ma-*, or its allomorph *na-*. Both of these are discussed below.

Morphological

One common means of forming nouns out of verb roots of Tuareg etymology is by means of the prefixes *a-* and *t-*. Table 3-32 shows some examples of roots that are nominalised with *a-*.

Table3-32 Tuareg roots nominalised with *a-*

	verb	gloss	noun	gloss	plural
1	əbbárgən	'show off'	abbárgan	'showing off'	ibárgaan
2	áɖɖəz	'be tired'	áɖɖaz	'being tired'	íɖɖaazan
3	áɖɖərər	'have need'	addóror	'need'	idórooran
4	ágməm	'chew tobacco'	aggámmam	'act of chewing tobacco'	igámmaamen
5	áɰlək	'destroy'	áɰluk	'destruction'	íɰluukan
6	áɰkəm	'reign'	alɰókum ⁵⁷	'government'	alɰókkuumen
7	áŋgər	'lean against sthg'	annágar	'leaning against sthg'	inággaraan
8	ártək	'fall over'	arátak	'falling over'	iráttaaken
9	dólæg	'decorate'	addólæg	'decoration'	idólləgan
10	zənnaynay	'tremble'	azənnaynay	'trembling'	izənáynaayan
11	zəwwab	'respond'	alzəwab	'response'	alzəwwaab
12	qáyyət	'chase'	áqqaayət	'search for criminals'	iqáyyətan
13	sábbəkəd	'do sin'	abbákkad	'sin'	ibákkaadan

⁵⁷ *alɰókum*, the noun form of *áɰkəm* 'reign' is actually of Arabic origin. The same goes for *zəwwab* 'respond' and *alzəwab* 'response'.

14	ságruurus	'make mewling camel sound'	agérúrus	'mewling sound of camel'	igérúruusen
15	sáyray	'teach'	assáyray	'teaching'	isáyraayan
16	səmáddərən	'think, ponder'	assəmádrən	'meditation'	isəməmádrənan
17	sónnəfrən	'choose'	annáfran	'choise'	ináfraanen

It is interesting to note that none of these instances of derived nouns ends with the plural morphemes *-wan* or *-tan*. The latter is fairly easy to explain, since *-tan* is often used to pluralise foreign borrowings. However, the absence of *-wan* is more difficult to explain and requires more study. Table 3-33 demonstrates some examples of Tuareg nominalised roots that begin with *t-*.

Table 3-33 Tuareg roots nominalised with *t-*

	verb	gloss	noun	gloss	plural
1	ádləm	'persecute'	tádləm	'persecution'	ʃídləmman
2	édru	'eat together'	tádrut	'eating together'	ʃídruuten
3	édwəl	'grow up'	táddawla	'growing up'	ʃídáwlaatan
4	égra	'understand'	taggərraw ⁵⁸	'understanding'	ʃígərraawan
5	égrək	'polite burp after meal'	tágrak	'polite burping after meal'	ʃígraaken
6	áyfər	'rent'	táyfər	'renting'	ʃíyfəren
7	áysər	'make a mess'	tayyáysar	'mess'	ʃíyássaaren
8	əzzərgen	'make dirty'	tazzárgan	'filthiness'	ʃízárgaanen
9	ənnəflay	'be rich'	tanáflit	'prosperity'	ʃínəfliiyen
10	əqqərət	'scream'	tayárit	'screaming'	ʃíyáriitan
11	əzzər	'lead'	tazzárat	'beginning'	ʃízáraatan
12	dəwwəkʃəʃ	'be happy'	tadəwwəkʃəʃ	'happiness'	ʃídəwwəkʃəʃ
13	gárfak	'do evil eye'	tággarfak	'evil eye'	ʃígárfakaan
14	mədəyər	'paste together'	tamádyar	'glue'	ʃímádyaraan
15	yáhu	'be born'	táhut	'birth'	ʃíhhuutan

Agentive *-ma*

If a root is of Tuareg or Arabic origin, the prefix *ma-*, or its allomorph *na-* if /b/, /f/, /h/, /z/, /l/ or /m/ exists in the root, can attach directly onto the root, along with other nominal affixes. The resulting noun means someone or something that performs the

⁵⁸ This needs to be compared with another noun, *aggərri* 'wisdom'. There is a likely connection between them, but this is beyond the scope of this study.

action of the root in question. The strategy is for *a-* or *t-* to appear before the Agentive *ma-*, with the initial *m* geminating unless stress occurs in the antepenultimate syllable, as figure 3-6 below demonstrates.

Figure 3-6 structure of the nominalised root with *-ma/-na* prefix
 nominalising prefix AGENTIVE root PL
a-/t- *ma- / na-* *-an/-wan/-en/-tan*

As roots of Tuareg origin gain syllables as a result of adding morphemes, the resulting construction will retain the same rules of stress, vowel elongation and consonant elongation discussed in Section 3.1.2. Table 3-34 demonstrates a few of these nouns of Tuareg origin, as they occur with roots of two syllables.

verb root	gloss	w/ agentive	gloss	ma- Agentive plural
1 <i>éddəd</i>	'press down'	<i>ammádad</i>	's-one who presses down'	<i>imáddaadan</i>
2 <i>éddəg</i>	'lead'	<i>ammádag</i>	'leader'	<i>imáddaagan</i>
3 <i>édyər</i>	'to stick, glue'	<i>ammádyar</i>	'glue'	<i>imádyaraan</i>
4 <i>éddən</i>	'graze'	<i>ammáddan</i>	'animal grazing'	<i>imáddiigan</i>
5 <i>éddər</i>	'live'	<i>ammúddar</i>	'animal'	<i>imúuddaaran</i>
6 <i>édrər</i>	'need'	<i>ammádrar</i>	's-one in need'	<i>imádraaran</i>
7 <i>éddərəz</i>	'leave traces'	<i>ammádráz</i>	'tracker'	<i>imádraazan</i>
8 <i>éddəz</i>	'be tired'	<i>ammáddaz</i>	'tired person'	<i>imáddaaзан</i>
9 <i>édgət</i>	'jump in pain/surprise'	<i>amádgat</i>	's-one jumping in pain/surprise'	<i>imádgaaзан</i>
10 <i>édhəl</i>	'be useful'	<i>ammádhəl</i>	'helper'	<i>imádhəalen</i>
11 <i>éyray</i>	'study'	<i>ammáyray</i>	'student'	<i>imáyraayan</i>
12 <i>éflay</i>	'be rich'	<i>annáflay</i>	'rich man'	<i>ináflaayan</i>
13 <i>égyək</i>	'work in a field'	<i>ammágyək</i>	'farmer'	<i>imagíyyaakan</i>
14 <i>égyət</i>	'testify'	<i>ammagíyyat</i>	'witness'	<i>imagíyyaatan</i>
15 <i>ékfəf</i>	'discover'	<i>ammákʃaf</i>	'discoverer'	<i>immákʃaafan</i>
16 <i>énsay</i>	'beg'	<i>ammánsay</i>	'beggar'	<i>immánsaywan</i>
17 <i>élkək</i>	'weak'	<i>ammálkək</i>	'weakling'	<i>immálkəakan</i>
18 <i>éngəd</i>	'put on turban'	<i>ammánɡad</i>	'young man, recently received turban'	<i>immanɡaaden</i>
19 <i>éryəm</i>	'scold'	<i>ammáryəm</i>	'scolder'	<i>immáryəaman</i>
20 <i>éfrəy</i>	'to judge'	<i>ammáʃray</i>	'judge'	<i>imáʃraayan</i>
21 <i>étkəl</i>	'lift up'	<i>ammátkul</i>	'one lifted up'	<i>imátkəalan</i>
22 <i>éstər</i>	'be discreet'	<i>ammástur</i>	's-one discreet'	<i>imástuuran</i>
23 <i>éwəy</i>	'dance'	<i>ammáway</i>	'dancer'	<i>imáwwaayan</i>
24 <i>éxlək</i>	'create'	<i>ammáxlək</i>	'creator'	<i>immáxləakan</i>

25	ázræg	'draw water for animals'	annázrag	's-one who draws water for animals'	inázraagan
26	áyray	'learn'	ammáyray	'student'	imáyraayan
27	ázri	'replace'	ammázri	's-one who replaces'	imázraayan
28	dállæg ⁵⁹	'decorate'	ammádlag	'decorator'	imádlaagan
29	zéyyad	'add, increase'	ammázyad	'extra person'	imázyaadan

The same pattern of stress placement and vowel and consonant elongation occurs with roots that have more than two syllables, as Table 3-35 demonstrates.

Table 3-35 Tuareg verb roots with three or more syllables, no other prefixes, taking ma-Agentive

	verb root	gloss	w/ agentive	gloss	plural
1	éffəga	'discover'	anəffəga	'discoverer'	inafəggaanan
2	əmməgən	'eat evening meal'	annamməgan	's-one eating evening meal'	inaməggaanan
3	érəkkam	'be weak'	ammárkam	'weaking'	imárkaaman
4	érəkkən	'change direction'	ammárkən	's-one changing direction'	imárkaanen
5	əriiyəd	'release suddenly'	aməriiyad	'prisoner released from prison unexpectedly'	imaríyyaadan
6	ərrəzərəz	'break w/ force'	amarrəzzərəz	'sthg broken w/ force'	imarrəzraazan
7	əzəgərəlləz	'move slightly in sitting position'	annazgárləz	's-one moving slightly in sitting position'	inazgárlaazan
8	bəriiyət	'throw sthg @ target'	annabbáryat	's-one throwing sthg @ target'	inabáryaatan
9	báttəqət	'completely ruin'	annabátqat	's-one who has been badly hurt in accident'	inabátqaatan
10	fəkərkər	'shake violently'	anafəkkərkər	'person shaking'	inafəkərkəran

⁵⁹ Numbers 28 and 29 are exceptional, in that the root does not begin with ə-. However, in other respects they do conform to the overall rule of stress placement and elongation.

11	zəzərgən	'make dirty'	anazəzərgan	violently' 'unclean person'	inazəzərgeenan
12	səbbəkəd	'sin'	annasbákkad	'sinner'	inasbákkaadan
13	səbbooka	'perform shamanism'	anásbooka	'shaman'	inasbókkaadan

In principle, any verb root of Tuareg origin with derivational affixes can be nominalized as well.⁶⁰ By far, the most common occurrence of this involves verb roots with the causative prefix *s-* and its allomorphs. In general, if the verb root being nominalised has derivational prefixes attached, the nominalising affixes will attach, and the normal rules of stress placement and vowel and consonant elongation described in Section 0 will apply. One key difference between agentive nouns with derivational affixes and those without is that those with derivations affixes generally do not undergo vowel changes. Table 3-36 has some common examples of nominalised verb roots of Tuareg origin with the Causative *s-* and its allomorphs.

Table 3-36 Tuareg roots with ma- Agentive, derivational morphemes on the root: Causative				
verb root w/ derivational morpheme	gloss	singular w/ Agentive	gloss	plural w/ Agentive
1 zəbzəg	'drive people crazy'	annazəbzəg	's-one who drives others crazy'	inazəbzəggen
2 səddəkud	'cause to measure'	amasəddəkud	's-one who orders measurements to be made'	imasəddəkkuuden
3 səddən	'cause animals to be taken to pasture'	ammasəddən	's-one who sends animals to be taken out to pasture'	imasəddənen
4 sədwəl	'provide for s-one else to raise up'	ammasədwəl	's-one who helps to raise up'	imasədwəllen
5 səɣray	'teach'	ammasəɣray	'teacher'	imasəɣraayan
6 ʃəʃʃək	'doubter'	ammaʃəʃʃək	's-one who raises doubt'	imaʃəʃʃəken
7 səssəs	'cause to bind up tightly'	ammasəsəs	's-one who causes to bind up tightly'	imasəssəsən

⁶⁰ See Section 0 for a discussion of derivational affixes in Tagdal.

8	з́рзəγ	'cause to bless'	annaз́рзəγ	's-one who pays for blessings for others'	inaз́рзəγγan
9	sátrəb	'cause to do quickly'	ammasátrəb	'person who works quickly'	imasátrəbbaan
10	sáhhosay	'cause to be beautiful'	amasáhhosay ⁶¹	'person who works in beauty'	imasəhóssaayan
11	sídəd ⁶²	'cause to follow closely'	ammasídəd	'person sends s-one else to follow closely'	imasíddəden
12	síləs	'cause to repeat'	ammasíləs	'person who causes to repeat'	imasílləsen
13	з́ззərrəb	'cause to taste'	anaз́ззərrəb	's-one who causes s-one else to taste'	inaз́ззərrəbaan
14	з́ззəd	'force to bow down'	amaз́ззəd	's-one who forces to bown down'	imaз́ззədān
15	з́ззəwab	'cause to answer'	annaз́ззəwab	's-one who causes to answer'	inaз́ззəwwaaban
16	з́зз́bbəgbəg	'cause to puff up'	anaз́зз́bbəgbəg	'flatterer'	inaз́зз́bbəgbəg
17	źzri	'cause to replace'	ammaźzri	's-one who causes to replace'	imaźzraayan

In principle, any verb root of Tuareg origin with the Reciprocal affix *nəm-* can be nominalised, though actual instances are relatively rare. The resulting noun takes the

⁶¹ Since in Agdal culture, people who work in beauty shops are usually women, this word would normally have the feminine prefix *t-*. The resulting noun would be *tamasáhhosay* 'woman who works in a beauty', with the plural being *šimasəhóssaayan*. However, for the sake of simplicity, I left the feminine prefix out. The male equivalent is *šab koy*, literally 'shaver' (see Table 3-40), a man who travels between various encampments offering beautifying services to men, especially shaving and cutting hair.

⁶² In examples 11 and 12 the roots in question begin with the vowel /i/.

meaning of, approximately, 'people who are doing action X to each other or together'. Stress usually falls on the antepenultimate syllable, especially if it contains the derivational affix, and follows the normal pattern for vocabulary of Tuareg origin described in Section 0. Due to the nature of the Reciprocal, these nouns are plural by default. Table 3-37 shows some examples.

Table 3-37 Tuareg verb roots with *ma-* Agentive, with other derivational morphemes on the root: Reciprocal

root	gloss	w/ derivational morpheme	Gloss	w/ Agentive	
1	əhkəm	'destroy'	nómməhkəm	'destroy each other'	inəməhkəmmen
2	əgyəl	'be faithful'	nómmədɣəl	'be faithful to each other'	imanəmmədɣəl ⁶³
3	əffəd	'borrow'	nómməfəd	'borrow from each other'	inanəməffəden
4	əfrəz	'separate'	nómməfrəz	'separate from each other'	inanəməfrəzzan
5	əgra	'understand'	nómməgra	'understand each other'	imanəməgraanan
6	əlləd	'put arms around'	nómmələd	'put arms around each other'	inanəməllədan
7	əzzəl	'hand sthg over w/ hand outstretched'	nómzəzzəl	'hand sthg over to each other'	imanəmzəzzələn
8	səsləm	'greet'	nəmsəsləm	'greet each other'	imanəmsəsləmmen
9	zəzɣəl	'pull hand-over-hand'	nəmzəzɣəl	'pulling s-one out of a hole hand-over-hand w/ rope'	inanəmzəzɣələn

In the same way, any verb root of Tuareg origin with the Passive affix *təw-* can be nominalised, though actual instances are relatively rare. The resulting noun means, approximately, 'person who is undergoing action X'. Stress falls on the syllable with the *təw-* prefix, and follows the familiar patterns for Tuareg vocabulary described in Section 3.1.2, as Table 3-38 demonstrates.

⁶³ This example is exceptional because in its nominal form it does not take the plural suffix – *en/-an*.

Table 3-38 Passive Tuareg verb roots, ma- Agentive, other derivational morphemes:

	verb root w/ derivational morpheme	gloss	singular w/ Agentive	gloss	plural w/ Agentive
1	táwwəzlay	'differentiated'	amatəwwəzlay	'person who was left out'	imatəwəzlaayyan
2	táwwətkəl	'taken'	amatəwwətkəl	'kidnappe d person'	imatəwətkəllan
3	táwwəzma	'squeeze'	amatəwwəzma	'squeezed person'	imatəwwəzman
4	táwwəxfəl	'locked'	amatəwwəxfəl	'person locked up'	imatəwəxfəllan
5	táwwədħəl	'helped'	amatəwwədħəl	'person helped'	imatəwədħəllan
6	təwzəzlay	'caused to be differentiated'	amatəwzəzlay	'person caused to be left out'	imatəwzəzlaayyan

It is not unknown for an Agentive noun to be formed with two or more derivational morphemes. In general, these follow the stress and syllable formation rules found in Section 3.1.2, as well as the normal order for multiple derivational prefixes found in Section 3.1.2. Table 3-39 demonstrates.

Table 3-39 Tuareg verb roots with two or more derivational prefixes, ma- Agentive

	verb root w/o agentive	gloss	root with multiple derivational prefixes	Combination of derivational affixes	gloss
1	əɣray	'learn'	amasəssəɣray	CAUS, CAUS	'one who causes teaching (i.e. school administrator)'
2	əɣray	'learn'	amatəwəssəɣray	PASS, CAUS	'one who is caused (forced?) to learn' ⁶⁴

⁶⁴ The image here is of students who are held prisoners in school and forced to learn.

3	jíkəl	'travel'	imasənəmƶákkuulen	CAUS, REC	'ones who are caused to travel together'
4	kórəd	'tie up, hobble'	imatəwməmsəkórəddan	PASS, REC, CAUS	'ones who are caused to be tied up together (i.e. as prisoners)'
5	málləyət	'race'	imanəmsəmələyyəten	REC, CAUS	'ones who race together'
6	málləyət	'race'	amasəsəmálləyət	CAUS, CAUS	'one who causes the race to occur (i.e. racing organiser)'
7	səgla	'go' ⁶⁵	imatəwnəmsəglen	PASS, REC, CAUS	'ones who were sent together'

Songhay roots

In most cases, Songhay and Tuareg roots are relatively easy to distinguish from each other in Tagdal. This section includes a brief discussion of Songhay verb roots, including how to determine whether most roots are nouns or verbs. The discussion of how roots of Songhay origin are nominalised with the suffix *-en* continues, as well as how Songhay cognates form Agentive nouns.

Determining verb vs noun

Since Songhay roots have little or no morphology to speak of in Tagdal, in most cases it is the location in the clause or sentence that determines whether a particular item is a noun or a verb. Nominalised verb roots of Songhay origin will be otherwise indistinguishable from verbs, except for their distribution in the clause or sentence. In Examples 3.1 through 3.3, those marked with *a* will contain an example where the root distributes like a typical verb, while *b* will include examples where the root will distribute like a noun.

⁶⁵ Examples 7 is formed from the suppletive Tuareg forms of the Songhay *koy* 'go'. (See Section 0.)

3.1a sa nité, iiriguuna-a harwá.
 sa ni= te iiri= guuna =a harwa
 SBDR 2SG arrive 1PL see 3SG still
 'When you arrived, we were still watching it (the movie).'

3.1b har nin te.
 har ni= n te
 until 2SG GEN arrive
 'Until you arrive.' (i.e. 'I'll see you when you get here.')

3.2a iiriyeēziikaat-i ənda nin faarayyen.
 iiri= yeezi kat =i ənda ni= n faarayyen
 1PL return VEN 3PL with 2SG GEN friends
 'We sent them back with your friends.'

3.2b yeeziikaat-a asəkóy hínzin ha!
 yeezi kat =a a= səkoy hínzin ha
 return VEN 3SG 3SG NEG.FUT fix thing
 'Returning it isn't going to fix a thing!'

3.3a γatəkóy Táhousa ənda-a.
 γa= tə- koy Táhousa ənda =a
 1SG FUT go Táhousa with 3SG
 'I will go with her to Táhousa.'

3.3b insəkóy da waalá ha fo ənda kóynan.
 ni= səkoy da waala ha fo ənda koy -nan
 2SG FUT.NEG do absolutely nothing with go ALL
 'You won't accomplish absolutely anything by going over there.'

Nominalising suffix *-yén*

A limited number of roots of Songhay etymology are nominalised by means of a suffix *-yén*, where the stress shifts to the syllable with the suffix and the initial /y/ in the suffix elongates, rather than the initial vowel. They are *bay* 'know', *bun* 'die', *may* 'have' and *wi* 'kill'.⁶⁶ Table 3-40 demonstrates how these are nominalised.

Table 3-40 Songhay roots nominalised with *-yén*

	root	gloss	nominalised root	gloss
1	bay	'know'	bayyén	'knowledge'
2	bun	'die'	buyyén	'death'

⁶⁶ I make no claim to this being an exhaustive list; there may be other roots nominalised by this means, of which I am currently unaware.

3	may	'have'	mayyén	'ownership'
4	wi	'kill'	wiyyén	'killing'

The rather limited distribution of this construction indicates that they may form a special case. However, for the moment this matter requires further study.

Agentive koy

By far the majority of Songhay verb roots in Tagdal are nominalised by means of an Agentive using the noun *koy*, literally 'lord' or 'master'. In principle, most any root of Songhay etymology can be nominalised in this manner, except for those which take the nominaliser *-yén*. Table 3-41 demonstrates a few common examples.

Table 3-41 Songhay roots nominalised with *koy* 'master'

	root	gloss	nominalised root	gloss
1	bis	'surpass'	bis koy	'the best'
2	dayná	'forget'	dayná koy	'forgetful person'
3	gab	'be inflexible'	gab koy	'stubborn person'
4	gar	'guard'	gar koy	'person who guards'
5	hárhor	'laugh'	hárhor koy	'funny person'
6	hurrú	'seek'	hurrú koy	'seeker'
7	je	'speak'	je koy	'speaker'
8	kəmmá	'find'	kəmmá koy	'finder'
9	kud	'herd'	kud koy	'shepherd'
10	nas	'be fat'	nas koy	'fat person'
11	qos	'cut'	qos koy	'cutter'
12	ǰab	'shave'	ǰab koy	'man who travels between encampments offering services to make men attractive'
13	zay	'steal'	zay koy ⁶⁷	'thief'
14	zúuru	'run'	zúuru koy	'fast runner'

The Agentive *koy* can also apply to the roots in Table 3-39, as Table 3-42 indicates.

Table 3-42 Songhay roots nominalised with *-yén*, with Agentive *koy*

	root	gloss	nominalised root	gloss
1	bayyén	'knowledge'	bayyén koy	'diviner'
2	buyyén	'death'	buyyén koy	'master of death'
3	mayyén	'ownership'	mayyén koy	euphemism for God (lit. 'owner of everything')

⁶⁷ Younger Tagdal speakers tend to use the Tuareg cognate *abáydag* 'thief'.

4 wiyyéñ 'killing' wiyyéñ koy 'assassin'

koy 'master' can also be combined with nouns of either Tuareg or Songhay etymology, in order to indicate either Ownership or to indicate some kind of relationship to the semantic properties of the noun in question, as Table 3-43 demonstrates.

Table 3-43 *koy* 'master' with nouns

	noun	gloss	combination	gloss
1	ámñəs	'camel'	ámñəs koy	'camel owner'
2	báyna	'slave'	báyna koy	'slave owner'
3	fiiʒi	'sheep'	fiiʒi koy	'sheep owner'
4	isúdar	'food'	isúdar koy	'chef'
5	zúula	'commerce'	zúula koy	'merchant'
6	táayde	'personality'	táayde koy	'popular person'
7	tágmar	'hunting'	tágmar koy	'good hunter'

3.2 When to use Songhay and Tuareg vocabulary

Tagdal has certain occasions in which Songhay or Tuareg cognates are the correct choice. In most cases, the default vocabulary will be of Songhay origin, while Tuareg cognates are used when more information is necessary.

3.2.1 Generic vs. specific

One of the main functions of Songhay versus Tuareg cognates has to do with determining generic versus specific. The generic vocabulary item will almost always be of Songhay origin, while Tuareg vocabulary is used for specification. It is also a matter of domains of language use. Since Tagdal speakers are essentially part of the Tuareg socio-economic sphere, most of the overall lexicon is of Tuareg origin. Table 3-44 gives just a few examples.

Table 3-44 Generic Songhay, specific Tuareg

	generic noun	gloss	specific noun	gloss
1	kámba	'hand, arm'	áyyəl	'right hand'
			zəlgət	'left hand'
			táymur	'elbow'
			ammánsur	'forearm'
			tagóltəm	'upper arm'
2	hinʒiini	'goat'	azzóləy	'adult male goat'
			áynəs	'baby goat'

			asságay	'6-12 month old goat'
			éɣayd	'young goat'
			afféli	'newborn goat'
3	hánǰi	'dog'	abbórzia	'hunting dog'
			abbáykor	'street dog'
			áykar	'puppy'
4	ízze	'child'	bárar	'boy'
			aggúgəl	'orphan'
			ammáwa	'adolescent'
			áwta	'youngest child'
			abbíyyaw	'pre-teen'

Two possible exceptions to this otherwise general rule of Songhay generic, Tuareg specific. First, the Tuareg generic word *ámṇəs* 'camel', plural *imṇəs*, with the Songhay cognate *yu* 'adult female camel' and its plural *yúwwan*. Otherwise, however, all other nouns for camels in Tagdal are of Tuareg origin. Second, Songhay has two words for sibling: *káyna* 'younger sibling, plural *kaynéen* and *ber* 'older sibling', plural *beerén*. The Tuareg equivalent is *affáqeɣ* 'brother', which can only specify as far as masculine or feminine (see next section).

3.2.2 Masculine vs. feminine

As a further specification, Tuareg nouns can also differentiate between masculine and feminine, as Table 3-45 demonstrates. The feminine affix is *t-* (see Section 0), and the nouns in question follow the general rules of stress, word formation, consonant and vowel length, etc... described in Section 3.1.2. Unlike Tuareg languages, no grammatical agreement is required between masculine and feminine.

Table 3-45 Masculine vs. feminine, Tuareg nouns

	masuline noun	gloss	feminine noun	gloss
1	abbórzia	'hunting dog (m)'	tabbórziat	'hunting dog (f)'
2	abbáydəg	'thief (m)'	tabbáydəg	'thief (f)'
3	abbóbaz	'cousin (m)'	tabbóbaz	'cousin (f)'
4	addágal	'father-in-law'	taddágal	'mother-in- law'
5	affáryas	'desert tortoise (m)'	taffáryas	'desert tortoise (f)'
6	allólli	'noble free man'	tallóllit	'noble free woman'

7	ammáwaḍ	'adolescent (m)'	tammawat	'adolescent (f)'
8	ammadérgəl	'blind man'	tammadérgəl	'blind woman'
9	ammanókal	'king'	tammanókal	'queen'
10	ammáyaay	'porcupine (m)'	tammáyaay	'porcupine (f)'
11	ámɣar	'old man'	támɣar	'old woman'
12	aʃʃáqeɣ	'brother'	taʃʃáqeɣ	'sister'
13	áwta	'youngest boy'	táwtat	'youngest girl'
14	bágzan	'show horse (m)'	tabágzan	'show horse (f)'
15	móknud	'dwarf (m)'	tamóknud	'dwarf (f)'

3.2.3 Large vs. small

The Tuareg prefix *t-* can also function to distinguish between large and small nouns, as Table 3-46 demonstrates.

Table 3-46 Large vs. small, Tuareg nouns

	masuline noun	gloss	feminine noun	gloss
1	abbóraybəray	'applause'	tabbóraybəray	'light, polite applause'
2	áɖɖaz	'fatigue'	táɖɖaz	'slight tiredness'
3	áyɾəm	'town'	táyɾəm	'village'
4	áftək	'cloak'	táftək	'short cloak'
5	agírrəmɾəm	'complaint'	tagírrəmɾəm	'minor complaint'
6	akkábbar	'bowl'	takkábbar	'small bowl'
7	akkáfwar	'mountain'	takkáfwar	'hill'
8	allággaz	'watermelon'	tallággaz	'small watermelon'
9	arkánay	'suffering'	tarkánay	'slight difficulty'
10	assámməd	'leather sack'	tassámməd	'small leather sack'
11	attókkən	'clay water container'	tattókkən	'small clay water container'
12	azzəggəz	'knife'	tazzəggəz	'dagger'

3.3 Adjectives, adverbs

3.3.1 Adjectives

In Tagdal, adjectives typically match the nouns they modify in number, either singular

or plural. There is no grammatical gender. Since the morphological behaviour of adjectives depends heavily on the etymology of the root, this section first covers adjectives of Songhay origin, followed by those of Tuareg origin. Special attention will be paid to how adjectives are formed morphologically from roots.⁶⁸

Songhay

The adjectivising suffix is *-an* or *-nan*, if the root ends in a vowel. Stress will remain in the original syllable in the singular. In their plural form stress will shift to the syllable with the plural adjectiviser *-en* or *-nen*. Table 3-47 demonstrates some common adjectivised roots of Songhay origin.

Table 3-47 adjectives, Songhay cognates

	Root (noun, verb)	gloss	w/ adjvr, singular	gloss	w/ adjvr, plural
1	buuhú	'burlap' (noun)	buuhúunan	'made of burlap (sg)'	buuhuunén
2	deegí	'to hang'	deegíinan	'hanging'	deegiinén
3	fáarad	'to sweep'	faráadan	'swept away (sg)'	faaradnén
4	fas	'to dig'	fáasan	'dug up (sg)'	fasnén
5	fik	'to bury'	fíikan	'buried (sg)'	fíknén
6	fuufú	'to be cold'	fuufúunan	'cold (sg)'	fuufuunén
7	fuunús	'to light on fire'	fuunúusan	'lit on fire (sg)'	fuunusnén
8	gar	'to guard'	gárnan	'guarded (sg)'	garnén
9	gúugut	'polish'	gúuguutan	'polished (sg)'	guugutén
10	ze	'be old'	zaanúunan	'old'	zaanuunén
11	kəkáy	'to build'	kəkáynan	'built (sg)'	kəkaynén
12	kuukú	'be long'	kuukúunan	'long (sg)'	kuukén
13	mor	'be far'	móornan	'far'	moornén
14	mun	'to spill'	múunan	'spilled (sg)'	muunén
15	nam	'to bite'	náaman	'bitten (sg)'	naamén
16	ǰiidi	'to be red'	ǰiidiinan	'red (sg)'	ǰiidiinén
17	waryá	'be large'	waryá	'large'	waryén

A few Songhay roots do not take any adjectiver in the singular form, but do take an adjectiviser in their plural, with stress shifting to the syllable with the adjectiviser. Table 3-48 demonstrates.

⁶⁸ The line between adjectives, relative clauses and verbs in Tagdal is quite opaque, and the three categories have a number of overlapping functions. However, here, I will only cover morphological issues relating to adjectives.

Table 3-48 adjectives, Songhay cognates w/ no adjvr in singular form

	Root (noun, verb)	gloss	w/ adjvr, singular	gloss	w/ adjvr, plural
1	biibi	'be black'	biibíi	'black'	biibén
2	dúŋguuru	'be short'	dúŋguuru	'short'	duŋguurén
3	hiimí	'to clean'	hiimí	'cleaned'	hiimiinén
4	waryá	'be large'	waryá	'large'	waryén

A few adjective forms tend to be irregular. In Table 3-49, Examples 1 through 3 take both the Songhay adjectivising suffix *-u* or *-i*, plus *-an*. Examples 4 and 5 have reduplication. These examples loosely match those appearing in Christiansen-Bolli (2010: 134, 135), though not all of the cognates there match what occurs in Tagdal. For example, Example 13 in Table 3-46 in Tadaksahak would be *mormoríinan* 'far' (ibid), not *mórnan*.

Table 3-49, irregular adjectives of Songhay origin

	Root (noun/verb)	gloss	w/ adjvr, singular	gloss	w/ adjvr, plural
1	zen	'be old'	zaanúunan	'old'	zaanuunén
2	nas	'be fat'	naasúunan ⁶⁹	'fat'	naasuunén
3	qoq	'be dry'	qooyíinan	'dry'	qooyiinén
4	qos	'cut'	qósqoosan	'cut'	qosqoosén
5	was	'boil'	wáswaasan	'boiled'	waswaasén

Tuareg

Just like adjectives of Songyay origin, those of Tuareg origin will match the noun they are modifying in number. However, there are some key differences between the way that Tagdal treats adjectives derived from roots of Tuareg origin, from those of Songhay origin. First, stress in adjectives derived from Tuareg roots will tend to occur in either the penultimate or antepenultimate syllable. Second, the vowel in the stressed syllable will usually be long, at least in the singular form, unless it is /ə/. Third, stress will not shift in the plural form, unless maintaining it where it is would cause it to fall before the antepenultimate syllable. Fourth, the default plural adjectiviser is *-nen* or *-nan*, not *-en*.

The adjective of Tuareg origin, described in Figure 3-7, begins with the Subject Relative prefix ə-.⁷⁰ If the Tuareg root begins with /ə/, an epenthetic /y/ will be inserted, which will cause the initial /ə/ in the root to shift position to [i].⁷¹ The

⁶⁹ A few speakers I have heard use the form *naasén* 'fat', though *naasúunan* seems to be more common. This requires more study.

⁷⁰ The relation between the Subject Relative marker ə- and the participle in Berber languages, discussed briefly in the next chapter, is something that will require more study.

⁷¹ Like Christiansen-Bolli, I represent this orthographically here as /i/ for the sake of simplicity.

adjectivising suffix follows, either *-an* or *-nan* in the singular or *-en* or *-nen* in the plural.

Figure 3-7 adjective morphology, roots of Tuareg origin that begin with *-ə*
 Subject Relative verbal prefix (if begins with *-ə*) root adjr
ə- *y-* *-nen*

Table 3-50 demonstrates some examples of adjectives derived from two-syllable Tuareg roots.

Table 3-50 adjectives, Tuareg cognates, two syllables

	Root (noun, verb)	gloss	w/ adjvr, singular	gloss	w/ adjvr, plural	gloss, PL
1	áddəd	‘to press down’	əyidáadan	‘pressed down (sg)’	əyidádnen	‘pressed down (pl)’
2	áddər	‘to live’	əyiddáaran	‘alive (sg)’	əyiddárnən	‘alive’
3	ádrər	‘to need’	əyidráaran	‘needed (sg)’	əyidrárnən	‘needed (pl)’
4	əhhəd	‘to swear, give oath’	əyiháadan	‘pertaining to an oath (sg)’	əyihádnen	‘pertaining to an oath (pl)’
5	əffər	‘to promise’	əyiffáaran	‘promised (sg)’	əyiffárnən	‘promised (pl)’
6	ətəkəl	‘to lift up’	əyiṭkáalan ⁷²	‘lifted up (sg)’	əyiṭkálnən	‘lifted up (pl)’
7	əṅkəd	‘be careful’	əyiṅkáadan	‘carefully (sg)’	əyiṅkádnen	‘carefully (pl)’
8	əqqəb	‘to traverse’	əyiqqáaban	‘traversed (sg)’	əyiqqábnen	‘traversed (pl)’
9	əqqəl	‘to wait’	əyiqqáalan	‘waited for (sg)’	əyiqálnən	‘waited for (pl)’
10	ətəkəl	‘to lift up’	əyiṭkáalan	‘lifted up (sg)’	əyiṭkálnən	‘lifted up (pl)’
11	əzzár	‘be first, lead’	əyizzaáaran	‘leader (sg)’	əyizzárnən	‘leader (pl)’
12	əzma	‘squeeze’	əyizmáayan	‘squeezed (sg)’	əyizmáynən	‘squeezed (pl)’
13	əzri	‘replace’	əyizráayan	‘replaced (sg)’	əyizráynən	‘replaced’
14	kérəd	‘to tie hands together’	əkráadan	‘having hands tied together’	əkrádnen	‘having hands tied together’

⁷² This example is unusual, in that in its singular form, stress shifts from the original syllable.

15	məʒʒəq	'to debate'	məʒʒáayən	(sg) 'debated (sg)'	məʒʒáyənən	(pl) 'debated (pl)'
16	zəddəg	'be holy'	zəddiigan	'holy (sg)'	zəddəgnən	'holy (pl)'

Table 3-51 demonstrates examples of adjectives derived from roots with three or more syllables.

Table 3-51 adjectives, Tuareg cognates, three or more syllables

	Root (noun, verb)	gloss	w/ adjvr, singular	gloss	w/ adjvr, plural	gloss, PL
1	bəttəqət	'ruin complet ely'	bəttəqqáatan	'comple tely ruined'	bəttəqqáatnən	'comple tely ruined (pl)'
2	əddəryəl	'be blind'	əyiddəryáalan	'blinded'	əyiddəryáalnən	'blinded (pl)'
3	əffərəz	'separate '	əyiffərzáaran	'separat ed'	əyiffərzáarnən	'separat ed (pl)'
4	ərrəreggət	'chase down w/ force'	ərrəreggáatan	'chased down w/ force'	ərrəreggáatnən	'chase down w/ force (pl)'
5	wánniifət	'look for sthg put down earlier'	wanifáatan	'searche d for, put down earlier'	wanifátnən	'searche d for, put down earlier (pl)'

A few irregular roots of Tuareg origin take the plural adjectiviser *-en*. Table 3-52 demonstrates some of these.

Table 3-52 adjectives, irregular Tuareg cognates, plural advr *-en*, other

	Root (noun, verb)	gloss	w/ adjvr, singular	gloss	w/ adjvr, plural	gloss, PL
1	əbbər	'scratch'	əyibráaran	'scratched'	əyibráaren	'scratched'
2	benná	'be good for nothing'	bennán	'good for nothing'	bennén	'good for nothing'
3	dəlbəb	'be fat'	dəlbəbban	'fat'	dəlbəbben	'fat'

4	dórən	'to desire'	dóran	'wished for'	dóraanen	'wished for'
5	hóssay	'be beautiful'	hóssaayan	'beautiful'	hóssaynen	'beautiful'
6	miiží	'to separate'	miižán	'separated'	miižén	'separated'
7	málluulu	'to shine'	málluulan	'shiny'	mállúulen	'shiny'

3.3.2 Adverbs

True adverbs form a fairly closed system, indicating additional spatio-temporal and manner information to the Verb Phrase. Table 3-53 indicates the adverbs in Tagdal and their function.

Table 3-53 adverbs in Tagdal

	manner		spatio-temporal	
tármət	'quickly'	meeraddaayóoda	'this very instant'	
wúllen	'much, very'	ne / néeda	'here'	
səllán	'slowly'	fen / fēnda	'there'	
		kanžin	'before'	

Tagdal has a number of other time expressions, such as the connector *hazinaláqqam* 'after that'. For example, *meerá* 'now' is a connector with both spatio-temporal and syntactic functions, and will be discussed in the following chapter.

3.4 Adpositions

Tagdal has only one preposition, the instrumental or accompaniment marker *nda*, while all others are postpositions. Adpositions are usually preceded by either a Noun Phrase, pronoun or proclitic. Or in the case of *nda*, the NP follows. In cases where the NP does not need to be mentioned overtly, a proclitic or pronoun will be present either before or after. Table 3-54 lists the possible adpositions, along with their glosses and functions.

Table 3-54 list of adpositions in Tagdal

Preposition	gloss	function	postposition	gloss	function
nda	'with'	Instrumental, Accompaniment	sa	'for'	Dative
			kan	'in', 'at'	Locative
			daayó	'at' ('chez')	Locative
			béena	'on', 'over'	Locative

3.5 Verbs

Since Songhay and Tuareg verb roots are usually distinguishable in Tagdal,⁷³ this section will include, first of Songhay cognates, then of Tuareg cognates, followed by a discussion of the derivational morphemes which affix onto verb roots of Tuareg origin.

3.5.1 Songhay cognates

In general, Songhay verb roots are often distinguishable by their syllable patterns. By far the most common verb roots of Songhay origin have only one syllable and carry a CVC pattern. Table 3-55 demonstrates some of the more common verb roots of Songhay origin with CVC syllable patterns.

Table 3-55 Songhay verb roots with CVC syllable pattern

1	dut	‘pound (grain)’
2	may	‘have’
3	kaw	‘remove’
4	dab	‘dress’
5	ʃin	‘say’
6	koy	‘go’
7	hay	‘give birth’
8	ʦon	‘fill up’
9	daw	‘send’
10	har	‘declare, praise’
11	zoq	‘fight’
12	ben	‘finish’
13	kan	‘fall’
14	man	‘call, name’
15	man	‘be far’
16	gar	‘save, guard’
17	bun	‘die’
18	ʃat	‘fly’
19	bis	‘pass by’
20	bay	‘know’
21	fer	‘open’
22	nin	‘drink’
23	tuk	‘hide’
24	nam	‘bite’
25	yed	‘return’
26	kud	‘go to the bush with flock’

⁷³ See, for example, the discussion on syllable patterns of Songhay and Tuareg cognates in Christiansen-Bolli (2010:50-51).

27	qos	‘cut up’
28	nas	‘be fat’
29	giʃ	‘leave’
30	fad	‘be hungry’
31	waw	‘insult’
32	ban	‘be flexible’
33	dor	‘be in pain, hurt’
34	ʃab	‘apply make-up’
35	mun	‘spill’

When an additional vowel is added to a verb root of Songhay origin with a CVC pattern, such as (for example) when a direct object clitic attaches directly onto the verb, the initial vowel lengthens, so that the new syllable pattern is either CV̇:CV or CV:CV̇.⁷⁴ Examples 3.4 through 3.6 demonstrate a just few cases in which the initial vowel in the verb roots from Table 3-54 lengthen due to the addition of a vowel, in this case the third person singular direct object clitic.⁷⁵

3.4 vowel lengthening, Songhay cognates, verb root *nin* 'drink'

	noun Direct Object		clitic Direct Object	
	anín aʃfáhi.		aníin-a	
a=	nin	aʃfahi	a=	nin =a
3SG	drink	tea	3SG	drink 3SG.OBJ
	'He drank tea.'			'He drank it.'

3.5 vowel lengthening, Songhay cognates, verb root *qos* 'cut'

	noun Direct Object		clitic Direct Object	
	iiriqos háamu.		iiriqóos-a	
iiri=	qos	háamu	iiri=	qos =a
1PL	cut	meat	1PL	cut 3SG.OBJ
	'We cut the meat.'			'We cut it.'

3.6 vowel lengthening, Songhay cognates, verb root *hur* 'enter'

	noun Direct Object		clitic Direct Object	
	nihúr húggu.		nihúur-a .	
ni=	hur	húggu	ni=	hur =a
2SG	enter	house	2SG	enter 3SG.OBJ
	'You entered the house.'			'You entered it.'

Table 3-56 demonstrates some common verb roots of Songhay origin with CV syllable patterns.

⁷⁴ The same process occurs in Tadaksahak (Christiansen-Bolli 2010: 79).

⁷⁵ I have chosen the third person singular direct object clitic in the following examples only for the sake of simplicity; the central point here is lengthening of the initial vowel in the root.

Table 3-56 Songhay verb roots with CV syllable pattern

1	da	‘do’
2	ʃi	‘be, not have’
3	ki	‘stop, stand’
4	wa ⁷⁶	‘eat’
5	wi	‘kill’
6	na	‘give’
7	te	‘arrive’
8	bi	‘be black’
9	to	‘suffice’

All of the cases in Table 3-57 are of verb roots of Songhay origin with CV:CV syllable patterns.

Table 3-57 Songhay verb roots with CV:CV syllable pattern

1	báara	‘be’ (locative)
2	báaya	‘want, love, need’
3	buubó	‘be penitful’
4	guuná	‘look’
5	ziidá	‘walk’
6	kéeni	‘sleep’
7	ziiní	‘grab’
8	kuukú	‘be long’
9	huunú	‘go out’
10	ʃidi	‘be red’
11	goorá	‘sit, stay’
12	zúuru	‘run’
13	híinjin	‘fix, arrange’

In such cases, the addition of a Direct Object clitic will result in the final vowel becoming elided, as in Examples 3.7 through 3.9. In some of these cases, the third person plural clitic =*i* is used, since eliding the vowel /a/ before the third person singular =*a* will not result in any discernible difference. In those cases where stress falls on the second syllable of the root, vowel elision will result in stress falling on the clitic instead.

3.7 vowel lengthening, Songhay cognates, verb root *baaya* ‘love’

	noun	Direct Object			clitic	Direct Object	
	abáaya	an	ízzen.		abáay-i		
a=	baaya	a=	n	izzen	a=	baaya	=i
3SG	love	3SG	GEN	children	3SG	love	3PL.OBJ
	‘She loves her children.’					‘She loves them.’	

⁷⁶ In several mainstream Songhay languages, this word actually has a CCV pattern *ɲwa* ‘eat’.

3.8	vowel lengthening, Songhay cognates, verb root <i>guuná</i> 'see'
	noun Direct Object clitic Direct Object
	anʒiguuná alfaqqiitan. anʒiguun-í.
anʒi=	guuna alfaqqiitan anʒi= guuna =i
2PL	see judges 2PL see 3PL.OBJ
	'You(pl) saw the judges.' 'You(pl) saw them.'

3.9	vowel lengthening, Songhay cognates, verb root <i>huunú</i> 'exit'
	noun Direct Object clitic Direct Object
	nihuunú taɣaaysar aayó. nihuun-á.
ni=	huunu taɣaaysar aayo ni= huunu =a
2SG	exit mess DEF 2SG exit 3SG.OBJ
	'You escaped that mess.' 'You escaped it.'

Some Songhay verb roots with more than one syllable close the first syllable with a nasal consonant. Most, though not all, of these verb roots will take stress on the final syllable, as Table 3-58 demonstrates.

Table 3-58 Songhay verb roots with CVNCV or CVNCVCV

1	hámbaara	'fear'
2	dumbú	'slaughter' (lit. slit throat)
3	homboorí	'play drums'
4	zumbú	'descend'
5	hangá	'hear'

Finally, some Songhay cognates in Tagdal which do not fit the general patterns described above, as shown in Table 3-59.

Table 3-59 other

1	zaabén	'divide in half, share'
2	kəmmá	'find'
3	kəbbáy	'run into someone'
4	kəkkáy	'build'
5	háʃfi	'look/, understand'
6	hurrú	'search'
7	daabés	'add onto'
8	kúrkur	'burn'
9	karfó	'tie someone with rope'
10	bánda	'back, behind'
11	kámba	'handle, take care of'

3.5.2 Tuareg cognates

Like Songhay cognates, cognates of Tuareg verb roots in Tagdal tend to follow

certain recognisable patterns. A typical uninflected verb root without any derivational morphemes attached would begin with /ə/. These would generally be verb roots which in Tadaksahak, Tagdal's sister Northern Songhay language, would begin with /y/ rather than with /ə/. As is the case with adjectives of Tuareg origin in Tagdal, in cases where the epenthetic /y/ appears, the /ə/ in the root shifts position to [i]. Table 3-60 below demonstrates a few Tuareg cognates that both Tagdal and Tadaksahak share.

Table 3-60 some Tuareg cognates in Tagdal and Tadaksahak

	Tadaksahak root	Tagdal root
1	yíftay 'spread out'	éftay 'spread out'
2	yílkəd 'overtake'	élkəd 'overtake'
3	yíŋgəd 'put on turban'	éŋgəd 'put on turban'
4	yizəŋkəz 'push away'	əzəŋkəz 'push away'
5	yírəb 'almost catch sthg'	érəb 'almost catch sthg'
6	yítkəl 'take'	étkəl 'take'
7	yíxfəl 'lock up'	éxfəl 'lock up'
8	yízzəl 'reach out'	ézzəl 'reach out'

Uninflected verb roots of Tuareg origin function as the imperative, generally used to give commands. Whereas the /y/ in Tadaksahak verbs tends to be part of the root which disappears altogether in certain environments (see Christiansen-Bolli 2010: 52), in Tagdal it only occurs in an epenthetic role in cases where the verb has a Perfective marker. Examples 3.10 through 3.12 demonstrate how /y/ occurs epenthetically in Tagdal, in roots that begin with /ə/.

3.10 verb root: əŋgəd 'put on turban'

ayíŋgəd an íman sa.

a=	əŋgəd	a=	n	iman	sa
3SG	put on turban	3SG	GEN	soul	DAT

'He put his turban on by himself.'

3.11 verb root: əxfəl 'lock'

iyíxfəl iiri kásaw kan.

i=	əxfəl	iiri	kasaw	kan
3PL	lock	1PL.IND	prison	in

'They locked us up in prison.'

3.12 verb root: əzzəl 'stretch out'

abáydag ayízzəl an kámba.

abaydag	a=	əzzəl	a=	n	kamba
thief	3SG	stretch out	3SG	GEN	hand

'The thief stretched out his hand.'

It is worth noting that the verbs in Examples 3.10 through 3.12 would be the same in either Tagdal or Tadaksahak, since /y/ occurs in almost identical environments in both languages. The main difference is that /y/ in Tadaksahak occurs in the root, in the imperative, whereas in Tagdal it does not.

A large number of uninflected and underived verb roots of Tuareg origin have two syllables and a $\acute{V}CCVC$ pattern. Stress falls on the penultimate syllable. Table 3-61 demonstrates some of these.⁷⁷

Table 3-61 2-syllable Tuareg cognates beginning with /ə/ and have $\acute{V}CCVC$ syllable patterns

1	ədbaɣ	‘close’
2	ədrər	‘need’
3	ədkar	‘fill up’
4	əfnəz	‘make small’
5	əfraay	‘be sick’
6	əfrəd	‘walk backward’
7	əgməm	‘give chewing tobacco’
8	əgrəz	‘please someone’
9	əɣbər	‘kick backwards’
10	əɣdər	‘sneak around’
11	əɣrəs	‘pass through’
12	əhkəm	‘govern, rule’
13	əhlək	‘destroy’
14	əkbəl	‘sustain’
15	əlyad	‘comfort’
16	əlkəd	‘overtake, pass’
17	əlməd	‘show, demonstrate’
18	əndər	‘break off’
19	əngəd	‘put on turban’
20	ərgən	‘cover with dirt’
21	əryəm	‘scold’
22	ərzəy	‘give blessing’
23	əsləm	‘greet’
24	əʃyəl	‘work’
25	əskat	‘separate’
26	ətrəb	‘do quickly’
27	əxsəs	‘survive’
28	əzləf	‘layer on thickly’
29	əzgər	‘exit’
30	əzrəg	‘draw water for animals’

Another common syllable pattern for uninflected Tuareg verb roots without

⁷⁷ This pattern is so common in Tagdal that in the interest of space, I have limited this list to only a few examples.

derivational affixes is $\acute{V}CCV$, also with two syllables. Like the cases above, stress falls on the penultimate syllable, as Table 3-62 demonstrates.

Table 3-62 2-syllable Tuareg cognates that begin with /ə/ and have $\acute{V}CCV$ syllable patterns

1	ádru	‘work together’
2	эгда	‘be equal’
3	эгра	‘understand’
4	эyli	‘surround’
5	экла	‘spend the day, take a break’
6	экса	‘spend the cool season s-where’
7	элку	‘scoop up’
8	элwa	‘add onto, make bigger’
9	энfa	‘win something’
10	энгу	‘break out’
11	энji	‘get up early’
12	эрти	‘mix together’
13	эзри	‘replace’

Two other common patterns for Tuareg verb roots in Tagdal is $\acute{V}CVC$, actually $\acute{V}C:VC$, since if the first consonant is a stop, nasal or sibilant, it will lengthen due to gemination.⁷⁸ Like other cases of Tuareg roots with two syllables, stress falls on the penultimate syllable. Table 3-63 demonstrates some examples.

Table 3-63 2-syllable Tuareg cognates that begin with /ə/ and $\acute{V}CVC$ or $\acute{V}C:VC$ syllable pattern

1	эnnəz	‘bend down’
2	эqqəb	‘leave’
3	эqqəl	‘wait, show patience’
4	эрəb	‘almost catch’
5	эрəg	‘contribute’
6	эрəs	‘lower’
7	эрəz	‘repay’
8	эssay	‘tie together’
9	эššay	‘illuminate’
10	эssəs	‘tie up tightly’

A few Tuareg cognate verb roots in Tagdal do not begin with /ə/ and have two syllables. Typically, in these cases stress would fall on the penultimate syllable as well, as Table 3-64 demonstrates.

Table 3-64 Tuareg cognates that do not begin with /ə/ and have two syllables

1	gárɣək	‘give someone the evil eye’
2	héekay	‘watch out for, be careful of’
3	máday	‘glue together’

⁷⁸ See section Christiansen-Bolli (2010) for a discussion of gemination in Tadaksahak.

4	nətfəs	‘fold’
5	qáyit	‘chase’
6	zə̀rəg	‘take animals to the well’

Table 3-65 demonstrates examples of verb roots of Tuareg origin that begin with consonants⁷⁹ and have more than two syllables and stress falls on the antepenultimate syllable. Therefore, the conditions described in Section 3.1.2 apply.⁸⁰

Table 3-65 Tuareg cognates w/ more than 2 syllables, antepenultimate stress

1	bəráỵbəray	‘applaud’
2	bə̀ttəqət	‘ruin completely’
3	bə̀bbəgət	‘blacken by the elements’
4	də́wwəkʃəʃ	‘make someone happy’
5	də̀bərdəbbər	‘crawl quickly’
6	fə́ddəgdəg	‘make sound of animal running’
7	fə́lliwəs	‘be happy’
8	fə̀rəkrək	‘vibrate’
9	gə́bbərrət	‘grab sthg out of someone’s hand’
10	gə́ruurus	‘make mewling sound’
11	gúruurəs	‘sing’
12	γóruurud	‘tumble, fall down’
13	hə́lləklək	‘pant, sputter’
14	káytaaran	‘spend 2-4 months deep in the bush w/ animals’
15	kə̀bərkəbər	‘limp’
16	mə́lluulu	‘clean until shiny’
17	mə́ttəkwi	‘move about’
18	hánnəfa	‘whine’
19	kórookod	‘be ashamed’
20	kubúŋkuubut	‘hide by covering up’
21	mə́ggə̀rəz	‘be discouraged’
22	tə́hhəmət	‘accuse’
23	tə́rəgət	‘jump to get sthg off back’
24	tə́wwaala	‘leap’
25	wánniifat	‘search for sthg put down earlier’
26	wə́ráỵwəray	‘look around and around for sthg’
27	wə́ʃʃəʃət	‘burn trash’
28	wə́ziiwəz	‘scatter’
29	zə̀bəỵzəbbəỵ	‘waddle’

⁷⁹ Other than s, z, ʃ or Z, since verbs that begin with these typically have a causative prefix (see below).

⁸⁰ A large number of these are cases of reduplication. However, the point here is that uninflected Tuareg verb roots with no derivational morphemes will usually have stress on the antepenultimate syllable.

30	zəllayla	'slither'
31	zəwəyɣəwəy	'pick at food a little at a time'

Table 3-66 contains some examples of Tuareg verb roots with more than two syllables, where stress falls on the penultimate syllable.

Table 3-66 Tuareg cognates w/ more than 2 syllables, begin w/ consonant, stress falls on penultimate

1	farákta	'inspect'
2	ləfáyɣəd	'be unpleasantly surprised, disappointed'
3	məyáyɣətər	'have difficulties, problems'
4	məzərzər	'try'
5	nətérmas	'arrest'
6	sabára	'cover woman seated on animal'
	sələyɣad	'plead'

Table 3-67 demonstrates some examples of Tuareg verb roots that begin with /ə/ and have more than two syllables. In those cases where stress falls in the antepenultimate syllable, the same conditions for Tuareg vocabulary described in Section 3.1.2 apply.

Table 3-67 Tuareg cognates w/ more than 2 syllables, antepenultimate stress, begin with /ə/

1	əffəga	'uncover, reveal'
2	ələttuutəg	'go easy on sthg or s-one weak'
3	əláfənzək	'break apart'
4	əmməgən	'eat during evening'
5	ənnəfli	'be at ease, be rich'
6	ərəbət	'wrinkle'
7	ərəkam	'be weak, not solid'
8	ərəkan	'push sthg forcefully'
9	əriiyəd	'release sthg suddenly'
10	ərrəragət	'chase down w/ force'
11	ərrəzzərəz	'break w/ force'
12	əssəyləf	'take one's leave'
13	əzzəlay	'differentiate'
14	əzənkəz	'push'

3.5.3 Derivational affixes

If the verb root is of Tuareg origin, then it will take one of three types of derivational prefixes, or combinations of more than one of these. The Tuareg derivational prefixes are: the causative *s-*, along with its allomorphs *f-*, *z-* and *ɣ-*;⁸¹ the reciprocal *nəm-*; and the passive *təw-*.

⁸¹ In Tabarog, which lacks /ɣ/ and /f/, the only allomorph is /z/.

When one of the derivational affixes attaches onto a Tuareg verb root, stress shifts onto the syllable with the prefix, unless this would cause it to fall before the antepenultimate syllable, in which case, stress would not shift. Otherwise, the conditions for Tuareg cognates described in Section 3.2.1 apply.

Causative

The default causative morpheme in Tagdal is *s-*, with /ə/ occurring in an epenthetic function if needed. In those cases where the Tuareg verb root begins with /ə/ and has two syllables, when the causative *s-* is added, no additional syllable is added. Therefore, stress remains in the penultimate syllable. Table 3-68 demonstrates the causative *s-* with verb roots that have two syllables.

Table 3-68 causative affix s(ə)- Tuareg cognates with two syllables

verb root	meaning	Causative morpheme	Verb w/ causative	Meaning w/ causative	
1	əŋkəd	'squeeze'	s-	sənkəd	'cause to squeeze'
2	ət̪t̪əf	'spit'	s-	sət̪t̪əf	'cause to spit'
3	əz̪zəd ⁸²	'bow'	s-	səz̪zəd	'cause to worship'
4	əhlək	'destroy'	s-	səhlək	'cause to destroy'
5	əhkəm	'reign'	s-	səhkəm	'cause to reign'
6	əkfəd	'nurse'	s-	səkfəd	'cause to nurse'
7	ədwəl	'grow up'	s-	sədwəl	'raise'
8	əfrag	'be able'	s-	səfrag	'cause to be able'
9	əxfəl	'lock'	s-	səxfəl	'cause to lock'
10	əsway	'make animal wait'	s-	səsway	'cause animal to wait'
11	əd̪baq	'close opening'	s-	səd̪baq	'close opening'
12	əddəz	'be tired'	s-	səddəz	'cause to be tired'
13	əgməm	'chew tobacco'	s-	səgməm	'cause to chew tobacco'
14	əyrəs	'pass through'	s-	səyrəs	'cause to pass through'
15	əyray	'study'	s-	səyray	'teach'
15	əyfər	'rent'	s-	səyfər	'cause to rent'
16	əyrəf	'water animals every other day'	s-	səyrəf	'cause to water animals every other day'
17	əlləm	'uncover'	s-	səlləm	'cause to uncover'

⁸² Normally, this verb root should take the causative allomorph Z(ə)-. However, this case is an exception.

18	ónṭa	‘begin’	s-	sónṭa	‘cause to begin’
19	édru	‘work together’	s-	sédru	‘cause to work together’
20	áktəb	‘write’	s-	sáktəb	‘cause to write’

In cases where the Tuareg verb root has more than two syllables, or would have more than two syllables when the causative prefix is added, stress shifts to the antepenultimate syllable of the with the causative prefix, as Table 3-69 demonstrates. When this happens, the conditions described in Section 3.1.2 apply.⁸³

Table 3-69 causative affix s(ə)-, Tuareg verb roots w/ more than two syllables, stress changes					
	verb root	meaning	Causative morpheme	Verb w/ causative	Meaning w/ causative
1	gərfət	‘kneel’	s-	səggərfət	‘cause to kneel’
2	əmməgni	‘bounce back’	s-	səmməgni	‘cause to bounce back’
3	əmməgən	‘eat in the evening’	s-	səmməgən ⁸⁴	‘cause to eat in the evening’
4	ərəkam	‘structurally weak’	s-	sərəkam	‘cause to be structurally weak’
5	əbbədar	‘live’	s-	səbbədar	‘cause to live’ (i.e. to save one’s life)
6	əssərqət	‘infiltrate’	s-	səssərqət	‘cause to infiltrate’
7	gəruurus	‘mewl like camel’	s-	səgruurus	‘cause to mewl like camel’
8	kərad	‘hobble animal’	sə-	səkkərad	‘cause to hobble animal’
9	kərkər	‘clean’	sə-	səkkərkər	‘cause to clean’
10	ləfləf	‘clamber quickly’	sə-	səlləfləf	‘cause to clamber quickly’
11	ləngət	‘hang’	sə-	səlləngət	‘cause to hang’
12	məggən	‘eat before sleeping’	sə-	səmməgən	‘cause to eat before sleeping’
13	əddərəz	‘leave traces’	sə-	səddərəz	‘cause to leave traces’
14	bəkkəmət	‘ambush’	sə-	səbbəkəmət	‘cause to ambush’

Table 3-70 demonstrates some exceptional cases, where the original stress remains

⁸³ In general, Tagdal accentual shift in the causative seems to be similar to the Perfective Causative, described in Heath (2005: 444-447), in the case of Tuareg spoken in Mali. Unfortunately, a study of derivational morphology and its effects on accentuation in the Tuareg languages of Niger has not been undertaken.

⁸⁴ In the case of *əmməgni* ‘bounce back’ and a few others, the initial long consonant is likely due to gemination, while the same long consonant in the causative form is likely due to elongation that accompanies the shift in stress to the antepenultimate syllable.

when the causative prefix is added, because stress already falls on the antepenultimate syllable.

Table 3-70 causative affix s(ə)-, Tuareg verb roots w/ more than two syllables, no stress shift

verb root	meaning	Causative morpheme	Verb w/ causative	Meaning w/ causative
1 əhálləklək	'sputter'	s-	səhálləklək	'cause to sputter'
2 əmməni	'meet w/ someone'	s-	səmməni	'cause to meet'
3 gálləfət	'grab quickly'	sə-	səgálləfət	'cause to grab quickly'
4 kərəbkərəb	'tremble'	sə-	səkkərəbkərəb	'cause to tremble'
5 kəbərbəkəbər	'limp'	sə-	səkkəbərbəkəbər	'cause to limp'

Table 3-71 demonstrates the occurrence of *f*- as an allomorph of *s*-.

Table 3-71 *f*- as allophone of *s*-

verb root	meaning	Causative morpheme	Verb w/ causative	Meaning w/ causative
1 əχfəd	'ruin'	f-	fəχfəd	'cause to ruin'
2 mətfa	'store'	fə-	fəmmətfa	'cause to store'
3 fəddən	'count'	fə-	fəffeedən	'cause to count'
4 əfrəχ	'judge'	f-	fəfrəχ	'cause to judge'
5 əfχəl	'work'	f-	fəfχəl	'cause to work'
6 əfrəχ	'judge'	f-	fəfrəχ	'cause to ruin'
7 əffək	'doubt'	f-	fəffək	'cause doubt'
8 əffaχ	'illumine'	f-	fəffaχ	'cause to illumine'
9 əfχəl	'work'	f-	fəfχəl	'cause to work'
10 gərfək	'be jealous'	f-	fəggərfək	'cause to be jealous'
11 kərfət	'break into small pieces'	fə-	fəkkərfət	'cause to break into small pieces'

ʒ- can also be an allomorph of *s*-, as table 3-72 demonstrates.

Table 3-72 *ʒ*- as allophone of *s*-

verb root	meaning	Causative morpheme	Verb w/ causative	Meaning w/ causative
1 əʒʒərgən	'be dirty'	ʒ-	ʒəʒʒərgən	'make dirty'
2 əməʒwər	'move tent'	ʒ-	ʒəmməʒwər	'cause to move around'
3 ʒənuunug	'wander'	ʒə-	ʒəʒənuunug	'cause to wander'
4 ʒərəb	'test'	ʒə-	ʒəʒʒərəb	'cause to test'

5	ázzək	‘beat’	3-	zázzək	‘cause to beat’
6	əzəggəlgəl	‘be hairy’	3-	zəzəggəlgəl	‘cause to be hairy’
7	zəwəb	‘respond’	3-	zəzəwəb	‘cause to respond’
8	əzzəl	‘hand over’	3-	zəzzəl	‘cause to hand over’
9	əzləg	‘place directly on top’	3-	zəzləg	‘cause to place directly on top’
10	zəlləd	‘bother’	3-	zəzzələd	‘cause to bother’
11	zəzəg	‘take animals to the well’	3-	zəzəzəg	‘cause to take animals to well’
12	zəbbəgbəg	‘puff up’	3ə-	zəzəbbəgbəg	‘cause to puff up’

z- can also be an allomorph of s-, as Table 3-73 demonstrates.

Table 3-73 z(ə)- as allophone of s(ə)-
verb root

	meaning	Causative morpheme	Verb w/ causative	Meaning w/ causative	
1	ənzəg	‘place’	z-	zənzəg	‘cause to place’
2	əzzəf	‘be naked’	z-	zəzzəf	‘cause to be naked’
3	ərzəm	‘pay’	z-	zərzəm	‘cause to pay’
4	əgzər	‘hold a grudge’	z-	zəgzər	‘cause to hold a grudge’
5	əzzar	‘be first’	z-	zəzzar	‘cause to be first’ (i.e. ‘rule’, usually unexpectedly)
6	zəddáy	‘know’ (someone)	zə-	zəzzəday	‘cause to know’
7	əzzəkət	‘cease’	z-	zəzzəkət	‘cause to cease’
8	ənəmməgzər ⁸⁵	‘be enemies’	z-	zənəmməgzər	‘cause to be enemies’
9	əmməzray	‘confuse’	z-	zəmməzray	‘cause confusion’
10	wəzziiwəz	‘scatter’	zə-	zəwəzziiwəz	‘cause to scatter’

⁸⁵ This is a case of the causative prefix z- occurring in the same verb as the Reciprocal nəm-. The occurrence of multiple derivational prefixes will be treated below in Section 3.5.

Reciprocal

Another derivational prefix in Tagdal is the reciprocal *nəm-*, which indicates that the subjects – by necessity plural – are either performing an action together or upon each other. Unlike Tadaksahak (Christiansen-Bolli 2010), in Tagdal *nəm-* does not have the allomorph *nə-*.

Whenever *nəm-* occurs with a verb root of Tuareg etymology, stress will shift to the syllable with the prefix, unless this would cause it to shift to before the antepenultimate, in which case it would not shift. In cases where stress shifts to the antepenultimate, it would have the same effects upon the penultimate syllable described in Section 3.1.2.⁸⁶ Table 3-74 demonstrates some common verb roots with the Reciprocal prefix attached.

Table 3-74 Tuareg verb roots with Reciprocal prefix

	verb root	gloss	w/ derivational morpheme	Gloss
1	ə̀hkəm	'destroy'	nóm̄m̄ə̀hkəm	'destroy each other'
2	ə̀gyəl	'be faithful'	nóm̄m̄ə̀d̄yəl	'be faithful to each other'
3	ə̀ffəd	'borrow'	nóm̄m̄ə̀fəd	'borrow from each other'
4	ə̀frəz	'separate'	nóm̄m̄ə̀frəz	'separate from each other'
5	ə̀gra	'understand'	nóm̄m̄ə̀gra	'understand each other'
6	ə̀lləd	'put arms around'	nóm̄m̄ə̀ləd	'put arms around each other'
7	ə̀tkəl	'seize'	nóm̄m̄ə̀tkəl	'seize each other'
8	ə̀zzəl	'hand sthg over w/ hand outstretched'	nóm̄m̄ə̀zəl	'hand sthg over to each other'
9	fəkə̀rkər	'shake about'	nəmfəkə̀rkər	'shake each other about'
10	gə̀bbərrət	'grab with force'	nəmgə̀bbərrət	'grab each other with force'
11	zə̀z̄z̄əl	'pull hand-over-hand'	nəm̄z̄ə̀z̄z̄əl	'pulling s-one out of a hole hand-over-hand w/ rope'
12	kə̀rə̀bkərə̀b	'tremble'	nəmkə̀rə̀bkərə̀b	'tremble together'
13	lə̀flə̀f	'scramble up quickly'	nəmlə̀flə̀f	'scramble up quickly together'

⁸⁶ As with the case of the causative, the shift in stress seems to be similar to what occurs in the Reciprocal in the Tuareg language of Mali (Heath 2005: 477-479).

14	səsləm	'greet'	nəmsəsləm	'greet each other'
15	təxfər	'rent'	nəmtəxfər	'rent together'
16	wəzɡət	'engage in sexual intercourse'	nəmwəzɡət	'engage in sexual intercourse w/ each other'

Passive

The third derivational prefix possible for verb roots of Tuareg origin is the passive voice *təw-*, demonstrated in Table 3-75. When the passive voice affix is attached to a verb root, stress normally shifts to the syllable with the prefix, unless this would cause it to fall before the antepenultimate syllable. If stress falls upon the penultimate prefix, it will have the same effects in the penultimate described in Section 3.1.2.⁸⁷

Table 3-75 passive affix <i>təw-</i>			
verb root	meaning	Verb w/ passive	Meaning w/ causative
1	bəkkəmət	təwbəkəmət	'ambushed'
2	ət̪t̪əf	təwwət̪əf	'spat'
3	əhlək	təwwəhlək	'destroyed'
4	əxfəl	təwwəxfəl	'locked'
5	əɣrəs	təwwəɣrəs	'pierced'
6	əɣray	təwwəɣray	'studied'
7	əɣfər	təwwəɣfər	'rented'
8	əɣfəd	təwwəɣfəd	'ruined'
9	əktəb	təwwəktəb	'written'
10	əlləm	təwwələm	'uncover'
11	ɡəlləfət	təwɡəlləfət	'grabbed quickly'
12	kərəd	təwkərəd	'animal hobbled'
13	kərɣət	təwkərɣət	'broken into small pieces'
14	ləngət	təwləngət	'hung'
15	zibbəgbəɡ	təwzibbəgbəɡ	'puffed up'

Multiple prefixes

Figure 3-8, based on Christiansen (2010: 53), demonstrates the order in which multiple derivational prefixes occur when attached to the root.

⁸⁷ Likewise, the stress shift in the Passive voice seems to be similar to what occurs in the Perfective Passive in the Tuareg language of Mali (Heath 2005: 467-468).

Figure 3-8 Multiple derivational affixes

Passive	Causative	Reciprocal	Causative	Root
təw-	s-	nəm-	s-	

Among attested combinations of multiple derivational prefixes are the following, given in Table 3-76:⁸⁸

Table 3-76 Attested cases of multiple derivational affixes

	combination	gloss
səssəyɾay	CAUS, CAUS	'cause to cause to learn'
təwəssəyɾay	PASS, CAUS	'be caused (forced?) to learn' ⁸⁹
təwməmsəyɾay	PASS, REC, CAUS	'be caused (forced?) to learn together'
nəmsəyɾay	REC, CAUS	'cause to learn together'
sənəmsəyɾay	CAUS, REC, CAUS	'cause to learn together'

3.5.4 Suppletion

Since the causative *s-*, the Reciprocal *nəm-* and the passive *təw-* can only attach onto verb roots of Tuareg origin, whenever a Songhay cognate is present and requires one of these three, Tagdal suppletes the Songhay verb root with one of Tuareg origin, with the prefix(es) in question already lexicalised.⁹⁰ Each of the suppletive forms of Tuareg origin follows the conditions for Tuareg vocabulary described in Section 3.1.2. Table 3-77 demonstrates some of the more common verbs of Songhay etymology and the Tuareg roots that supplete them.

One note of importance here: whereas the Tuareg suppletive verb forms are legitimate verbs in Tagdal, their root forms without the lexicalised prefixes are not. For example, the causativised verb *fəʔta* 'feed' (in effect, 'cause to eat') is a verb in Tagdal. The underived root **ʕfta* 'eat' is not. The verb 'eat' in Tagdal is *wa*. Likewise, the passive *təwwəkəs* 'exited' is a verb, the Tuareg verb **əkkəs* 'exit' is not.

⁸⁸ For the sake of simplicity, the root *əyɾay* 'learn' will be used here. However, others could theoretically be possible as well.

⁸⁹ In the contexts in which Passive and Causative co-occur, it seems that there may be an element of forcing something to occur. However, this requires more study. (See for example, *amatəwəssəyɾay* 'one who is forced to learn' in Table 3-38 as an alternative term for 'student'.)

⁹⁰ Benítez-Torres (2020) suggests that suppletion came about due to the prosodic processes that came into the language with Songhay and Tuareg vocabulary.

Table 3-77 Suppletion of Songhay cognates in the verb root

	Songhay	Verb root	Causative		Reciprocal		Passive	
1	báaya	'love'	sérat	'cause to love'	nómmərat	'love one another'	təwwərat	'loved'
2	bay	'know'	səşsen	'cause to know'	nómməşen	'know each other'	təwwəşen	'known'
3	ben	'finish'	səkkəsaw	'cause to finish'	nəmməkəsaw	'finish (for) each other'	təwwəkəsaw	'finished'
4	bis	'pass'	séekay	'cause to pass'	nómmeeKay	'pass each other'	təwweekay	'passed'
5	buubó	'multiply'	səggəd	'cause to multiply'	nómməgəd	'multiply together'	təwwəgəd	'multiplied'
6	bun	'kill'	sənyə	'cause to kill'	nómmənyə	'kill each other'	təwwənyə	'killed'
7	da	'give'	səssuuga	'cause to give'	nəməssuuga	'give to each other'	təwəssuuga	'given'
8	dab	'dress'	səlsa	'cause to dress'	nómməlsa	'dress each other'	təwwəlsa	'dressed'
9	daw	'send'	səssooka	'cause to send'	nəməssooka	'send each other'	təwəssooka	'sent'
10	don	'fill'	sədnay	'cause to fill'	nómmədnyay	'fill together'	təwwədnyay	'filled'
11	dut	'pound grain'	səssud	'cause to pound grain'	nómməlsud	'pound each others' grain'	təwwəlsud	'pounded'
12	fer	'open'	səssuura	'cause to open'	nəməssuura	'open (for) each other'	təwəssuura	'opened'

13	gar	'protect'	zázaygəz	'cause to protect'	nəmázaygəz	'protect each other'	təwázaygəz	'protected'
	giʃ	'set loose'	səwwiia	'cause to set loose'	nəmówwiia	'set each other loose'	təwwiia	'set loose'
14	goorá	'sit'	sətteema	'cause to sit'	nəmótteema	'sit together'	təwótteema	'sat'
15	gun	'look'	səswəl	'cause to look'	nəmməswəl	'look at each other'	təwwəswəl	'looked'
16	haŋgá	'hear'	səddərgən	'listen'	nəməddərgən	'hear each other'	təwəddərgən	'heard'
17	haŋgá	'accompany'	səssiidu	'cause to accompany'	nəməssiidu	'accompany each other'	təwəssiidu	'accompanied'
18	har	'declare'	səmməl	'cause to declare'	nəmməl	'declare to each other'	təwwəməl	'declared'
19	hay	'give birth'	səsseeru	'cause to give birth'	nəmmeeru	'give birth together'	təwweeru	'birthed'
20	huunú	'exit'	səwwəkəs	'kick out'	nəməwwəkəs	'leave together'	təwwəkəs	'exited'
21	ziiná	'grab'	səttərməs	'cause to grab'	nəməttərməs	'grab each other'	təwəttərməs	'grabbed'
22	kaw	'remove'	səkkus	'cause to remove'	nəmməkus	'remove each other'	təwwəkus	'removed'
23	kəkáy	'build'	səkrəs	'cause to build'	nəmməkrəs	'build each other up (i.e. encourage)'	təwwəkrəs	'built'
24	kəmmá	'find'	səgrəm	'cause to	nəmməgrəm	'find each	təwwəgrəm	'found'

				find'		other'		
25	keení	'sleep'	sánsa	'cause to sleep'	nómmansa	'sleep together'	táwwansa	'slept'
26	kuukú	'be long'	zázzagrət	'cause to be long'	nómázzagrət	'be long together'	táwzagrət	'made long'
27	koy	'go'	səgla	'cause to go'	nəmməgla	'go together'	təwwəgla	'gone'
28	may	'have'	səlla	'cause to have'	nəmməla	'have each other'	təwwəla	'had'
29	na	'give'	səkfa	'cause to give'	nəmməkfa	'give to each other'	təwwəkfa	'given'
30	jin	'say'	səssəna	'cause to say'	nəmməna	'say to each other'	təwwəna	'said'
31	te	'arrive'	súka	'cause to arrive'	nəmmuuka	'arrive together'	təwwuuka	'arrived'
32	tuk	'hide'	səyləf	'cause to hide'	nəmməyləf	'hide together'	təwwəyləf	'hidden'
33	wa / ɲwa	'eat'	ʃəʃta	'feed'	nəmməʃta	'feed each other'	təwwəʃta	'fed'
34	zaabén	'share'	zázzəm	'cause to share'	nəmməzəm	'share together'	təwwəzzəm	'shared'
35	zoq	'fight'	səknes	'cause to fight'	nəmməknes	'fight each other'	təwwəknes	'fought'

It is interesting to note that the suppletive forms follow all of the prosodic rules outlined in Section 3.1.2. For example, *haŋgá* 'hear' becomes *sáddərgən* 'listen', *nəmáddərgən* 'listen to each other' and *təwáddərgən* 'heard'.

3.5.5 Verb morphology

Tagdal has a number of bound morphemes which attach both before and after the verb root. With few exceptions outlined below, they do not take any stress, since typically stress falls somewhere in the verb root. Table 3-78 shows the major elements that attach onto the verb root.

Table 3-78 structure of the verb word in Tagdal

Part of speech	Pronominal Clitic	Negation	TAM	Verb root	-kat -nan	Pronominal Clitic
Function	Subject	Negation	TAM		direction	Direct Object

In addition, some of the bound morphemes that attach to the verb root, under certain circumstances attach into the Dative marker *sa*, as part of the Verb Phrase, to indicate the Indirect Object. Therefore, this will also be discussed in the following sections.

Pre-verbal bound morphemes

The three pre-verbal bound morphemes in Tagdal are the pronominal Subject, clitic the Negation markers and the Tense-Aspect-Mood marker, each of which will be discussed below.

Subject pronominal clitics

The Subject pronominal clitic in Tagdal marks the Subject of the clause and with few exceptions⁹¹ is usually a required element of the sentence. Table 3-79 shows the subject pronominal clitics in Tagdal:

⁹¹ See, for example the discussion of Subject relative clauses in Section 4.2.

Table 3-79 subject pronominal clitics in Tagdal

Person:	Singular	Plural
First	ya-/ ay-	iri-
Second	ni- / -in ⁹²	anji-
Third	a-	i-

Normally these appear attached before the root, as the first element of the verb, before the negation and TAM marker. The proclitic may also attach to the genitive marker *n*, adpositions and the Dative *sa*. Examples 3.13 through 3.18 demonstrate how the subject clitic to indicate the Subject of the clause.

3.13 **ya**təzəzzəbətkaat-a.⁹³
ya= tə- zəzzəbət -kat =a
1SG FUT CAUS come down VEN 3SG
'I'll make him come down.'

3.14 **ni**mɣaar-i ne da.
ni= m- gar -i ne da
2SG SBJ guard 3PL here EMPH
'You should keep them here.'

3.15 **a**kóy yáabu.
a= koy yaabu
3SG go market
'She went to the market.'

3.16 **iri**kungú taggəla kan.
iri= kungu taggəla kan
1PL satiate bread in
'We had our fill of bread.'

⁹² The first person singular clitic *-ay* only occurs as an Indirect Object with the Dative *sa*. The second person singular *-in* occurs as an Indirect Object with the Dative *sa*, as well as before the Negations *se-*, *nə-* and the Future *tə-*.

⁹³ *zəzzəbət* 'cause to descend' is the suppletive form of the Songhay cognate *zumbú* 'descend'.

3.17 bæssába **anji**təbáy.
 bæssába anji= tə- bay
 tomorrow 2PL FUT know
 'You (pl) will know tomorrow.'

3.18 sa **ité** daayó aayó, **iki**.
 sa i= te daayó aayó i= ki
 SBDR 3PL arrive place DEF 3PL stop
 'When they arrived in that place, they stopped.'

The subject proclitic also attaches to the Genitive marker *n* to indicate Ownership or Kinship, as Table 3-80 demonstrates.

Table 3-80 subject clitic with Genitive marker *n*

	singular		plural	
first person	yan káyna	'my younger sibling'	irin káyna	'our younger sibling'
second person	nin káyna	'your younger sibling'	anjín káyna	'your (pl) younger sibling'
third person	an káyna	'his, her younger sibling'	in káyna	'their younger sibling'

The Genitive *n* generally adjusts its place of articulation to its environment, as Table 3-81 demonstrates.

Table 3-81 subject clitic with GENITIVE marker *n* when followed by bilabial

	singular		plural	
first person	yam móota	'my car'	iirim móota	'our car'
second person	nim móota	'your car'	anjim móota	'your (pl) car'
third person	am móota	'his, her car'	im móota	'their car'

Negation

The negation prefix follows the pronominal clitic. Tagdal has three negation prefixes, each of which, in addition to Negation, encodes some form of TAM. In addition, the future negation is not part of the morphology per-se; rather, it occurs as a syntactic construction. Nevertheless, it will be covered here as part of the discussion on negation.

The Perfective Negation marker *n-* or *nə-* is the default Negation in most

spoken discourse, as well as in stative verbs. It indicates that an action did not occur at some definitive point or, in the case of stative verbs, something which is currently not the case, as Examples 3.19 through 3.24 demonstrate.

3.19 harwá **anəz**áwkaat-a.
 harwa a= nə zaw -kat =a
 yet 3SG NEG.PRF carry VEN 3SG
 'He has not brought it yet.'

3.20 tabárar aayó, **anəh**óssay.
 tabarar aayó a= nə hossay
 girl DEF 3SG NEG.PRF beautiful
 'That girl is not pretty.'

3.21 **inə**qbəl ha aayó
 i= nə əqbəl ha ayó
 3PL NEG accept thing DEF
 'They didn't accept

im bárar əzáwkat.
 i= n barar ə- zaw -kat
 3PL GEN son SUB.REL bring VEN
 what their son brought them.'

3.22 **yanə**dayná-a.
 ya= nə dayna =a
 1SG NEG.PRF forget 3SG
 'I didn't forget it.'

3.23 harwá iirinəhuun-á.
 harwa iri= nə huunu =a
 yet 1PL NEG.PRF leave 3SG
 'We haven't exited (from) it yet.'

3.24 boorén aayoonén, **inə**fræg
 booren aayoonén i= nə əfræg
 people DEF 3PL NEG.PRF able
 'Those people couldn't

sa itəyáræg.
 sa i= tə yaræg
 SBRD 3PL FUT live together
 live together (i.e. be neighbours).'

The imperfective negation is marked with the prefix *s-* or *sə-*. It indicates that a particular action is not the case at present, or was not the case in the past. Examples 3.25 through 3.29 demonstrate.

3.25 *γasəbwá ha aayó.*
 γa= sə- b wa ha aayo
 1SG NEG.IMP IMP eat thing DEF
 'I don't eat that.'

3.26 *asəbáy ha aayó amdá.*
 a= sə- bay ha aayo a= m da
 3SG NEG.IMP know thing DEF 3SG SBJ do
 'He doesn't know what he should be doing.'

3.27 *asəbsəməddərən waalá ha fo*
 a= sə- b sēmədrən waala ha fo
 3SG NEG.IMP IMP think nothing thing IDF
 'He doesn't worry about anything'

a-húngu kan.
 a= n hugu kan
 3SG GEN house in
 in his household.'

3.28 *isəbəddər*
 i= sə- əddər
 3PL NEG.IMP live
 'They are dead. (lit. they are not living).'

3.29 *iirisəbmáy ha.*
 iri= sə- b may ha
 1PL NEG.IMP IMP have thing
 'We didn't have anything.'

Normally, the Negation morpheme precedes the Tense-Aspect-Mood marker. However, in Tagdal the Subjunctive marker *m-* is followed by the Negation *sə-*, indicating that something should not happen, or should not be the case, as Examples 3.30 through 3.33 demonstrate.

3.30 *iirimsəđóos-a.*
 iri= m- sə- đos =a
 1PL SBJ NEG.IMP touch 3SG
 'We shouldn't touch it.'

3.31 **nimsəkóoy-a**
 ni= m- sə- koy =a
 2SG SBJ NEG.IMP go 3SG
 'You shouldn't go there.'

3.32 **anjimsəwá izzén aayoonén.**
 anji= m- sə- wa izzie -en aayo -en
 2PL SBJ NEG.IMP eat child PL DEF PL
 'You (PL) shouldn't eat those seeds.'

3.33 **imsəkeení dáayo aayó.**
 i= m- sə- keeni daayo aayo
 3PL SBJ NEG.IMP sleep place DEF
 'They shouldn't sleep there.'

The Future marker *tə-* cannot occur with a Negation prefix. Therefore, in order to negate the Future, a clause with the negated Subjunctive *msə-* can be combined with the verb root *koy* 'go', immediately followed by another clause whose verb contains the Subjunctive *m-* to indicate what will not happen. This syntactic construction forms a stronger injunction than the verb occurring only with *msə-*, as Examples 3.34 through 3.37 demonstrate.

3.34 **nimsəkóy nimbóy!**
 ni= msəkoy ni= m koy
 2SG FUT.NEG 2SG SBJ go
 'Don't go!'

3.35 **anjimsəkóy anjimḍós aarén aayoonén!**
 anji= msəkoy anji= m- ḍos aaro -en aayo -en
 2PL FUT.NEG 2PL SBJ touch man PL DEF PL
 'Don't touch (i.e. harm) those men!'

3.36 **nimsəkóy nimərmay!**
 ni= msəkoy ni= m ərmay
 2SG FUT.NEG 2SG SBJ fear
 'Don't be afraid!'

3.37 **nimsəkóy nimháfikat nin aláqqam!**
 ni= msəkoy ni= m hafī -kat ni= n alaqqam
 2SG FUT.NEG 2SG SBJ look VEN 2SG GEN back
 'Don't look back (toward here)!'

If *-msəkoy* is followed by an unconjugated verb root, the injunction is even stronger than if it is followed by a conjugated verb with the Subjunctive *m-*, along the lines of

a direct order to not perform the action in question, as in Examples 3.38 through 3.40.

3.38 **nimsəkóy** kóy!
 ni= msəkoy koy
 2SG FUT.NEG go
 'You're not going!'

3.39 anj**nimsəkóy** faw ás-a!⁹⁴
 anji= msəkoy faw a= sa =a
 2p' FUT.NEG show 3sg DAT 3sg
 'You (PL) are not going to show it to him!'

3.40 **nimsəkóy** maryá aaró boorén aayoonén kan!
 ni= msəkoy marya aaro boora -en aayo -en kan
 2SG FUT.NEG marry man person PL DEF PL in
 'You cannot marry a man from among those people!'

In Example 3.41, the injunction is made even stronger by the presence of *kaalá* 'never'.

3.41 kaalá **nimsəkóy** dós tabárar aayó!
 kaala ni= msəkoy dos tabarar aayo
 never 2SG FUT.NEG touch girl DEF
 'You're never to touch that girl!'

Tense-Aspect-Mood

In addition to the pronominal clitics and the negation prefixes, Tagdal also includes a number of prefixes and a zero-prefix, which comprise its Tense-Aspect-Mood subsystem. With the exception of the Subjunctive, these typically occur after the negation and before the verb root. The three TAM markers in Tagdal are the Perfective zero morpheme, the Imperfective *b-*, the Modal *m-* and the Future *tə-*.

The perfective aspect is the default choice in most spoken discourse, as well as with stative verbs. It denotes an action that took place and is now finished, or in the case of stative verbs, something which is currently the case. The perfective aspect is marked by a zero morpheme before the verb root, as in Examples 3.42 through 3.47.

3.42 yakóy.
 ya= koy
 1SG go
 'I left.'

⁹⁴ Example 3-36 is an example of stress shifting to the Indirect Object.

3.43 niguun-á.
ni= gun =a
2SG look 3SG
'You saw it.'

3.44 záɣnin, ánga ahóssay wúllen!
zaynin anga a= hossay wullen
wow 3SG.IND 3SG beautiful very
'Wow, that one sure is beautiful!'

3.45 ʃiiji aayó, iriyíddəz.
ʃiiji aayo iri= əddəz
night DEF 1PL tired
'That evening, we were tired.'

3.46 zayji aayó, anjiyéji ɣáy ɣan aʃʃayál.
jayji ayo anji= yeji ɣay ɣa= n aʃʃayál
day DEF 2PL return 1SG 1SG GEN work
'That day, you (PL) gave me back my job.'

3.47 iʃidəwkat alkáma
i= ʃidəw -kat alkama
3PL collect VEN wheat
'They collected the wheat.'

jiirén aayoonén hóssaynen kan.
jiiri -en aayo -en hossay nen kan
day PL DEF PL beautiful ADJR.PL in
on good days.'

Imperfective aspect, marked with the prefix *b-* before the verb root, indicates that an action was at one time the case, is presently the case, or that it is habitual, as Examples 3.48 through 3.53 demonstrate.

3.48 ɣabʃaw ísa-a.
ɣa= b- ʃaw i= sa =a
1SG IMP show 3SG DAT 3SG
'I was showing it to them.'

3.49 məʃiɡɡá⁹⁵ nibzəkkənzər?
 məʃiɡɡa ni= b- zəkkənzər
 why? 2SG IMP frown
 'Why were you frowning?'

3.50 tazzeri aayó abəyiş nin!
 tazzeri aayó a= b- əyiş nin
 hyena DEF 3SG IMP stalk 2SG.IND
 'That hyena was stalking you!'

3.51 iri**b**təraw!
 iri= b- teraw
 1PL IMP be related
 'We're related!'

3.52 məʃiɡɡá anjibhəfi faarayyen?
 məʃiɡɡa anji= b- haʃi faaray -en
 why? 2PL IMP look friend PL
 'Why are you (i.e. standing there) looking at each other?'

3.53 ibhangá nd-i.
 i= b- hanga nda =i
 3PL IMP accompany with 3PL
 'They hang out with them.'

In the Abargan and Kəl Illokoḍ varieties of Tagdal, in relaxed conversation the Imperpective marker *b-* is realised as [f] if the following conconant is voiceless. For example *abkóy* 'he is going' is pronounced [af'kəj] and *abtʃin* 'he says' is pronounced [af'tʃin].⁹⁶ This phenomenon also occurs among speakers of the Kəl Amdid / Tarbun variety of Tagdal, but seems to be rare and most common among older speakers.

French loan words beginning with /p/ are regularly pronounced with /f/. For example, *photocopies* would be pronounced [fottoko'fitan] and *projet* would be pronounced [faro:'ʒe].

The Subjunctive marker *m-* indicates that the action in question should or needs to happen. In some cases, the the Subjunctive can be used to give an order in a softer manner (see Section 4.9).

⁹⁵ The question word *məʃiɡɡá* 'why?', a combination of *məʃfi* 'what?' and the postposition *ga* 'on', is treated here as a single word, rather than as two words, for phonological reasons. First, stress in the first part *məʃfi* seems to disappear, occurring instead on the final syllable *ga*. Second, where the /ʃ/ would normally be long if *məʃfi* were alone, the presence of *ga* seems to cancel out this long consonant, shifting it instead to the /g/.

⁹⁶ [af'tʃi] in the Abargan variety

3.54 nin addələl ga, **ya**mkóy.
 ni= n addələl ga ya= m- koy
 2SG GEN fault on 1SG SBJ go
 'I need to go because of you.'

3.55 **ni**mkámba káyaatan kullú.
 ni= m- kamba káyaatan kullu
 2SG SBJ hand baggage all
 'You need to take charge of all the baggage.'

3.56 **a**mma insa nín azzúrəya.
 a= m- na in= sa ni= n azzurəya
 3SG SBJ give 2SG DAT 2SG GEN inheritance
 'He needs to give you your inheritance.'

3.57 **iri**mzumbúunaan-a
 iiri= m- zumbu -nan =a
 1PL SBJ descend ALL 3SG
 'Let's go down there.'

3.58 **anji**msənfu təgúuzi n fəddáy.
 anji= m- sənfu təguuji n fədday
 2PL SBJ recline tree GEN under
 'You (PL) should rest under a tree.'

In Example 3.59, the presence of the independent pronoun, followed by the Emphatic marker *da*, indicate a strong topicalisation of the Subject.

3.59 ínga da, **i**mjəwab ínsa.
 inga da i= m- jewab in= sa
 3PL EMPH 3PL SBJ respond 2SG DAT
 'They're the ones who should answer you.'

Tagdal marks the Future tense with the prefix *tə-*, after the negation marker and before the verb root. It denotes an action which in principle will occur at some point, but has not happened yet. The Future is the only TAM marker in Tagdal which cannot occur with a negation. Therefore, Tagdal depends on a number of other markers and syntactic structures to negate the Future. Examples 3.60 through 3.65 demonstrate.

3.60 mórnan, **ya**təbáq tassáhar!
 mor -nan ya= tə- baq tassahar
 far ALL 1SG FUT break door
 'Move away, I'm going to break (down) the door!'

3.61 nín, nibyédma
 nin ni= b- yedma
 2SG.IND 2SG IMP think
 'You? You think

sa intəjĩ íirin amanókal?
 sa in= tə- jĩ iiri= n amanokal
 SBDR 2SG FUT be 1SG GEN chief
 that you're going to be our chief?'

3.62 wáy aayó, atəjĩ ánga fóoda.
 way aayo a= tə- jĩ anga fo da
 woman DEM 3SG FUT be 3SG.IND one emph
 'That woman is going to be all alone.'

3.63 ámmaaka ha zĩ ədá, iritəbún!
 ammaaka ha zi ə- da iri= tə- bun
 if thing MED SUB.REL do 1PL FUT die
 'If THAT happens, we'll die!'

3.64 ámmaaka anjidá ha aayó yahár, anjitóddər.
 ammaaka anji= da ha aayo ya= har anji= tə- óddər
 if 2PL do thing DEM 1SG say 2PL FUT live
 'If you do what I say, you will live.'

3.65 təzzár, im món itəfér.
 təzzar i= n mo -n i= tə- fer
 then 3PL GEN eye PL 3PL FUT open
 'Then their eyes will be opened (i.e. they will understand).'

In many cases, Tagdal speakers perceive the Subjunctive and the Future as almost identical, and will use them interchangeably, even from one sentence to the next, with all the other essential elements identical. Examples 3.66 and 3.67 are part of just one conversation in which the Subjunctive and the Future were used fairly interchangeably. Regardless, this issue requires more study.

3.66 nimjĩn ása
 ni= m- jĩn a= sa
 2SG SBJ say 3SG DAT
 '(Please) tell him

sa bəssəba ɣatətənan-a.
 sa bəssəba ɣa= tə- te -nan =a
 SBDP tomorrow 1SG FUT arrive ALL 3SG
 'that tomorrow I'll arrive over there.'

3.67 áaywa, haziddá,⁹⁷ nimtənan bəssəba.
 aaywa hajidda ni= m- te -nan bəssəba
 yes exactly 2SG SBJ arrive ALL tomorrow
 'Yes, that's right, you should be arriving over there tomorrow.'

Suffixes

A number of elements follow the verb root in Tagdal. Most of these are bound morphemes, such as the directional suffixes *-kat* and *-nan*, as well as the Direct Object proclitic. This section will include these, as well as a discussion of the Dative marker *sa* and the Indirect Object.

Venitive *-kat*

The Venitive suffix *-kat*, or *-kaat* when followed by a vowel, indicates that the action is moving toward the speaker, as Examples 3.68 through 3.71 indicate.

3.68 ʃin ása amkóy**kat**.
 ʃin a= sa a= m- koy -kat
 say 3SG DAT 3SG SBJ go VEN
 'Tell him to come here.'

3.69 nimguuná**kat** ha aayó ɣəkəmmá.
 ni= m- guuna -kat ha aayo ɣa- kəmma
 2SG SBJ look VEN thing DEF 1SG find
 'Come look at what I found.'

3.70 álwaq aayó kan,
 alwaq aayo kan
 moment DEF in
 'In that instant,

⁹⁷ *haziddá* 'exactly that' is comprised of three elements, *ha* 'thing', the Medial demonstrative *zi* and the Emphatic marker *da*. However, for similar phonological reasons as in the case of *məʃiggá* 'why?', here it is treated as a single word.

γayígrakat sa irimbún.

γa=	əgra	-kat	sa	iri=	m-	bun
1SG	understand	VEN	SBDR	1PL	OPT	die

the understanding came to that we were going to die.'

- 3.71 máŋkat, γamguunákat nin!
 man -kat γa= m- guuna -kat nin
 approach VEN 1SG SBJ look VEN 2SG
 'Come closer (so that) I might look at you!'

Allative *-nan*

The Allative suffix *-nan*, or *-naan* when followed by a vowel, occurs relatively infrequently, especially in contrast to the Venitive *-kat*.⁹⁸ In general, *-nan* indicates that the action is moving away from the speaker, as in Examples 3.72 through 3.74.

- 3.72 iiridáwnaan-a nda-a.
 iiri= daw -nan =a nda =a
 1PL send all 3SG with 3SG
 'We sent her there with him.'

- 3.73 sa bæssóba, atéenan.
 sa bæssóba a= te -nan
 SBDR tomorrow 3SG arrive ALL
 'The next day, he arrived there.'

- 3.74 daáγo aayó amórnan.
 daayó aayó a= mor -nan
 place DEF 3SG far ALL
 'That place is far.'

There is one case in the database where *-kat* and *-nan* have a sort of derivational function, contrasting to form different meanings when affixed onto the same root. The root *day*, more or less meaning 'make a deal', when combined with the Allative and Venitive, give the root different meanings, at least from the outsider's perspective: *dáykat* 'buy' and *dáynan* 'sell'. Similarly, it might be possible to make the case that *koy* 'go', when combined with *-kat* becomes *kóykat* 'come'. However, *kóynan* 'go there' does not seem to be as common, and does not share quite the same nuances as *dáynan* 'sell'. Rather, *kóynan* 'go there' is rather unusual and limited to situations where the destination is already known. This is possibly because the default meaning of *koy* already implies moving away from. Regardless, the question of whether the

⁹⁸ In principle, though *-kat* means that the direction of the action is toward the speaker, in truth it occurs often enough that in speakers' minds there is little distinction in meaning between a verb root with *-kat* and one without it, especially in non-movement verbs.

directional markers *-kat* and *-nan* actually function as derivational morphemes with any other roots, and what relation, if any, they may have to Tuareg directional markers (see, for example, Lux 2011: 389) requires further study.

Direct Object

Finally, the Tagdal verb ends with the pronominalised third person singular or plural Direct Object clitics *=a* and *=i*. All other Direct Objects, when a pronoun rather than with a Noun Phrase, are independent pronouns, as Table 3-82 indicates.

Table 3-82 pronominal Direct Object markers

	singular	plural
first	yaay	iiri
second	nin	anʒi
third	=a	=i

Examples 3.75 and 3.76 demonstrate how the pronominalised Direct Object functions.

3.75 daayó aayó kan, iiridáykaat-**a**
 daayo aayo kan iiri= daykat =a
 place DEF in 1PL buy 3SG
 'It was in that place that we bought it.'

3.76 sa atóonaan-**i**, an-**í** izzé sa.
 sa a= to -nan =i a= na =i izzen sa
 SBDR 3SG fill ALL 3PL 3SG give 3PL child DAT
 'When he filled them up, he gave them to the children.'

In Examples 3.77 and 3.78, stress in the verb falls on the final syllable of the root. However, since in each case the final vowel is elided before the next vowel, stress shifts to the Direct Object.

3.77 anjimhang-**í**, imʒáaw **anʒi**.
 anji= m hanga =i i= m- jaw =anʒi
 2PL SBJ hear 3PL 3PL SBJ help 2PL
 Listen to them so that they can help you (PL).

3.78 ikəmm **íiri** táffaala kan.
 i= kəmma =iri tafaala kan
 3p find 1p hut In
 They found us in the hut.

In short, the verb word in Tagdal consists of three prefixes which occur before the verb root: the pronominal clitic, which indicates the Subject; the Negation, which includes a Perfective, Imperfective and Subjunctive Negation; and the Tense-Aspect-Mood subsystem. This includes a zero morpheme for the Perfective, as well as an Imperfective, a Subjunctive and a Future.

The verb in Tagdal also comprises of two suffixes, which occur after the verb root. These include a directional suffix, with *-kat* indicating that the action is moving toward the speaker and *-nan*, which indicates that it is moving away. The final suffix in the verb is then the First and second person plural and third person singular and plural pronominal clitics, which indicate the Direct Object.

Dative Indirect Object

The postposition Dative marker *sa* indicates the Indirect Object which typically carries the Beneficiary or UNDERGOER role. More importantly, however, when the Indirect Object is an attached clitic pronoun instead a Noun Phrase, the PRON-*sa* construction forms an accentual unit with the Verb Phrase. Table 3-83 indicates the form of the clitic pronoun Indirect Object which attaches onto the Dative marker *sa*.

Table 3-83 pronominal clitics with the Dative *sa*

	singular	plural
first	áy=sa	íiri=sa
second	ín=sa	ánzi=sa
third	á=sa	í=sa

Another key point is that Tagdal's default clausal word order is SVO. However, when both the Direct and Indirect Objects are present, the Indirect Object, indicated with the Dative *sa*, precedes the Direct Object. The Direct Object will appear either as a NP following the Dative *sa*, the third person proclitics *=a* or *=i* attached to the end of *sa* as bound morphemes, or as first of second person independent pronouns, as Table 3-84 indicates.

Table 3-84 non-NP Direct Objects following Dative *sa*

	singular	plural
first	sa yaay	s íiri
second	sa nin	s ánzi
third	s-a	s-i

The presence of both the Indirect Object and Direct Object clitics and pronouns effect the overall Verb Phrase in certain ways. First, if the verb root ends with a vowel, it will elide before the Indirect Object clitic attached to the Dative *sa*. Second, if the

Direct Object following *sa* begins with a vowel, the final vowel in *sa* will also elide.⁹⁹ Finally, the primary stress of the Verb Phrase, and therefore, of the clause, will shift onto the Indirect Object clitic. Examples 3.79 through 3.81 demonstrate these processes.

3.79 *zawkat áỵsa aʃʃáhi.*
 zaw -kat ya= sa aʃʃahi
 take VEN 1SG DAT tea
 'Bring me some tea.'

3.80 *may əšin ín̄sa sa intəkóy?*
 may ə- šin in= sa sa ni= tə- koy
 who SUB.REL say 2SG DAT SBDR 2SG FUT go
 'Who told you that you were going?'

3.81 *irihaar án̄zīsa, anjimsəd-á!*
 iri= har an̄zi= sa an̄zi= m- sə- da =a
 3SG declare 2PL DAT 2PL SBJ NEG.IMP do 3SG
 'We told you (PL) not to do it!'

In Examples 3.82 through 3.84, the final vowel in the verb root is elided before the Indirect Object.

3.82 *ad ása man Máno.*
 a= da a= sa man Mano
 3SG do 3SG DAT name Mano
 'He named him Mano.'

3.83 *an ír̄isa móota aayó.*
 a= na iri= sa móota aayó
 3SG give 1PL DAT car DEF
 'He gave us that car.'

3.84 *id ír̄isa ha horráanan.*
 i= da iiri= sa ha horra -nan
 3PL do 1PL DAT thing bitter ADJR
 'They made for us something bitter (i.e. made our lives miserable).'

Finally, in Examples 3.85 and 3.86, the final vowel of the Dative *sa* is elided in the presence of the Direct Object clitic or pronoun.

⁹⁹ Otherwise, it will not. For example, the unlikely sentence *asəkn áỵsa yaay* 'he showed me to myself', where the final vowel in *sa* does not elide because the Direct Object *yaay* does not begin with a vowel, is theoretically possible.

3.85 an **ims**-i.

a= na ni= sa =i
3SG give 2SG DAT 3PL
'He gave them to you.'

3.86 iiriqaran **is**-a.

iri= qaran i= sa =a
1PL read 3PL DAT 3SG
'We read it to them.'

