THE SEMANTIC BASIS OF NOUN CLASS SYSTEMS: THE CASE OF THE KI AND NGE CLASSES IN FULFULDE

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Cet article propose que la base d'un système à classes nominales est sémantique: les noms sont répartis dans les classes nominales pour des raisons sémantiques. Les données présentées proviennent de la langue fulfulde ou peule qui, comme beaucoup de langues Niger-Congo, est une langue à classes. Deux arguments sont présentés pour la motivation sémantique de la classification nominale. Le premier est que les mots d'emprunt sont intégrés dans les classes par analogie sémantique. Le deuxième argument repose sur la ré-analyse sémantique de la classe en NGE du dialecte fulfulde du Maasina (Mali), qui rend plus transparent le contenu sémantique de cette classe: en effet, tout mot qui ne désigne pas un bovin n'y utilise plus l'accord de la classe en NGE.

L'auteur montre aussi que les mots peuvent être groupés dans une classe selon un trait sémantique commun. Dans ce cas ils forment un champ sémantique. Les noms peuvent aussi se trouver dans un cadre sémantique selon le principe du domaine de l'expérience (*'domain of experience principle'*), à savoir: "S'il existe un domaine d'expérience fondamental associé à X, il est naturel que les entités dans ce domaine soient de la même catégorie que X" (Lakoff 1987:93). La culture des locuteurs d'une langue joue un rôle important dans la définition des domaines d'expérience fondamentaux: il faut donc bien tenir compte de la culture du peuple dont on tâche de décrire la langue.

This article argues that the basis of a noun class system is semantic: nouns in a nominal class are grouped together on semantic grounds. The data are from Fulfulde which has a noun class system, like many other Niger-Congo languages. Two arguments for the semantic motivation of nominal classification will be presented. A first argument is the fact that loan words are integrated in the noun classes by semantic analogy. A second argument is the semantic re-analysis of the NGE class in Maasinankoore (a Fulfulde dialect in Mali) which is rendering the content of this class semantically more transparent: all nouns that do not describe cows are no longer using the concord of the NGE class.

The author also shows how words can be semantically linked in a noun class: by sharing a semantic feature (a semantic field) or by occurring in the same domain of experience (semantic frame). The domain of experience principle states that "if there is a basic domain of experience associated with A, then it is natural for entities in that domain to be in the same category as A (Lakoff 1987:93). The culture of the speakers of a language plays an important role in the definition of the basic domains of experience. So it is necessary to take the culture of the people whose language one tries to describe into account.

1. NOMINAL CLASSIFICATION

Fulfulde has a noun class system, a characteristic feature of Niger Congo languages.[1] The Fulfulde dialect spoken in Maasina (Mali) known as Maasinankoore has twenty two noun classes. A speaker of Fulfulde must know the class of a noun in order to produce the correct agreements. A noun is morphologically marked with a class suffix. This is called overt gender: the class is clear from the noun itself and not only from the agreeing forms (Corbett 1991:44). A noun class system is therefore classified as a formal (morphological) system of gender. Nevertheless, a noun class system (a division of nouns into groups) always has a semantic basis: Corbett (p. 8) describes this in a linguistic universal which states that a (syntactically marked) division of nouns into groups always has a semantic core. This semantic basis of categorization is derived from human experience, that is why the semantics of noun classes is so important according to Lakoff:

> Language is among the most characteristic of human activities. To understand how human beings categorise in general, one must at least understand how human beings categorise in the special case of natural language. (Lakoff 1986:31)

[1] I would like to thank Felix K. Ameka, Caroline Angenent, Mirjam de Bruijn, Aysata Cissé, Mamadou A.A. Cissé, Issa Diallo, Han van Dijk, Gerrit J. Dimmendaal, Usman Koita, David Wilkins, Temore Tioulenta, and all Fulfulde speakers who ever assisted me, for sharing their knowledge with me, which led to the present insights in the semantics of Fulfulde noun classes.

The noun class systems which are so typical of the Niger Congo language family, categorise nouns into different classes. Therefore the semantics involved should tell us something about the way in which speakers of these languages categorise. Yet, previous attempts (Torrend 1903, Wils 1935, Merkies 1980) to draw conclusions about the cognition of speakers from the noun class system received much criticism, not without reason.

There are two main obstacles which have prevented linguists from unravelling the semantics of these noun classes. One obstacle is the limited vision on possible principles for the semantics of a noun class. A class is marked by one morpheme, hence it was concluded that this morpheme should have one (constant) meaning retrievable in all nouns formed with that class marker. Thus only one possible semantic motivation for a noun class was envisaged: namely the idea that all nouns in a class share one and the same semantic feature, thus forming a semantic field. Recent studies (Dixon 1982, Lakoff 1987) have shown that items can also be grouped in a semantic frame. A semantic frame is created by associations, the items are grouped together because they occur in the same domain of experience. Lakoff calls this The Domain of Experience Principle:

> If there is a basic domain of experience associated with A, then it is natural for entities in that domain to be in the same category as A. (Lakoff 1987:93)

The Domain of Experience Principle is an important innovation in the description of noun classification. It is a new tool that can be used to look for motivations for the classification of nouns, other than the simple sharing of one semantic feature.

A second obstacle to the research of semantic categorization in Niger-Congo languages follows from the domain of experience principle. Culture plays an important role in the definition of these domains of experience. Therefore culture is also important in the categorization of things. The mistake of Torrend (who based the meanings of the categories in Bantu languages on the order of events during and following the creation described in the book of Genesis) and others is not that they tried to make sense of the meaning of the categories signalled by nominal categorization, but that they judged the sensibility of possible semantic associations from a Western and Christian perspective. The false presumption that a Western point of view is a universal point of view can easily make one blind to the different perspectives on how things are related in other cultures. It is very human to regard one's own culture as universal, and all other cultures as a deviation from the normal pattern, but it is not scientifically correct. That a dominant Western point of view has consequences for the study of categorization in non-Western languages is stated explicitly by Lakoff:

> The fact is that people around the world categorise things in ways that both boggle the Western mind and stump Western linguists and anthropologists. More often than not, the linguist or anthropologist just throws up his hands and resorts to giving a list . . . (Lakoff 1987:92)

Seeing these fantastic constructions, many other linguists indeed resorted to lists and the search for the meaning of the noun classes became a subject that was not done. The semantic principles underlying the grouping of these nouns are at best ignored, or worse, it is made explicit that nothing sensible can be said about the grouping of the nouns into classes.

To the question whether the noun class system of Fulfulde is based on semantic grounds or on coincidences of similarity in form (phonological or morphological), Klingenheben (1941:105) opts for the last answer: (phonetic) coincidence. One of his arguments is based on the fact that some loan words are integrated into noun classes on the basis of the similarity of their last syllable with the form of a particular noun class marker. Another much quoted argument against the semantic basis of noun classes is

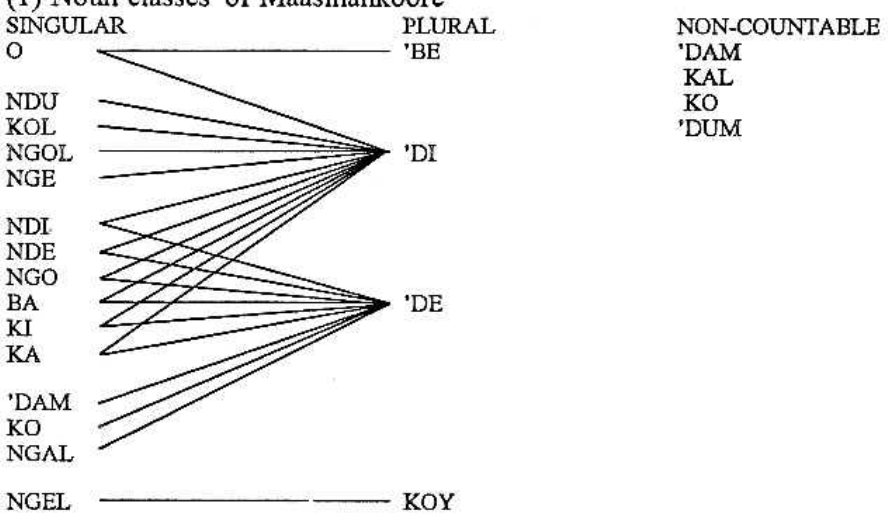
that certain semantic features which seem typical for one class can also be retrieved in other classes (e.g. Schadeberg 1985:72). For example in Bantu languages in general, the singular class 3 (***mu**) and its plural class 4 (***mi**) contain names of plants but plants are also found in other classes (Corbett 1991:48–49).

I want to defend the thesis that the semantic class assignment rules are primary in the Fulfulde noun class system. However, I do not want to claim that membership of a noun class is only based on semantic categorization of nouns, nouns can also be included on formal (morphological or phonological) grounds, as shown by loan words integrated on the basis of a formal similarity of the last syllable with a noun class suffix. However, the semantic categorization of the noun class system is more basic: the formal ascription to a noun class is triggered by a word (or group of words) which is in that noun class for semantic reasons.

2. THE FULFULDE NOUN CLASS SYSTEM

Previous studies have dealt with the semantic basis of the Fulfulde noun classes in different ways. There is consensus that noun classes can signal number and size (cf. Arnott 1959, Lacroix 1967, Labatut 1986, Tioulenta 1991). Depending on dialect, certain classes can function to form singular, plural, diminutive, and augmentative forms in the same nominal paradigm. However, certain classes formerly distinguished as singular classes have to be categorised as non-countable (Breedveld 1995:269). This is confirmed by the study of Mohamadou (1994) who links the feature dense to classes containing non-countable nouns. Data for my description of noun classes are based on the Fulfulde spoken in Maasina: Maasinankoore.

(1) Noun classes[2] of Maasinankoore



The reason why so far no semantic motivations for class assignment have been found (other than number and size) is that investigations have concentrated on finding a semantic feature that is shared by all the nouns in a particular class. Indeed, some Fulfulde noun classes can be described as a semantic field (e.g. the 'BE class contains nouns describing people). However, terms can also be linked by association, in which case they do not necessarily share one semantic feature, but they can be found in a pragmatic relation to each other, for example because of their occurrence in the same context. In this way the content of a noun class can be described as comprising a semantic network of associations. In this article the semantics of two noun classes are

[2] The apostrophe preceding a consonant indicates laryngealized voicing of that consonant. It is used for the capital forms of the laryngealized consonants, ('B = capital ɓ, 'D is capital ɗ). The apostrophe preceding [y] (i.e., 'y) represents a laryngealized palatal affricate.

described to exemplify the semantic networks which structure the content of most noun classes[3] in Fulfulde, a smaller number of noun classes can be described as one semantic field[4] (Breedveld 1995:295–460).

The grouping of nouns in two Fulfulde noun classes, the KI and the NGE class, are described here to show arguments for the semantic motivation of noun class assignment rules and to show some of the problems which occur in the research on the semantic core of the Fulfulde noun class system. The nouns in the KI class are thought to be grouped around the notion 'tree' and the nouns in the NGE class are thought to be grouped around the notion 'cow'. The establishment of possible semantic associations within a particular language requires knowledge of culture specific information about that language community. In order to know the associations of the concepts 'tree' and 'cow' in the Fulfulde speaking community, co-operative interdisciplinary research is imperative. Insights from anthropological studies, oral traditions, folk comments, shared intuitions of native speakers, and personal observations of language use in context form the basis for the study of possible concept associations in the Fulfulde speaking community.

There is some language internal evidence that these concept associations do indeed play a role in the noun class assignment rules in Fulfulde. Evidence for the semantic class assignment rules of a noun stem comes from the way in which nouns which are borrowed from another language into Fulfulde obtain a noun class agreement, and when a loan word is integrated, how it acquires a noun class suffix. That loan words obtain a class on both formal grounds (phonological similarity between the last syllable in a loan word and a class suffix) and on semantic grounds (semantic analogy with an existing Fulfulde noun) has been demonstrated in a study on French and Bambara loan words in Maasina Fulfulde by Tioulenta (1991:172–78). Evidence for the semantic assignment rules of a noun to a particular class may come from dialect comparison within Fulfulde. The nouns which use agreement of the NGE class differ from dialect to dialect. The presence of a suffix of the NGE class does not always predict the use of agreement with the NGE class concord. The grouping of a noun class has changed in the case of the NGE class. It shows that the noun class assignment is not a mere petrified remnant of a semantic grouping in the past. The assignment rules for a class suffix to a noun stem are thought to represent an older semantic classification than the assignment rules for concord agreement to a noun (Corbett 1991:49, Demuth et al. 1986:456, Denny and Creider 1976). This is why the present noun class systems are thought to result only from loss or retention (Demuth et al. 1986:459, 468). However, semantic links which are synchronically no longer evident (possibly also caused by a change in cultural circumstances) can be replaced by more transparent semantic or formal noun class assignment rules, even new classes can be formed.[5]

The associations which are responsible for the grouping of nouns in one class are represented in a semantic network. A semantic network connects semantic fields, i.e., groups of nouns that share one semantic feature. A circle represents such a semantic field. The common feature shared within a semantic field and the association that links this semantic field with the other nouns in the same noun class are given in italics. Exemplificatory members within a semantic field are written in bold letters. Associative

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[3] One other example of a semantic network is the 'DAM class which contains the semantic fields: things which sustain life (water, salt); concepts of vitality (life, dynamism); and concepts which lack vitality (drought, meagerness). It would take too much space to describe the different hypotheses for the semantic networks of the other noun classes in Fulfulde here, they are presented in my thesis (Breedveld 1995:295–460).

[4] The noun classes which form one semantic field (and not a semantic network) are the following: NGEL/KOY 'small' (SG/PL)'; KAL: 'small quantity'; KOL: 'young domestic animal'; KO: 'collective'; 'BE: 'people'. When only the use of the concord is taken to define a noun class (and not the noun class suffix), then the following two classes also form one semantic field: NGU: 'female genitals' and KA 'large artefacts' (Breedveld 1995:295–460).

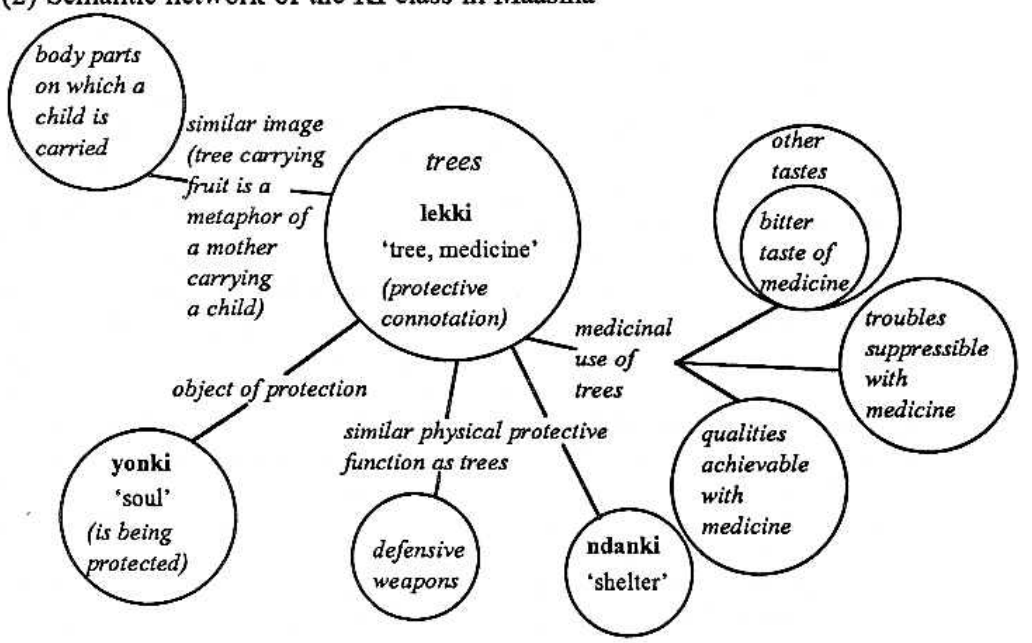
[5] The KU class arising in some local Fulfulde dialects in Mali is an example of a newly formed class (Breedveld 1995:372).

connections (which indicate the linking of two items in the same domain of experience) are represented by straight lines. These associative connections can link two semantic fields, two individual nouns, or a semantic field with an individual noun.

3. THE KI CLASS

Arnott (1970:75) tries to formulate some generalizations for the meanings found in various classes, mostly by naming some key terms that are typically found in a particular class. He classifies the KI class as a non-personal class, containing terms describing trees; also bladed instruments. Mohamadou (1991:155–56) tries to establish semantic features which are recurrent in the nouns of a particular class: [mass density] and [discrete] for the KI class. He lists the content of the KI class as trees, cutting instruments, and some other concepts that cannot be easily related. The figure in (2) shows the network of semantic associations which I propose to explain the grouping of the nouns in the KI class.

(2) Semantic network of the KI class in Maasina



TREES		BODY PARTS CARRYING CHILDREN		QUALITIES ACHIEVABLE WITH MEDICINE	
lekki	tree, medicine	**keeci**	lower back	**ŋari**	beauty
oroowi	baobab	**naawki**	armpit	**mo'y'yuki**	goodness
nduɓɓi	lontar palm	**laaci**	tail		
PROTECTION AGAINST WIND, SUN		MEDICINE: ITS TASTE		OTHER TASTES	
ndanki	shelter	**kaaɗeefi**	bitterness	**mbeleefi**	sweetness
PROTECTIVE WEAPONS		TROUBLES SUPPRESSIBLE WITH MEDICINE		OBJECT OF PROTECTION	
ɓaɓi	knife	**nguleefi**	heat	**yonki**	soul
silaamuuwi	sword	**mbonki**	badness		

The KI class contains nouns denoting names of trees. The KI class also contains a number of words that denote concepts with a connotation of protection. My assumption is that, for Fulfulde speakers, the concept of protection is associated with the tree. There are several forms of protection feasible. First of all a tree can physically protect people against sun, wind, and rain. This concept of physical protection is the association responsible for the classification of the word **ndanki** 'shelter' in the KI

class. Both a tree and a shelter provide protection for people from wind, rain, and sun (by its shade). One indication that the tree is a metaphor for protection is given in the explanation of the proverb in (3).

(3) **ɓaaraadɛ e lekki ɓuri ɓaaraade e leydi**
to lean at tree surpasses to lean at ground
Leaning against a tree is better than leaning on the ground.

Gaden (1931:272) explains its meaning as follows: a tree is a point of support whilst the ground is not. The proverb says that to have a protector is better than not having one.

The word **lekki** 'tree, medicine' is polysemous in Fulfulde. The names for the medicines are often the same as the names for the tree of which the medicine is made. This metonymic polysemy can be explained by the fact that medicines are traditionally made from the bark and other parts of trees. A medicine also has a connotation of protection because medicines are said to protect people against illness and other misfortune.

A protective mother-image is projected in the image of a tree. The protective connotation and a metaphorical association between 'tree' and 'mother' motivates the association of the body parts **keeci** 'lower back, bottom' and **naawki** 'armpit' in the KI class. A mother carries her child on her back or under the arm, like a tree carries fruit on its branches or stem. This association is also indicated by the fact that the words **ɓiɓɓo** 'child' and **ɓinnde** 'fruit' and its **plural ɓiɓɓe lekki** 'pieces of fruit' are built on the same stem. The word **keeci** denotes the lower back where the child is sitting when it is carried on the back. Baaba Maal (Maal and Seck 1989) remembers this place in a song about his childhood praising the women of Fuuta Tooro when he sings: **keeci ki wammbaami** 'the back that I was carried on'. The word **naawki** 'armpit' literally means 'used for carrying under the arm'. It is derived from the verb **naafaade** 'to carry under the arm'. The sentence **ɓiɓɓo woni e naawki** 'the child is at the armpit' describes a child on the side of the mother with the head peeping through her arm (to reach for a breast). The word **ɓaaci** 'tail' also has protective connotations: animals use it to chase away insects that bother them, tails are also swayed through the air in rituals invoking the protection of ancestors in order to chase away evil spirits. Temore Tioulenta (personal communication) suggested that the word **yonki** 'soul' is in the KI class precisely because that is what is being protected: the essence of a (living) human being.[6] More knowledge about the perception of what the soul is in Fulbe philosophy is needed to understand its semantic link with other words in the KI class. For example, does the soul of a person, being his essence, provide protection for that person?

The concept of protection could also be the association responsible for the presence of defensive weapons in the KI class. A knife, a sword, and other cutting instruments are in the KI class because they can be thought of as protective weapons. These associations of physical protection against wind, sun, and rain, medicinal protection, the tree as metaphor of a protecting mother, and protective weapons link these words in the KI class directly with the concept of 'tree'. The word **lekki** is therefore a central member of the KI class.

The other words in the KI class appear to be linked indirectly. Good medicine is supposed to be bitter, so a word like **kaaɗeeɗi** 'bitterness' can be semantically associated with the KI class via the medicinal use of trees. Other tastes like **mbeleeɗi** 'sweetness' are linked indirectly via the word **kaaɗeeɗi** 'bitterness'. A number of the abstract nouns are in the KI class because they denote qualities (**ŋari** 'beauty') which

[6] Temore Tioulenta (personal communication) also suggested a more central place in the semantic network for the word **yonki** soul because all things in the KI class are meant to protect the soul. I still think that the idea of protection is more central in the KI class and that the semantic link is derived from the protective image of trees.

one tries to achieve or troubles (**nguleefi** 'heat of the body, sweat') which one tries to get rid of by taking medicine. These are the associations and connotations of a tree that are shown by the semantic grouping of nouns in the KI class. A deeper knowledge of the Fulbe culture might reveal even clearer relations between these words.

That these associations are synchronically still productive can be shown by a semantically motivated integration of loan words into the KI class. Tioulenta (1991:202) describes how loan words in Maasina Fulfulde are first 'parked' in the O class. He calls the O class a class of transition because when loan words get integrated in the system they will shift to another noun class. The class suffix added to more integrated loan words is chosen on morphological or semantic grounds. The principle of semantic analogy responsible for the semantic classification of loan words is of course very interesting for the confirmation of the hypothesis about the semantic content of a noun class. The loans in (4) denoting trees are integrated in the KI class, marked by the suffixation of a KI class suffix.

(4)	**oro** [Dogon]	**oroowi**	baobab tree
	goro [?]	**ngoroowi**	kola-nut tree
	mangoro [Portuguese]	**manngoroowi**	mango tree

The following loans denoting cutting instruments are integrated in analogy with other defensive cutting weapons in the KI class. This integration is marked by the suffixation of an additional KI class suffix.

(5)	**Islam** [Arabic]	**silaamuuwi**	type of sword
	coupecoupe [French]	**kupukupuuwi**	machete

The fact that class suffixes are added to loan words might indicate that, in the lexicon, class suffixes are also added to the stems of indigenous Fulfulde words. This would imply that this linkage is a process. Synchronic class assignment rules imply that the lexicon stores noun stems, class suffixes, and rules for combining these. The combinations of noun stems with their class suffixes are not mere remnants of a once fuller semantically transparent noun class system.

4. THE NGE CLASS

That the NGE class is used to denote cows is a well-known fact often cited in Fulfulde grammars. Klingenheben (1963:71) even calls the NGE class the cow-class, but he does not comment on a possible relation between **nagge** 'cow' and terms like **naange** 'sun', **yiite** 'fire', and some other abstract nouns that also belong to the NGE class in the Aadamaawa dialect that he describes. Arnott (1967:66, 1970:75, 390) represents the semantic content of the NGE class by simply listing the three key terms 'cow', 'fire', and 'sun'. The grouping of these terms has puzzled many, although the issue is only cautiously discussed in the literature. Mukarovsky (1962:132) gives the original semantic content of the NGE class as the cow and anything that is like a cow. He reconstructed a Solar Bovine complex as a pre-Islamic belief in which both the cow and sun have been object of worship in the Fulbe culture. Mohamadou (1991:174) is very hesitant about a possible semantic link between 'cow', 'fire', and 'sun'. He rejects the possibility of sacredness as the classifying semantic feature of the NGE class because there is no sociocultural evidence showing that 'sun', 'cow', and 'fire' are or have been objects of worship in the history of the Fulbe.

Apart from my hypothesis that a noun class has meaning, I also think that for a noun class to be maintained, it must make sense to the present-day speakers of the language. So I believe that the semantic links within each noun class also make sense synchronically. Proof of their synchronic productivity comes from the fact that these class assignment rules are the subject of re-analysis. This is demonstrated in a

comparison between the dialects of Maasina and Aadamaawa which shows a re-analysis of the content of the NGE class, this reshuffling takes place in order to make the semantics of the NGE class more consistent, resulting in more productive class assignment rules.

Before presenting the comparative data, I will first describe the semantic network of nouns in Maasina which end in a suffix of the NGE class, and which can be referred to with a concord of the NGE class in Maasina. The semantic frame of the NGE class is based on the experience of the Fulbe with cows. The key term in this class is the cow. (Bulls **ngaari/gay** are in another class.) Cows are very important for the Fulbe, not only in their ideology but also for their subsistence. Cattle herding is important also in the ideology of a true Pullo (singular of Fulbe). In any type of herd, the female animals are economically more important than the male ones, because one only needs a few males for reproduction. Cows are also important in the social structure of Fulbe households because of the milk they give (de Bruijn and van Dijk 1995). Considering the importance of cows for the Fulbe, it is not strange that there is a separate noun class for these animals.

Apart from all the names of cows, the words **yiite** 'fire', **jaynge** 'light', and **naange** 'sun' form one semantic field within the NGE class as they all are sources of light. Sources of light can be associated with cows because they seem to influence the movement of cows. When I asked a herdsman about a possible link between fire and cows, he immediately responded by narrating how cows like it very much when you lit the fire for them in the evening because the fire chases away the mosquitoes. This association is also depicted in a myth collected by Bonfiglioli (1984:49). The story recounts how cows were given to the Wodaaße in Niger:

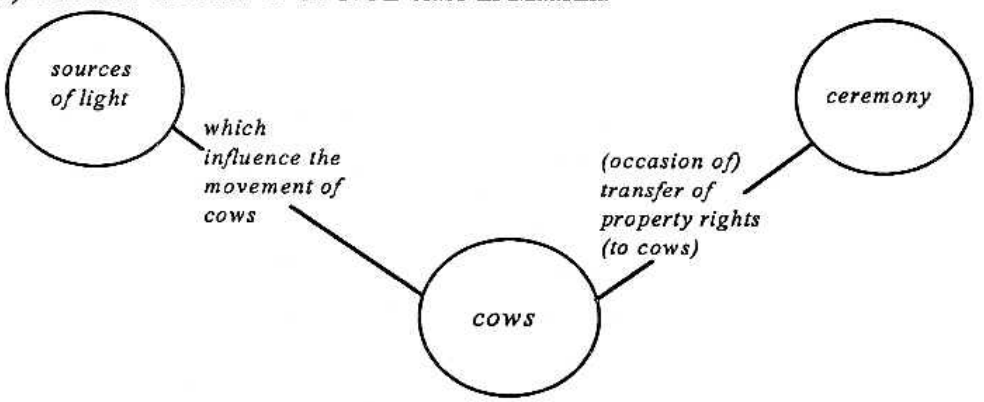
> A girl was made pregnant by the angel of the river. The girl gave birth to twins: two boys. When her father found out who fathered the twins, he asked the angel of the river for her wedding gift. Out of the river came a grey cow and a black bull. The mother and her sons followed the cows, but the animals were wild and they fled from people. By following the cows they went further and further into the wilderness. At night, they lit a fire, and the cows were attracted by the fire. So the night was spent around the fire. And each day they left and went even further. (Bonfiglioli 1984:49)

In this story, cows are attracted by the fire at night. In daytime when the sun appears the cows have an urge to travel to find water, food, or salt. So the sun and the fire can be related to cows in that they are both sources of light which seem to have some control over the comings and goings of cows.

The term **yannge** 'ceremony, family celebration' can also be found in the NGE class. Family celebrations which are said to be a **yannge** are the feast of **lamru** 'name giving' and the feast of **kurtungu** 'wedding'. At birth, celebrated during **lamru** 'name giving day', property rights to cows are (nominally) transferred from the parents (both the father and the mother) to their child. During a **kurtungu** 'wedding' milking rights, also a form of property rights to cows, are transferred from the husband to his wife, who can sell the milk or trade it for cereals. So the word **yannge** can be linked to cows because it refers to ceremonies where property rights to cows are being transferred. Strikingly, my informants disagreed on the question whether a **taadordi** 'circumcision' could also be called a **yannge**, possibly because it does not often involve the transfer of cows. Ideally, cattle is given to the circumcised son but poverty often prevents this (cf. de Bruijn and van Dijk 1995).

So even if the content of this class is not held together by one semantic field sharing the feature of 'object of worship', the semantic frame of this class is based on the domain of experience of the Fulbe with cows. The associations proposed for the NGE class in the Fulfulde of Maasina are represented in the semantic network in (6).

(6) Semantic network of the NGE class in Maasina

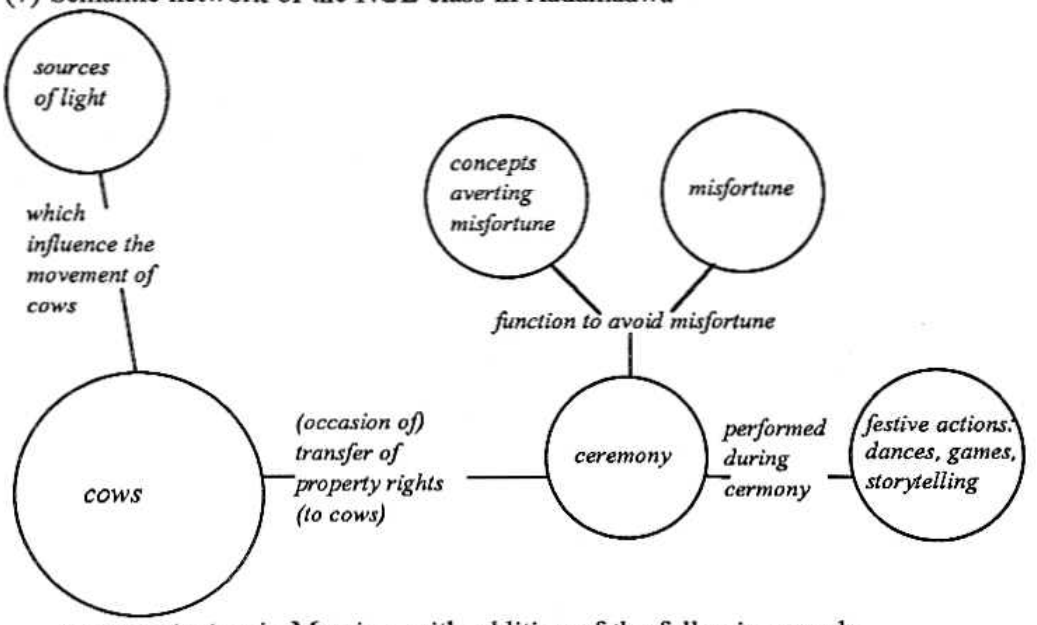


SOURCES OF LIGHT		cows	
yiite	fire	**nagge**	cow
jaynge	light	**wiige**	heifer
naange	sun	**ɲale**	calf
		saye	copper coloured cow
CEREMONY		**daake**	cow with different colour neck
yannge	ceremony	**dumare**	cow, head and tail same colour
		wumale	cow without horns
		sole	spotted cow
		sulɛ	cow, red with white spots
		wohe	cow, front part red, behind white
		jamale	cow, mottled, spotted in different colours
		wudde	cow without tail
		wuule	cow with white spot on forehead
		tolle	cow with only one horn
		waage	cow with white sides
		wadde	female calf, one year
		suume	cow, completely white or black
		sarɲe	cow with horizontal horns, widely separated
		rimare	cow that doesn't deliver calves (anymore)
		ruumte	milk cow, in village in rainy season
		oole	yellow cow

5. DIALECT COMPARISON OF THE NGE CLASS IN MAASINA AND AADAMAAWA

Dialect comparison shows that the NGE class in Aadamaawa contains much more words than the NGE class in the Fulfulde dialect of Maasina. Lots of words which are said to belong to the NGE class in Aadamaawa (Klingenheben 1963:71) do no longer use the agreement marker (concord) of the NGE class in Maasina and therefore these words no longer belong to the NGE class in Maasina even though they still carry the suffix of the NGE class. The semantic content of the NGE class in Aadamaawa can be represented by the semantic network in (7). The NGE class in Aadamaawa contains the same words as the dialect of Maasina plus a number of additional words listed from Klingenheben (1963:71).

(7) Semantic network of the NGE class in Aadamaawa



same content as in Maasina, with addition of the following words:

DANCES AND GAMES PLAYED AT CEREMONIES

gilgilwaaye	child's game, making dizzy	< **yiil-**	go round
fillaye	story	< **fill-**	tell
yaake nge	turning circle of young men, dancing and singing with a stick on their shoulder (Labatut 1973:313)		

MISFORTUNE AVOIDED BY CORRECT EXECUTION OF CEREMONY

tooŋaange	plague	< **tooŋ-**	to suppress
heege [M]	famine		

OTHER CONCEPTS AVERTING MISFORTUNE

dunngaye	permission	< **dunng-**	permit
barruye	ban, warning	< **barr-**	warn
yaafuye	pardon	< **yaffu** (imp); **ɓafaa** forgive	
wasuye	advice	< **waṣṣaa**	recommend
suumaye	fast	< (**yaṣuumu** (imp); **ṣaama** fast	
yerduye	permission	< **yarḍaa** (imp); **raḍiya** agree	
hinnaye	mercy	< (**ya**)**ḥinnu** (imp); **ḥanna**	have mercy

NO EXPLANATION YET AVAILABLE

kannge	gold		
kawye/kawyeeji	village	< **kawye**	village [Hausa]
fassaruuye	translation	< **fassara**	translate
sumalle/sumalli	water bottle		
bulaame	type of bird		
ɓaraage	red silk		
bulaange	type of (edible) fish		

Many of the additional terms in Aadamaawa are the names of games and dances which can be related to the NGE class because they are played during ceremonies. The term **yaake**, for instance, is a dance performed during **worso**, a ceremony where many people meet, when weddings are negotiated and performed.

Words describing misfortunes like **tooŋaange** 'plague' and **heege** 'famine' possibly also have a link with 'ceremony' in the NGE class because of a belief that the proper execution of the ceremonies can avoid misfortune. The Fulbe think it is necessary to perform ceremonies correctly, otherwise misfortune could happen. Other concepts like **barruye** 'warning', **wasuye** 'advice', and **yaafuye** 'forgiveness', prescribing the right way to live, are possibly included in the NGE class because they describe ways of behaviour that, like the correct execution of ceremonies, are thought to prevent misfortune.

If we now compare the semantic networks of the NGE classes of Aadamaawa and Maasina, we see that in Maasina a number of words have been thrown out of the NGE class, i.e., they no longer can be referred to with a concord of the NGE class but now use the concord of the O class. The assumption that the NGE class has become smaller in Maasina rather than enlarged in Aadamaawa is based on the fact that the former NGE class words in Maasina still carry the suffix of the NGE class. This process points to a synchronic reanalysis of the content of the NGE class. Presently, there are some speakers in Maasina who no longer use the concord of the NGE class for the words **yiite** 'fire' and **yannge** 'ceremony': they use the concord **o** of the O class instead.

(8)

Maasina		Aadamaawa (Klingenheben 1963:72)	
tooŋaange o	insult, provocation	**tooŋaange nge**	plague
yaafe o	forgiveness	**yaafuye nge**	pardon
yannge o / nge	ceremony		
yiite o / nge	fire		

The choice for the O class is morphologically motivated by other nouns belonging to this class which are without the noun class suffix of the O class, it is semantically motivated by the honorific connotation of the O class (Breedveld 1995:300–18). If Maasina speakers will continue to remove all words which do not describe cows from the NGE class, this will eventually result in a noun class denoting only cows. Present day speakers are thus re-analyzing the semantic content of the NGE class.

When cows play an important part in family celebration ceremonies, a link to a non-Islamic system of beliefs is possible. A study of nomadic Fulbe who are said to be less influenced by Islam should uncover more information on the semantic associations between concepts denoting misfortune, the way of averting misfortune and their link to cows. Based on the assumption that there is a link between cows and non-Islamic beliefs, a very tentative hypothesis for the change of the NGE concord in the Maasina dialect could be postulated as follows: Perhaps the terms related to **yannge** 'ceremony' have been removed from the NGE class as a result of the tension between a certain interpretation of Islamic law and the traditional system of beliefs related to cows. Such a tension could also be the explanation for the change of concord of a word like **gilgilwaaye** which denotes a children's game where children turn around and around to get dizzy. Games are especially played during ceremonies, but in Maasina, Islam is said to forbid games. The term associated with the ceremonies changed their concord to that of the O class which is also a class for religious terms in Maasina, so a shift to that class is easily semantically explained. This will lead to the reinterpretation of the content of the NGE class simply as the semantic field of cows.

6. CONCLUSION

The integration of loan words into the Fulfulde noun class system on semantic grounds and the semantic re-analysis of noun classes show that the semantic associations between members of a noun class make sense. The dialectal differences in noun class membership show that the noun classes have to be studied separately for

each dialect. It also demonstrates that noun class systems are subject to reanalysis and change. If a certain noun class no longer makes sense to its speakers, it is likely to be reanalyzed, merged or lost. The search for this sense—the semantic basis of categorization within a noun class language—can provide hypotheses about the culture of its speakers on the basis of semantic data, of which the semantic categorization of words in noun classes is a very interesting one. Of course, the actual relation between language and culture can only be confirmed by extra-linguistic data. The hypotheses postulated here, concerning the different semantic motivations for the grouping of nouns, are tentative. Associative tests, and other experiments revealing the way in which the Fulbe people categorise the world are a next step in the necessarily interdisciplinary research of Fulfulde semantics.

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