

# ORTHOGRAPHIES WITH PUNCTUATION-LIKE LETTERS INDICATING TONE

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# Tone & Orthography

Most African languages use vocal pitch to distinguish words. Sometimes a change in pitch changes the tense or aspect of a verb. In other cases changes can indicate an entirely different noun. Varying the vocal pitch changes the word. Including these variations in pitch, the target pitch for a word, or the pattern of pitches that are part of the word is important for writing and reading the languages of the Ivory Coast. Active community organizations leading indigenous literacy are important for the flourishing of communities across the Ivory Coast. Due to the high number of different levels of pitch, many of the writing systems in the Ivory Coast use punctuation marks as part of their writing systems. Using punctuation marks and mathematical symbols started in the early 1970s prior to the use of computers in the region. The first language to use these punctuation marks to indicate tone was Dan. In the following years other language communities adopted the practice. Western Krahn, indicated in purple, like Dan uses mathematical symbols in its writing system, but unlike the rest of the language communities indicated on the map it only uses plus signs.

# Example Text from Eastern Dan

Dan, shown in green on the map, is a member of the Mande language family. It is spoken in Ivory Coast (Cote d'Ivoire) and Liberia by an estimated 1.3 million speakers. The following text exemplifies how punctuation marks are used.

<sup>2</sup>Ablaamö bha =në Izaakö kpɔ, 'yö Izaakö -yö Zakɔbö kpɔ, 'yö Zakɔbö -dı 'pö 'ö Zuda waa- ö dheebehang -nu -a -nu kpɔ. <sup>3</sup>=Dhe 'ö Zuda =ya Fadhezö waa- Zedha -a -nu kpɔ, -a -nu dhe 'wo- -dhe Tama bha- "dhiü, 'yö Fadhezö -dı 'pö 'ö Eslɔɔmö kpɔ, 'yö Eslɔɔmö -yö Adhamö kpɔ, <sup>4</sup>'yö Adhamö -yö Abinadabö kpɔ, 'yö Abinadabö -yö Naasɔn kpɔ, 'yö Naasɔn -yö Samɔ kpɔ, <sup>5</sup>'yö Samɔ -yö Boazö kpɔ Dhaabö "dhiü, 'yö Boazö -yö Obədö kpɔ, 'yö 'wo- -bha dhe -dhe 'pö Dhutö. Obədö bha =në Izai kpɔ, <sup>6</sup>'yö Izai -zë 'ö gun -na -gblüdë Davi 'kpɔ.

Fig. 1: Text from the Eastern Dan New Testament (Wycliffe)



Fig. 2: Listen to Dan.

# Cartographic Resources

- GRASS GIS
  - Adobe Illustrator
  - Populated Places Data Set
  - Open Street Map Data
  - Various Language Maps to produce hand drawn shapes

# Map

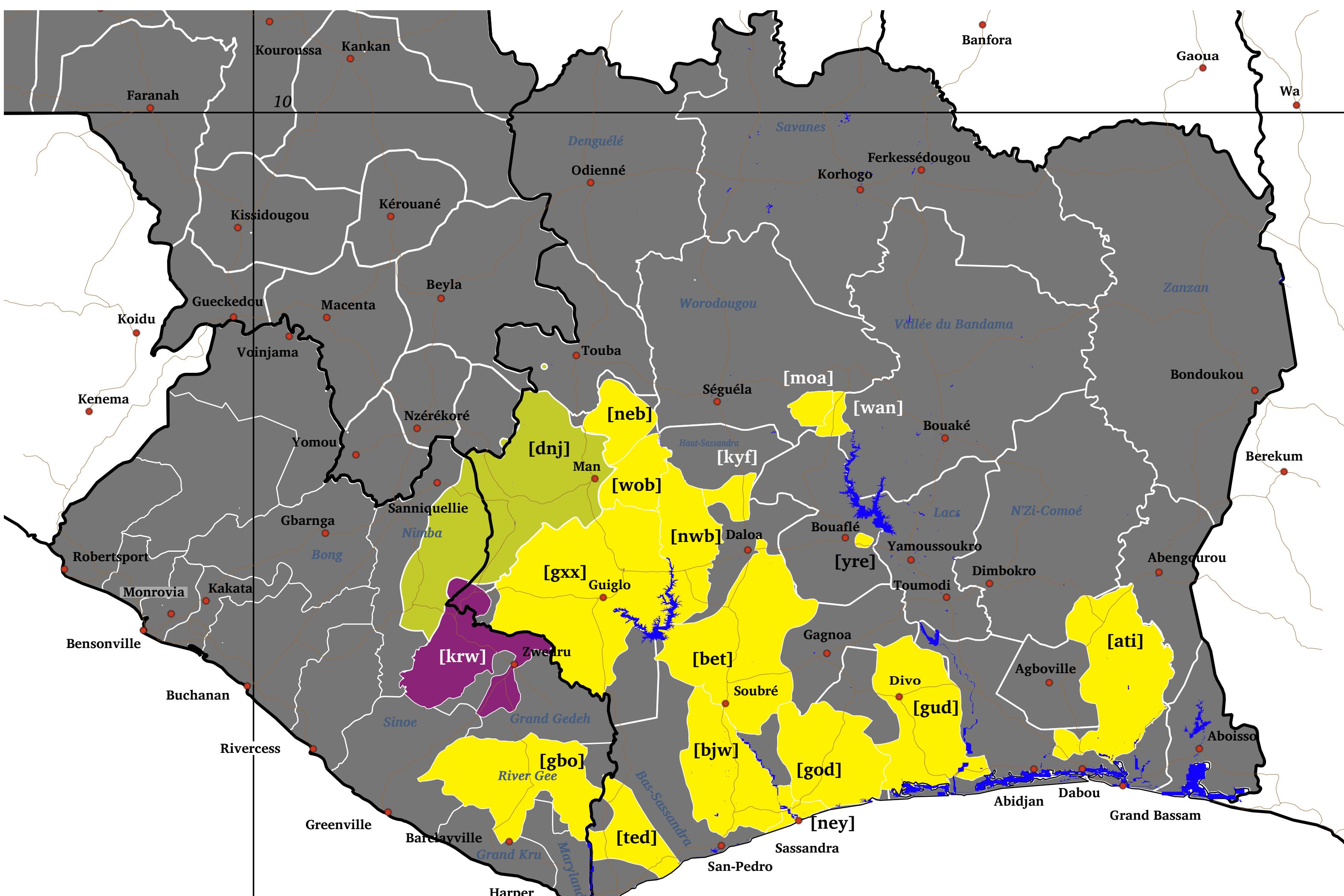


Fig. 3: Ivory Coast, Liberia, and Guinea.

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Table 1: Languages indicated on map

Code on Map	Language Name	Color
dnj	Dan	Light Green
krw	Western Krahn	Purple
neb	Toura	Yellow
gxx	Wè Southern	Yellow
wob	Wè Northern	Yellow
bet	Guiberoua Béte	Yellow
bjw	Bakwé	Yellow
gbo	Northern Grebo	Yellow
ney	Neyo	Yellow
god	Godié	Yellow
gud	Yocoboué Dida	Yellow
kyf	Kouya	Yellow
moa	Mwan	Yellow
wan	Wan	Yellow
yre	Yaouré	Yellow
ati	Attié	Yellow
ted	Tepo Krumen	Yellow
nwb	Nyabwa	Yellow