

several different ways presents quite a problem. Such cases occur even in the Pekinese pronunciation on which our transcription is based.

When rendering Japanese place names in idiography from Japanese maps and atlases, one has to resort to special reference materials where these names are transposed into Japanese syllabic writing, *kana*, or into Roman script. This is necessary because the pronunciation of characters in Japanese geographical names often differs from their present generally accepted pronunciation.

Special rules are to be observed when rendering Armenian, Georgian and Greek names from materials in the national languages and Korean names from the national writing, *kunmun*. These are the main elements in the problem of rendering foreign names into Russian.

There is also the problem of transposing names from languages that have no alphabets of their own. In our opinion, they should be fixed in writing by means of the alphabet of the language most nearly akin and transcribed according to the existing rules.

As we mentioned earlier, at present we have to issue maps and atlases not only in Russian but also in languages with Roman and other systems of writing. This, in its turn, makes it urgent to create methods to deal with new problems. In working out such methods, we believe that whatever valuable information has been accumulated by all countries should be utilized.

When making maps in Roman script we consider that place names of countries using the Roman alphabet should be written as they are written in their own countries, including diacritical marks.

When rendering names from non-Roman writings into Roman script, we think it advisable to transliterate them in Latin characters in accordance with the system of transliteration in use in the country concerned.

Thus, the place names of the Soviet Union should be rendered in accordance with the system of transliteration of the Academy of Sciences of the USSR; the place names of Bulgaria in the system of transliteration of the Bulgarian Academy of Sciences; the place names of China in the official Roman writing of the country etc. The Roman writing used in international editions, e.g. the RGS II² system for the place names of India, Iran, the Arab countries etc. might be used as well. Much remains to be done in respect to the rendering of names into other systems of writing, such as Arabic; what is important is to work out a special system of transposition.

Now that economic, scientific and cultural relations among various countries have been considerably expanded, the rendering of names from one system of writing into another has become of still greater importance. In order that this work may be more productive, it is necessary, in our opinion, first, that an exchange of information among various countries on rendering geographical names should take place, which would help to resolve the problems of both national and international standardization; secondly, that the national orthography in a number of countries should be standardized, particularly the orthography of proper names; thirdly, that cartography should be developed on the basis of the main local languages with their own national alphabets.

² Royal Geographical Society.

PRINCIPLES OF TRANSCRIPTION OF AFRICAN PLACE NAMES

Paper presented by France¹

INTRODUCTION

A system for the transcription of the African place names of the French-speaking States south of the Sahara was developed by the National Geographic Institute in 1963. This system was designed to meet the following two needs:

Standardization of place names through the use of a system of spelling unencumbered with useless letters and marks;

Reconstruction by a French-speaking reader of an acceptable pronunciation of these place names making possible their proper identification.

The realization of these aims demands, first, the adoption of guiding principles and, secondly, the choice of a set of detailed rules.

The guiding principles are, in brief, as follows:

Use of the Roman alphabet as the basic alphabet;

Pronunciation of all letters apart from a few exceptions for practical reasons as explained below;

One-to-one correspondence between the phoneme and its written form.

With regard to the set of detailed rules, an effort was made to avoid diacritical marks through the use of digraphs. While some of the digraphs retain the phonetic

value which they have in French, others, on the contrary, are conventionally represented² by sounds peculiar to the African languages concerned.

In both cases, the digraphs may be underlined if further differentiation is desired. In order to avoid an excessive number of conventional digraphs, the transcription system has been designed more along phonological than phonetic lines. Although the phonetic element is still given considerable weight, the accepted procedure has been to disregard many of the nuances if these do not have any appreciable effect on the meaning of the words.

This system can, of course, be adjusted to take any local peculiarity into account. The paramount consideration, however, is that the collection of the place names in the field and the recording of their pronunciation should be effected by means of a phonetic alphabet and should be firmly based on serious linguistic research into the languages concerned.

* * *

The recording of place names in unwritten languages on to cards is a very difficult task. In the African languages in particular, there are many consonants and vowels which, being alien to the European languages, cannot be properly represented by any letter of the Roman alphabet.

¹ The original text of this paper, prepared by the National Geographic Institute, appeared as document E/CONF.53/L.52.

² This does not mean "arbitrarily" represented because logical, historical or practical reasons necessarily influence the choice of the most satisfactory equivalents.

French, like all the European languages, is governed by complicated rules of spelling which are foreign to a phonetic transcription. To apply these rules indiscriminately to unwritten languages would lead to improper spelling and to extensive mispronunciation. This is readily apparent from an analysis of the names of certain towns and villages in "Black" Africa, the pronunciation of many of them having little in common with the proper pronunciation. Despite this, these names have become well known, and they must be retained if the local administration wants them to be.

The same, however, is not true of the very large number of names designating named places, small rivers and so on. For these names, an accurate transcription is imperative if the map is to serve its purpose effectively.

In the system proposed by the National Geographic Institute to the African States which have concluded technical assistance agreements with France, the rules of French spelling have been adapted and standardized, and groups of letters have been introduced to represent sounds that do not exist in French. An effort has been made, however, to ensure that for a reader of French the sounds in the names thus transcribed will be as close as possible to the actual sounds being imitated.

The different systems of phonetic notation differ as regards some of the symbols used, but the principles on which they are based are identical. Thus:

Each consonant and each vowel must be represented by a single symbol, which, in its turn, has a single and specific value so that the phoneme to which it relates cannot be represented by any other symbol;

The value of the symbol remains unchanged regardless of its position in the word;

The written form of the word does not contain anything which is not intended to be pronounced; it may not therefore, contain any marks for gender or number that could be confused with phonemes.

French, however, like most other European languages, is characterized by a traditional orthography that departs from these principles. Thus, it may be noted that:

The same sound may be written in different ways—for example: "f" and "ph", and "o", "au" and "eau";

The value of a symbol is affected by the symbols which precede and follow it and by its place in the word;

The written form of French includes plural marks, which are not intended to be pronounced, and a mute "e" at the end of many words which in ordinary pronunciation end in a consonant.

In any system of transcription based on French, these causes of ambiguity must therefore be avoided. While such a system of transcription will never be a fully satisfactory medium for the representation of sounds, it will for practical purposes come near enough to doing so.

The problem was taken up as early as 1951 by Mr. Houis, Chief of the Language Section of the French Institute for "Black" Africa (IFAN). The different systems which have been experimented with since then differ from the IFAN system only in points of detail. In the system proposed here, the experience acquired between 1954 and 1962 in a wide variety of language sectors has been taken into account.

The transcriptions thus obtained represent an approximation which is much less satisfactory than the phonetic notations which they will never be able to replace. Some phonemes cannot be properly represented, and some words, as pronounced by the map user, will not be readily recognizable. Maximum advantage will, however, have been taken of the notation possibilities of the Roman alphabet—with the phonetic values which it has in French—without the need for resorting to phonetic symbols, which, while suitable for specialized studies, do not readily lend themselves for use with ordinary typewriters, type-setting machines and the like and are, moreover, incomprehensible to the map user. Except in areas where the languages used present unusual difficulties, place names transcribed according to the present system will be acceptable.

GENERAL PRINCIPLES

1. These transcription principles apply to place names in languages without any well-established written form of their own.
2. The letters used are those of the Roman alphabet.
3. The notations used are simple because they are primarily intended for a very broad map-using public.
4. The rules adopted do not in general run counter to the rules governing the relationship between the written and the spoken form of French.
5. As a rule, every letter is pronounced. In order, however, to keep the number of diacritical marks to a minimum, it has appeared necessary to retain certain commonly-used digraphs such as: "an", "ou", "gu", "ss" and so on.
6. A letter or a digraph represents only one phoneme.
7. In the case of phonemes which do not exist in French, a digraph such as "hr" or "fh" is used as a means of approximating the actual sound as closely as possible. If this cannot be done, the notation for the most closely related phoneme is used.
8. So far as possible, an effort is made to transcribe in a different form those sounds which, in the language considered, have a distinct phonological value, that is, the power to differentiate words.

1. CONSONANTS

<i>Phoneme to be transcribed³</i>	<i>Letter or digraph used</i>	<i>Examples</i>	<i>Remarks</i>
b b b occlusive bi-labiale sonore	b	Bamako (Mali) Birou (Haute-Volta)	
ḃ ḃ B occlusive bi-labiale sonore injective (claquante)	b'	sib'adé, aspirer (Peul)	Différent de: sibadé, mesurer.
ʃ ʃ ʃ̣ fricative palato-alvéolaire (chuintante) sourde	ch	Chari (Tchad)	
d d d occlusive dentale sonore	d	Dakar (Sénégal) Dassa (Haute-Volta)	
ḍ ḍ Ḍ occlusive dentale sonore injective (claquante)	d'	d' id'i, deux (Peul)	Différent de: didi, limite.
ɖ ɖ ɖ̣ occlusive cacuminale (rétroflexe) sonore			
f f f fricative labio-dentale sourde	f	Bafoulabé (Mali)	
ɸ f ɸ fricative bi-labiale sourde	fh		
g g g occlusive vélaire sonore	g	Gao (Mali) Gourao (Mali)	
	gu	Siguiiri (Guinée)	Devant e et i; un tréma sur la lettre "u" indique que l'on a deux phonèmes distincts "g" et "ü".
gb gb gb ⁴ occlusive sonore à double occlusion vélaire et labiale	gb	Agbassa	
h h h fricative glottale sourde (aspirée)	h	Ham-dallaï	
ɬ hl ɬ fricative latérale sourde	hl	tchakahla, quartz (Mokolo, Cameroun)	Voir ci-après les autres latérales.
x x x̣ fricative vélaire sourde	hr	Hrassonké	
ʒ ʒ ʒ̣ fricative palato-alvéolaire (chuintante) sonore	j		
k k k occlusive vélaire sourde	k	Koulikoro (Mali)	
kp kp kp ⁴ occlusive sourde à double occlusion vélaire et labiale	kp	Akpmé (Togo)	
l l l latérale alvéolaire	l	Mayo Darlé	

³ The symbols, in the order given, are those of the:
International Phonetic Alphabet (API);
International African Institute (WW);
Institut d'Ethnologie (IE).

⁴ Although the two symbols should actually be superimposed, they are usually written one after the other.

⁵ Symbol not provided for by IE.

One of these phonetic alphabets should be used by the staff responsible for collecting the place names and recording their pronunciation.

1. CONSONANTS—*continued*

<i>Phoneme to be transcribed³</i>	<i>Letter or digraph used</i>	<i>Examples</i>	<i>Remarks</i>
l l l latérale cacuminale (rétroflexe)	l		
m m m occlusive nasal bi-labiale	m	Bourem (Mali) Mouzoumou (Hte-Volta)	Voir ci-après la nasalisation des consonnes.
n n n occlusive nasale apico-dentale	n		Voir ci-après la nasalisation des consonnes et des voyelles.
ɲ ɲ ɲ occlusive nasale vélaire	nn		Pour éviter la prononciation d'une voyelle nasale: an, en, in, on, un.
ŋ ŋ ŋ occlusive nasale vélaire	ng	Songay	On transcrira la nasale vélaire par "n" devant "g" et "k".
p p p occlusive bi-labiale sourde	p	Pilimpikou (Haute-Volta)	
q ɸ k occlusivé uvulaire sourde	q		Ne pas employer à la place de "k"; notation réservée aux langues pour lesquelles les deux sons existent avec des valeurs phonologiques distinctes.
r r r vibrante apicale	r	Kabara (Mali) Gourma (Mali)	
ʁ ʁ ʁ fricative vélaire sonore	rh	Korhogo (Côte d'Ivoire)	
R r r vibrante dorsale			
ʀ ʀ vibrante uvulaire			
s s s sifflante sourde	s	Ségou (Mali) Salikoundé	Intervocalique
	ss	Bissikrima (Guinée)	
t t t occlusive dentale sourde	t	Tougué (Guinée)	
ʈ ʈ ʈ occlusive cacuminale (rétroflexe) sourde	ʈ		
v v v fricative labio-dentale sonore	v	Vour (Haute-Volta)	
β v β fricative bi-labiale sonore	vh		
z z z sifflante sonore	z	ziguei, zad Zoula (Haute-Volta)	
ʔ ʔ ʔ occlusion glottale	ʔ	tsu', "hibou" (Bamiléké, Cameroun) pou', "esclave" (Bami- léké, Cameroun)	Différent de: tsu, "manger"; Différent de: pou, "toi et moi".

³ Symbol not provided for by WW.

⁷ No special notation provided for by WW or IE.

2. SEMI-CONSONANTS

<i>Phoneme to be transcribed³</i>	<i>Letter or digraph used</i>	<i>Examples</i>	<i>Remarks</i>
j y y palatale (yod)	y	Koya (Guinée) Yélimané (Mali) Tyékoura	Voir ci-après les consonnes palatalisées.

2. SEMI-CONSONANTS—continued

Phoneme to be transcribed ³	Letter or digraph used	Examples	Remarks
w w w bi-labiale	ou w	Ouagadougou (Hte-Volta) Tessaoua (Niger)	Au contact de "ou" voyelle; pour noter une particularité phonologique de la langue intéressée dans des toponymes non encore officialisés
ɥ ɰ ɰ	u ü	Ntui (Cameroun) Güe	Après "g", et devant "e" et "i", pour indiquer que l'on a deux phonèmes successifs distincts "g" et "ü".

3. PALATALIZED CONSONANTS

No distinction is made between a palatalized consonant and a non-palatalized consonant followed by a "yod". There is, for example, no differentiation between the simple phoneme represented by "gn" (ɲ) in "araignée", "montagnard" and the phoneme group represented by "ni" (ɲj) in "genièvre", "opiniâtre". This merging together of the two phenomena makes it possible to represent the palatalization of consonants by inserting a "y"⁸ after them. When a palatalized consonant comes at the end of a word or precedes a hard consonant, no attempt is made to indicate the palatalization.

In the International Phonetic Alphabet, palatalization is indicated by a small reverse hook or loop: ɟ̟, ʒ̟, ʃ̟, and in the IE alphabet by a small apostrophe or vertical bar: t', d'.

4. NASALIZED CONSONANTS

The nasalization of a consonant is indicated by inserting an "m" or an "n" before it. The following are the groups most frequently encountered:

- | | |
|--------------------|-----------------------|
| mb Mbour (Senegal) | nd Ndoulo (Senegal) |
| mb Mpal (Senegal) | ng Nguigmi (Niger) |
| | nk Nkogam |
| | nt Ntorosso |
| | nz Nzérékoré (Guinea) |

⁸ The letter combinations "tch" and "dj" can also be used for the palatalized consonants provided that the language does not make a distinction between "tch" and "ty" (palatalized), "dj" and "dy" (palatalized). This is the case, for example, in Dahomey.

5. ASPIRATED CONSONANTS

The "aspirated" stops—with the exception of the voiceless bilabial stop "p"—are indicated by means of the letter "h": bh, dh, gh, kh, th. Example: "khe" (raffia palm-tree) as opposed to "ke" (with) (Bamileke, Cameroon).

6. GEMINATED CONSONANTS

The gemination of consonants is indicated by doubling the letter or digraph representing them.

Exceptions: The special notation of the voiced velar stop "gu" becomes "ggu"; that of the palatalized consonants will be of the type: "kky", "tty" and so on.

7. GLOTTALIZED CONSONANTS

The glottalized consonants, both ejective and injective, are indicated by an apostrophe (symbol of the glottal stop) placed to the right of the consonant.

In all three phonetic alphabets (API, WW and IE), the notation differs according as the glottalized consonant is ejective or injective.

Ejective: p' k'—p' k'—p'k'

Injective: 'b 'd ou bɔ—bɔ—BD

8. SYLLABIC CONSONANTS

The syllabic consonants are preceded by an indistinct vowel that is pronounced with the mouth closed; they are represented by a hyphen: "m-", "n-", "p-". Groups such as "m-be" must not be confused with the group "mbe", which includes a semi-nasal.

9. VOWELS⁹

Phoneme to be transcribed	Letter or digraph used	Examples	Remarks
a a a antérieure étirée ouverte (a antérieur) ɑ ɑ ɑ postérieure étirée ouverte (a postérieur)	a	Bamako (Mali)	

⁹ *Vowel aperture:* The staff responsible for the place names must, contrary to French usage, insert the accent marks regardless of where they occur in the word. Thus, in the "fon" language of Dahomey,

the words "détिंग" (Elaeis palm-tree) and "détिंग" (raffia palm-tree) occur. In particular, every unaccented "e" is to be pronounced like the "e" in "Denis" in French.

9. VOWELS⁹—continued

Phoneme to be transcribed	Letter or digraph used	Examples	Remarks
ə ə ə centrale d'aperture moyenne	e		Sauf en finale et dans le cas de polysyllabes, où l'on emploiera le digramme eu.
e e e antérieure étirée demi-fermée (é fermé)	é	Nguékélé	
ɛ ɛ ɛ antérieure étirée demi-ouverte (è ouvert)	è		
ø ø ø antérieure arrondie demi-fermée (eu fermé)	eu		Voir ci-dessus la valeur donnée au digramme "eu" en finale.
œ œ ø antérieure arrondie demi-ouverte (eu ouvert)			
i i i antérieure étirée fermée	i	Tibati (Cameroun)	
o o o postérieure arrondie demi-fermée (o fermé)	o	Débo (Mali)	
ɔ ɔ ɔ postérieure arrondie demi-ouverte (o ouvert)			
u u u postérieure arrondie fermée	ou	Touba (Côte d'Ivoire)	
	ou		A employer pour différencier la voyelle de la semi-consonne bi-labiale, et d'une manière générale, chaque fois que la lecture de la voyelle peut prêter à doute.
y ü ü antérieure arrondie fermée	u		Pour mémoire

10. LENGTH OF VOWELS

Long vowels bear the circumflex accent; in the case of the digraphs "ou" and "eu", the accent is placed above the letter "u".

In the API system of notation, the length of vowels is indicated by two dots placed immediately after the vowel; in the IE system, the symbols used in Latin prosody are employed: "ā"=long "a", "ă"=short "a".

11. NASALIZATION OF VOWELS

As a general rule, letters and digraphs that are underlined represent nasal vowels.

The nasal vowels "ã" (nasal "a"), "ẽ" (nasal "e"), "õ" (nasal "o"), "œ̃" (nasal "eu") "ü̃" (nasal "ou") are represented, respectively, by: *an*, *in*, *on*, *un* and *oun*. Examples: *Bonyolo* (Upper Volta), *Poun* (Upper Volta).

In order to avoid the possibility of confusion between these phonemes and groups of the type "oral vowel plus consonant 'n'", the consonant "n" will be doubled in the latter case, except, however, for "ou" followed by "n" (see above).

The nasal vowels "ɪ̃" (nasal "i") and "ũ" (nasal "u") are represented, respectively, by "ĩ" and "ũ". Example: *Sikou* (Upper Volta).

The nasal quality of a vowel followed by a nasal consonant—m, n, ng—will not be specifically indicated; it will be replaced in such case by the corresponding oral vowel. Examples: *Haribongo* (Mali), *Tondibi* (Mali).

12. DIPHTHONGS

Diphthongs are represented—as is done in the International Phonetic Alphabet—by writing the constituent vowels one after the other.¹⁰ If the second element is an "i", it bears the diaeresis.

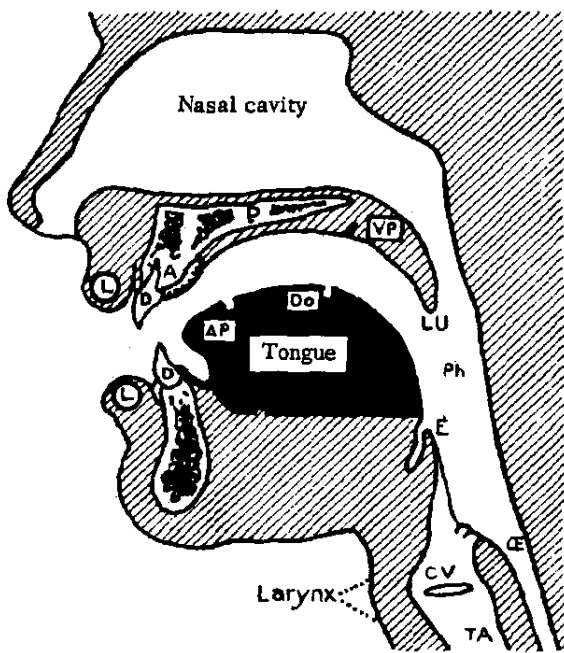
Annex I

POSITION OF THE ORGANS OF PHONATION IN THE EMISSION OF SOUND

The vocabulary used by linguists to describe the sounds of speech is based on the various position of the organs of phonation in the emission of sounds.

The following diagram will help to clarify the definitions given in the "Principles of transcription".

¹⁰ In the system of notation used by the Institut d'Ethnologie, the less accentuated part of the diphthong is represented by a smaller-sized letter.



Organs of speech

L	lips	labial
D	teeth	dental
A	sockets of the teeth	alveolar
P	palate	palatal (prepalatal alveolar or retroflex postpalatal)
VP	soft palate	velar
LU	uvula	uvular
Ph	pharynx	pharyngeal
Ap	apex	apical
Do	dorsum of the tongue	dorsal
CV	vocal cords	
E	epiglottis	
OE	oesophagus	
TA	trachea	

Annex II

Glossary

antérieur (front). Said of a phoneme whose point of articulation is in the forward part of the oral cavity; the opposite of *postérieur* (back). Examples: the palatals are front sounds, by contrast with the velars; a front "a" occurs in the words "bras", "état", "chantâmes", and a back "a" in "repas", "flamme", "pâte".

aperture (aperture). Space between the organs of speech at the point of articulation of a phoneme; practically synonymous with *ouverture* (opening), but this latter term can also designate the act of opening, whereas *aperture* refers only to the state.

arrondissement (rounding). Property of phonemes pronounced with rounded lips. Examples: the vowels "o" and "ou".

articulation (point d') (point of articulation). Area of the vocal tract where the constriction or closure intended to regulate the passage of air from the lungs mainly occurs.

claquante (click). Phoneme resulting from a double oral and glottal occlusion—which may be accompanied by a lowering of the

pharynx to rarefy the air in the cavity thus formed—with the explosive release inward of the air by reason of a slackening of the oral occlusion.

consonne (consonant). The essential characteristic of the consonant is the expiratory sound produced by the passage of air through the vocal tract, apart from the sound, or voice utterance, which characterizes the vowel.

digramme (digraph). A group of two characters or two letters used to represent a single sound. Example: "ch" for the voiceless palatal fricative.

diphthongue (diphthong). Single vowel which results from the combination—or even from the fusion in a single syllabic element—of two distinct vowels and which consequently undergoes a change in timbre in the course of its utterance.

fermé (closed). A closed sound is one which entails either the occlusion or a substantial constriction of the vocal tract. In the case of consonants, closure is characteristic of the stops (k, p, ...) in contrast to the fricatives or spirants (f, s, ...). In the case of vowels, closure is accompanied by a variation in timbre. In the French word "élève", the first "e" is referred to as closed and the second as open.

fricative (fricative). A consonant resulting from the narrowing of the vocal tract and characterized mainly by an audible friction produced by the expired breath. Also called "*spirante*" (spirant). Examples: f, s.

intervocalique (intervocalic). Said of a consonant occurring between two vowels. Example: in the word "maison", the consonant "s" is intervocalic.

latérale (lateral). A consonant articulated by pressing the tip or dorsum of the tongue against the palate, the escaping air finding an outlet along one or both sides of the obstacle thus created.

longueur (length). Synonym of *durée* (duration). Time allotted to the utterance of a phoneme. Also called "*quantité*" (quantity) in so far as the measurement of vowels is concerned. Example: the vowel represented by the digraph "eu" is long in the word "jeune"; the vowel "a" is short in the word "carte".

occlusive (stop). A consonant articulated by closing the vocal tract and then suddenly opening the closure. Example: k, p, ...

ouvert (open). Property of a phoneme pronounced with the vocal tract open; the opposite of *fermé* (closed).

ouverture (opening). See *aperture*.

phonème (phoneme). The element which is the end result of the acoustic analysis of language.

postérieur (back). Said of a phoneme whose point of articulation is in the back part of the mouth; the opposite of *antérieur* (front).

semi-consonne (ou *semi-voyelle*) [semi-consonant (or semi-vowel)]. A phoneme intermediate between a vowel and a consonant. In the sound produced by a semi-consonant there can be heard the timbre of a vowel and the friction of a fricative consonant. The semi-consonants correspond to each of the more closed vowels: i, ou, u.

sonore (voiced). Said of a consonant the utterance of which is accompanied by laryngeal or glottal vibrations. Example: g, b.

sourde (voiceless). Said of a consonant the utterance of which is not accompanied by glottal vibrations characteristic of voiced consonants. Example: k, p.

voyelle (vowel). A phoneme the essential characteristic of which is a voice utterance, that is, a resonance either of the oral cavity alone (oral vowels: a, o) or of the oral cavity and the nasal cavity in combination (nasal vowels: an, on).

TOPONYMY IN MADAGASCAR

Paper presented by Madagascar¹

The principal characteristics of Malagasy toponymy are summed up below.

¹ The original text of this paper, submitted in French, appeared as document E/CONF.53/L.69.

1. It is relatively simple, owing to its essentially descriptive character, since it is closely related to physical geography and topography, and there are only few names of foreign origin (Arabic or European). On the other hand,