The Global Distribution of (P)APA and (T)ATA
and their Original Meaning

by Alain Matthey de l’Etang * and Pierre J. Bancel **

Abstract: In previous articles (Bancel & Matthey de l’Etang 2002, Matthey de l’Etang & Bancel 2002), we studied the global etymology (k)AKA along with its probable original Proto-Sapiens meaning, ‘male elder on the mother’s side’ (GdF, MB, B+), consistent with a kinship system that recognized relatives according to sex, status based on age, and filiation groups. Two more worldwide etymological series are added here, namely (P)APA and (T)ATA, the origin of which can be also traced back to the Proto-Sapiens language. These two etyma clearly referred to the male elders on the father’s side (F, FB, B+, GdF). Such a semantic pattern constitutes the exact paternal counterpart of the (k)AKA kin class. The new light it sheds on our ancestral kinship system gives additional strength to our hypotheses regarding the nature of this system.

1. INTRODUCTION

The existence in most of the world’s languages of phonetically similar terms designating the father F and the mother M has been until recently explained as the result of convergence. Two among the articles dedicated to the nursery words PAPA and MAMA certainly marked a milestone in the history of linguistics. In 1959, Murdock made factually evident this global “convergence”, intuitively known to many linguists, by means of hundreds of examples drawn from kinship terminologies’. Soon after, in his famous article “Why Mama and Papa?”, Jakobson (1960) launched an explanation to these similarities that remained unchallenged for decades.

Jakobson’s claim was that “non historically related” languages coin similar nursery words for father F and mother M as an adaptation to the phonetic ability of nursling, initially limited to the consonants [p, b, t, d, m, n], and to the vowels [a, ə]. Words built up with nasal consonants would have naturally referred to the mother M, by virtue of a spontaneous association made by the baby between his mother and his own nasal murmur, emitted while suckling. Words built up from oral stops would, in turn, have been associated with the father F, for reasons, one must say, anything but clear in Jakobson’s formulation.

In 1994, Merritt Ruhlen established another global series of kinship terms KAKA (‘uncle, elder brother’) that could not have resulted from convergence but had been inherited from an ancestral language. On this basis, he questioned for the first time Jakobson’s explanation for the global distribution of the nursery words PAPA and MAMA, suggesting that these two series probably involved, at least partially, an inherited component.

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1. This “convergence” was already known to 19th century historians. In 1852, Buschmann published a list of terms for father F and mother M taken from different languages and displaying the canonical PAPA and MAMA shapes. Sometimes afterwards, in his famous book The Origin of Civilisation and the Primitive Condition of Man (1870, p. 346 sqq.), Sir John Lubbock issued his own list of parental terms, notably based on Koelle (1854) for African languages. Both studies were quoted by Westermarck in his History of Human Marriage (1921, 5th edition, vol. 1, p. 242). Koelle’s relevant terms are included in our own documentation.
In the first of our papers devoted to the same global kinship etymon \((K)AKA\) (Bancel & Matthey de l’Etang 2002), following Ruhlen’s line of reasoning, we analyzed in greater detail the numerous weaknesses of an explanation relying on sound symbolism. With regard to the 363 cognates of \((K)AKA\) gathered from 432 complete kinship terminologies worldwide, and the hundred others collected from various word lists, we concluded that the only satisfactory explanation for the origin of this series was a common descent from a language ancestral to all known human languages. This conclusion led us to further anthropological developments. In our second paper (Matthey de l’Etang & Bancel 2002), we were able to clarify the original classificatory meaning of \((K)AKA\): ‘elder brother B+, mother’s brother MB, grandfather GdF’, i.e. the male elders on the mother’s side (or elders belonging to a group to which the mother M belongs). This in turn allowed us to tentatively characterize some of the features of our ancestral kinship system, like gender recognition, status depending on age and membership to a filiation group.

In the present study, our first concern will be to establish the etymological validity of two well known global kinship series, namely \((P)APA ~ (B)ABA\) and \((T)ATA ~ (D)ADA\) – which were precisely subject of Murdock’s and Jakobson’s investigations. We have compared some 1,600 languages worldwide (1,080 fairly complete kinship terminologies and some 500 other incomplete kinship glossaries).

Our second concern will be to show that the only explanation for the existence of these etymological series is their common origin in the Proto-Sapiens language. We will approach this question by challenging some of the arguments, involving numerous linguistic examples, that have recently been opposed by Trask (s.d.) to the idea that kinship nursery terms are inherited from the Proto-Sapiens language.

Finally, we will envision the meaning of the etyma \((P)APA\) and \((T)ATA\) from an anthropological viewpoint, showing that both refer to male elders on the father’s side. This classificatory meaning will be evaluated in light of the mirroring classificatory meaning of \((K)AKA\) (‘male elders on the mother’s side), and it will be shown that both kin class are compatible with a kinship organization, already outlined in Matthey de l’Etang & Bancel (2002).

## 2. METHODS

In order to put the convergence hypothesis under scrutiny, Murdock selected words specifically designating the father F or the mother M, showing how overwhelmingly the sound sequences combining consonants \([p, t]\) and the vowel \([a]\) were attached to the paternal entity, while the sound sequences combining consonants \([m, n]\) and the vowel \([a]\) were attached to the maternal entity. By privileging the father and mother relationships in his comparison, Murdock gave credence to an opinion that, at the time, was intuitive. At the same time, he went short of all the other meanings that these sound sequences possibly conveyed. Needless to say, a truly representative semantic evidence is necessary for any kind of lexical comparison.

Our methods, extensively presented in our previous articles on \((K)AKA\), can be summarized as follows.

1. Phonetically compare kinship terms from our global set of kinship terminologies to the canonical forms \((P)APA ~ (B)ABA\) and \((T)ATA ~ (D)ADA\). The validity of these phonetic series will depend on the phonetical proximity – graded on a three-step scale – of the potential cognates with the canonical forms (phonetic consistency), and on the extent of their distribution through linguistic families and continents (geolinguistic validity).

2. Assess the semantic consistency of the series, determining to which degree the meanings of the terms retained in the phonetic series scatter or converge towards some salient kin relationship(s).

3. Review the different explanations accounting for the phonetic and semantic consistencies and the global distribution that a series may display.

4. Establish the semantic representativity of each of the numerically salient positions by determining their geolinguistic distribution. Each salient relationship will be considered representative of the original (individual or classificatory) meaning of the etymon, provided
that cognates referring to this particular relationship are distributed throughout a substantial number of language families.

5. Transfer the original – individual or classificatory – meaning on a genealogical diagram for anthropological interpretation. Semantic patterns will be evaluated according to established kinship patterns and/or type of kinship systems.

3. THE (P)APA AND (T)ATA ETYMOLOGICAL SERIES

3.1. THE PHONETIC SERIES

3.1.1. The phonetic series (P)APA ~ (B)ABA
Potential cognates of the forms (P)APA ~ (B)ABA are graded according to their contribution to the phonetic consistency of the series.

The first category contains terms reflecting all the canonical phonemes such as Uzbek baba F, GdF, Sekani abba my F, Oromo or Naron aba F, Dogon or Marathi ba F, Mayoruna papa F, FB, Korean appa (childish) F, Konzo or Rumsen apa F, FB, Lushai or Wambaia pa F, FB, Comanche ap F, MZH. Adjunction of a glottal stop is admitted, such as in Patwin ?apa GdF, Arabic ?ab F or Didra ba? F.

The second category contains terms exhibiting substantial phonetic changes (and sometimes affixal adjunctions) but remaining at a small phonetic distance from the etymon and thus strongly contributing to the validity of the series. Such are Gujarati bãpu F, Beliyan fâbá F, FB, Burmese a-pha F, Bayso aabo ~ abo F, FB, !Xam ibo F, Northern Wintun of Shasta County hapa F, uSüt-vare vâv GdF, Jate afö F, FB, Bambara fâ F, Sere và F, Khalkha av F, Kotoko abâ-gënë F, Chahar ab-aga FB, Chukenche apai-nin GdF, Pnar papun MF.

The third category contains even more differentiated terms such as Dinka wa ~ awa F, Zaysse awaa F, Murngin wâwa B+, Kaling ’wa B+, Z+. Since w may have evolved from different source segments (w < k ~ g ~ p ~ b), their phonetic shape may result from an evolution from other potential etyma such as (K)AKA. We retained such terms only when found in languages belonging to linguistic families where other words, closer to the canonical phonetic pattern and semantically similar, are also present. For instance, in the Gunwinyguan group of Australian, Ngandi wa’wa B+ is a close correlate of Wardaman ba-pa B+, FF, SS; or, in the Western Nilotic group of Nilo-Saharan, Shilluk wa ~ wia F, FB and Nuer gwa F, FB, MZH, FZH correspond to Lango papa F, FB. Because of their weak phonetic relation with the etymon, they only marginally contribute to the etymological validity of the series.

From the exhaustive study of the 1,080 kinship terminologies, we obtained 986 potential reflexes, which are listed in Appendix A. Among these reflexes, 427 are listed under the first, 422 under the second, and 137 under the third phonetic category. The first and second category cognates are overwhelming (86% of total) and unquestionably verify the phonetic consistency of the series.

3.1.2. The phonetic series (T)ATA ~ (D)ADA

Out of the 1,080 languages for which we have complete kinship terminologies, 446 languages provide 632 reflexes, to which add 121 more reflexes from incomplete word lists.

The first category contains terms such as Pali tата F, Gothic atta F, Middle Turkic ata F, Cornish tat F, Marathi ta F, Albanian at F, Avar dada ‘dad,’ Zaysse adda F, Idoma āda F, English dad, Hatti da F, Ugaritic âd F. Adjunction of a glottal stop is admitted, as in Wailaki ta’ F.

The second category contains terms as Cebuano tatay (address term) F, Arabana tara WF, Aztec tatli F, FB, Tjungundijji naita F, FB, Basque or Moni aita F, Nez Perce tööt F, Arawak itti F, FB, MB, Gilyak yt-k F, FB, at-k FF, Adyghe to F, Briton (ma)zad my F, etc.

No potential cognates from the third, weaker category have been retained so far.

These potential cognates from the first two categories are listed in Appendix B. Among these cognates, 308 are listed under the first category and 324 under the second.
3.2. Geolinguistic validity of the series

The geolinguistic validity of the (P)APA ~ (B)ABA series is fully confirmed by its global distribution. Cognates are found on every continent, in all the linguistic megaphyla and in most of the languages families at all levels: human languages are covered at a global level. 666 languages out of 1,080 provide reflexes. Thus, more than one language out of two (61.7%) in our sample displays reflexes of (P)APA ~ (B)ABA. But we must also mention that 335 supplementary languages, for which we do not have extensive lists of kin terms, also provided 449 reflexes which have been excluded from our statistical account. As a whole, this series is even more impressive than the (K)AKA series.

The geolinguistic distribution of the (T)ATA ~ (D)ADA series is also fairly global. A majority of linguistic stocks is also represented, a few of which, however – Indo-Pacific and Australian – do not provide a lot of convincing reflexes.

It is also worth mentioning that numerous reconstructed proto-languages are included in both series (Appendices A and B).

3.3. Semantic validity of the series

Table I displays the various meanings covered by the (P)APA forms in the 666 languages of our sample where they are present. The first row gives the number of reflexes referring to each specific kin relation. As a lot of terms are classificatory, i.e. they refer to several kin types like father F, father’s brother FB, mother’s sister’s husband MZH, etc., we took into account only one focal meaning (the closest to ego, in this case the father F and the father’s brother FB). When reflexes refer to two relationships equivalent in terms of proximity, we took both relationships into account, for example sister Z and brother B, grandmother GdM and grandfather GdF, or even father’s brother FB and mother’s brother MB. Consequently, the total number of relationships is higher than the number of reflexes. Of course, when several terms phonetically very close and identical in their meaning are reported in a given language, only one of these phonetic variants is taken into account.

<table>
<thead>
<tr>
<th>Total</th>
<th>F</th>
<th>F/FB</th>
<th>FB</th>
<th>GdF</th>
<th>B/B+</th>
<th>GdM</th>
<th>GdPt/GdCh</th>
<th>GdCh</th>
<th>FZ</th>
<th>MB</th>
<th>Z/Z+</th>
<th>M</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,029</td>
<td>288</td>
<td>106</td>
<td>100</td>
<td>134</td>
<td>100</td>
<td>49</td>
<td>42</td>
<td>38</td>
<td>36</td>
<td>33</td>
<td>27</td>
<td>20</td>
<td>42</td>
</tr>
<tr>
<td>%</td>
<td>28</td>
<td>10.3</td>
<td>9.7</td>
<td>13</td>
<td>9.7</td>
<td>4.7</td>
<td>4</td>
<td>3.7</td>
<td>3.5</td>
<td>3.2</td>
<td>2.6</td>
<td>1.9</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Table I. The semantic distribution of (P)APA ~ (B)ABA reflexes.

Far from being dispersed over the kinship semantic field, 71% of the relationships covered by the reflexes of (P)APA gather in a cluster including the father F, the father’s brother FB, the grand-father GdF, and the (elder) brother B+. This parental class is of great semantic consistency, as it is only composed of male elders.

All the other relationships that show up in the table are of less significant statistical value. We will see below why all of them (except maybe the reciprocal relationship grandparent GdPt – grandchild GdCh) have to be eliminated from the tentative reconstruction of the original meaning of the etymon (B)ABA ~ (P)APA.

Table II display the various meanings covered by the (T)ATA forms in the 488 languages of our sample where they are present. Calculations have been made according to the same procedure as for table I above.

<table>
<thead>
<tr>
<th>Total</th>
<th>F</th>
<th>F/FB</th>
<th>FB</th>
<th>GdF</th>
<th>B/B+</th>
<th>GdM</th>
<th>MB</th>
<th>Z/Z+</th>
<th>FZ</th>
<th>Ch</th>
<th>GdPt-GdCh</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>712</td>
<td>183</td>
<td>71</td>
<td>58</td>
<td>106</td>
<td>60</td>
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<td>33</td>
<td>26</td>
<td>24</td>
<td>18</td>
<td>5</td>
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<tr>
<td>%</td>
<td>25.7</td>
<td>10</td>
<td>8.1</td>
<td>14.9</td>
<td>8.5</td>
<td>5.7</td>
<td>5.5</td>
<td>4.6</td>
<td>3.6</td>
<td>3.3</td>
<td>2.5</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Table II. The semantic distribution of (T)ATA ~ (D)ADA reflexes.
The total number of relationships covered by the \((T)ATA\sim (D)ADA\) reflexes is not as high as in the \((P)APA\sim (B)ABA\) series, but remains at a significant statistical level. Here again, their semantic consistency is compelling, as 67% of the relationships covered by the reflexes form a cluster, composed of the father F, the father’s brother FB, the grandfather GdF, and the (elder) brother B+. The only other relationships having some statistical significance are the mother’s brother MB (5.5%) and the elder sister Z+ (4.6%).

### 3.4. CONCLUSION

All the results pertaining to the tests of sections 3.1, 3.2, and 3.3 are unambiguous: the phonetic and semantic consistencies of both etyma are compelling, and their geolinguistic distribution is global. What is really striking is that the respective proportions for each of the most significant relationships \((F/FB, GdF, B/B+)\) are fairly similar in both cases: 48%, 13% and 9.7% for \((P)APA\) and 43.8%, 14.9% and 8.5% for \((T)ATA\). The same is true for the total figures of the parental class \{F, FB, GdF, B+\} as a whole: 71% and 67% respectively. And still more striking is the comparison of these proportions with the statistical figures of the \((K)AKA\) kin class: MB 42.3%, GdF 13.3%, B+ 16.1%, giving a total for the kin class of 71.7%.

Two new etymological series, consistent at a global level, are consequently confirmed, the origin of which requires an explanation. In our former articles, several possible explanations accounting for the worldwide distribution of nursery kin terms such as chance resemblance, sound symbolism, diffusion and borrowing were addressed and opposed. The readers is referred to sections 3 and 4 of Bancel & Matthey de l’Étang (this volume) dealing with the nature of nursery words, in which other linguistic arguments are developed, which favor their common origin from a Proto-Sapiens language. In the next part of the present study, we will focus on some complementary arguments, illustrated with linguistic examples, which have been recently opposed to the hypothesis of the common origin of nursery kinship terms.

### 4. CONVERGENCE OR INHERITANCE?

#### 4.1. ARE \((P)APA\) AND \((T)ATA\) INHERITED — OR DO “THEY JUST KEEP COMING”?

Before Jakobson launched his own explanation to the global “convergence” of kinship nursery terms, Murdock had already concluded that languages were universally developing nursery words regardless of their historical relationships: “As standard parental terms become phonetically and morphologically modified in consequence of the normal process of linguistic change, forms develop which are difficult for very young children to pronounce. Under such circumstances, simpler nursery forms tend to appear – carved, so to speak, out of infant babblings under parental encouragement. From time to time, it is alleged, such nursery words come to replace the traditional words in standard usage” (1959:1). This idea has been accepted since as an unshakable truth by a vast majority of linguists, and has never been challenged until recently. As the hypothesis of a Proto-Sapiens language is gaining ground, some linguists feel it is time to reactivate it. This is why, not long ago, Larry Trask issued an article on the internet entitled “Where Do the Mama/Papa Words Come From?”, intended to put a final “nail in the coffin of the Proto-World conjecture.”

Some of his views certainly represent the most conservative perspective. His core argument is very similar to Murdock’s: “The papa/mama words are not fossilized relics of some ancient ancestral language at all. Instead, they are being created all the time. New examples of papa/mama words are constantly being invented and passing into use. At first, these new words survive alongside the older ones as informal or intimate versions, but they may take over completely and drive the older words out of the language. This process is self-renewing forever […]. This endless re-creation and recycling of papa/mama words explains a great deal. It explains why we find these words so often, in so many languages.” In support of his assertions, Trask produces numerous linguistic examples taken from various linguistic stocks. Let’s examine some of these examples.

#### 4.1.1. Turkic \textit{ata} and \textit{aba} ~ \textit{baba}

According to the author, “the inherited Turkic words for ‘mother’ and ‘father’ are ana and ata, respectively, and these words […] are still the everyday words in most Turkic languages. But in the best-known Turkic language, [Modern] Turkish, the word \textit{ata} has now become specialized. It is no longer the
everyday word for ‘father,’ and instead it is an elevated word meaning ‘forefather, ancestor.’ [...] But the everyday word for ‘father’ is now baba. This, of course, is another mama/papa word, and it used to be the Turkish word for ‘daddy,’ but now is the ordinary word for ‘father,’ and ‘daddy’ must now be expressed by adding a diminutive suffix, producing baback [...]”

Trask aims at proving through this succession of replacements and meaning shifts that nursery words undergo constant and quick replacements through time. But his presentation is partial – in all the senses of the word.

In the first place, as Trask himself says, Proto-Turkic ata certainly referred to the father F. For instance, Old Turkic ata F, Karakhanid ata F, Middle Turkic ata F, Azeri ata F, Sary-Yughur ata F, Tatar ata F, Kazakh ata F, Nogai ata F, Balkar ata F, Kumyk ata F, Bashkir ata F, Khakassian ada F, Tuva Tolofar ada ‘da F. All these terms are not only the traces of the Proto-Turkic form; they also show that this word did not undergo any phonetic and semantic change at all in most of the Turkic languages through their entire history. Isolating the case of Modern Turkish from other Turkic languages is exactly contrary to the comparative method.

Secondly, is the “specialization” of meaning of ata in Modern Turkish from ‘father’ to ‘forefather, ancestor’ a true change of meaning? In fact, there are many examples of modern Turkic languages where ata means either ‘ancestor’ or ‘father’ and ‘ancestor’: Modern Turkish ata ‘ancestor,’ Turkmen ata FF, Kirghiz ata F, ‘ancestor,’ Karakalpak ata ‘ancestor,’ Uighur ata F, ‘ancestor,’ Altai ada F, ‘ancestor.’ Consequently, it is highly likely that ata originally meant both ‘father’ and ‘ancestor.’ The specialization that occurred in Modern Turkish (as well as in Karakalpak) is certainly not a semantic innovation at all.

Thirdly, is the new Turkish word baba ‘father’ really new? In fact, one also finds baaba GdF in Turkmen, a language belonging to the same southern branch of Turkic as Turkish, but also baba GdF, ‘elder’ in Uzbek (Schurmann 1962: 200), a language belonging to the eastern branch of Turkic. The first possibility is that baba forms are derived by reduplication from the Turkic word apa ~ aba ‘father, ancestor,’ attested by Old Turkic (Orkhon) aba ‘grandfather,’ Karakhanid aba F, ‘ancestor,’ ‘bear,’ Turkish aba F, Azeri (dial.) aba F, Turkmen (dial.) aba F, Salar aba F, Sary-Yughur awa F, Tatar (dial.) aba F, Kirghiz aba F, Balkar appa ~ aba F, Bashkir apa F, Khakassian aba F, Tuva Tolofar ava F, Altai aba F, ‘bear,’ Chuvash aba ‘bear.’ Moreover, Turki is one of the three branches of the Altaic family, together with Mongol and Tungusic, where the root apa ~ aba ‘father, ancestor’ is abundantly attested, sometimes even with the meaning of mother M, mother’s sister MZ and elder sister Z+ (see Appendix A).

The second hypothesis is that the Turkish, Turkmen, and Uzbek baba forms were borrowed from the neighboring Iranian languages (such as Farsi, Pashto, Tajik). Iranian languages are derived from Indo-European, where the root papā ~ baba F is also present in the Anatolian and Indic branches, and exists in Italic and Greek with the meaning of ‘grandfather’. The fact that Turkish also uses another term peder ‘father’, from Iranian origin, gives substance to this hypothesis. Of course, these two hypotheses are not contradictory. If, as it is probable, Turkish-speaking invaders had an apa ~ aba form in their language, it would have been only easier for them to adopt a baba form from Indo-Iranian speakers in the newly conquered regions.

Whether borrowed from Iranian or derived from Proto-Altaic (or both), Turkish baba ‘father’ is certainly not a newly created word.

4.1.2. Welsh tad

Trask claims that, in Welsh, the term inherited from Proto-Indo-European pater ‘father’ F (attested in other Celtic languages such as Gaulish atéir ‘father’ F or Old Irish athair ‘father’ F) disappeared and was replaced by a “new word” tad F. This statement is not true, either.

In the first place, the Welsh term tad F is anything but new in the Brythonic branch of Celtic. It is found in XIIIth century Old Welsh tad F (Charles-Edwards 1993), in Middle Briton tad F (XIIth-XVIIth century) and also in Old Cornish tat F (Vocabularium Cornicum, ca. 1150). According to Charles-Edwards (1993: 169), this word must “go back at least to the Romano-British period.”

In fact, tad F must have belonged to the common Brythonic lexic, and even to the Insular Celtic lexic (comprising the Brythonic and Goidelic branches). The first reason is that the Old Irish (a Goidelic language) word dait ~ data ‘foster father’ (still in use in Modern Irish) is evidently related to Brythonic tad ~ tat F. The second reason is that neither Middle Briton nor Old Irish may have borrowed the word dad from English, a language with which they never were in close contact. On the contrary, the
English word *dad*, an isolated form within the Germanic group, is likely to have been borrowed from Brythonic at the time of the Anglo-Saxon invasion.

Secondly, the Old Welsh derivative *edrydd* ~ *edryf* ‘paternal kin’ is, according to Charles-Edwards (1993: 200), parallel to Old Irish *aithire*, and derives from Proto-Celtic *attrio* ‘paternal kin,’ itself cognate with Latin *patrius* ‘paternal kin.’ This form clearly shows that the Indo-European root *pater* ‘father’ did not completely disappear from Welsh, either.

4.1.3. Rumanian *tata*, French *papa* and Greek *babbas*

Among the nursery kin terms which Trask believes are of recent origin, there are also the Rumanian, French and Greek terms for ‘dad’, *tata*, *papa*, and *babbas*, respectively.

Trask asserts that, in Rumanian, the recent word *tata* F eventually replaced the original term for ‘father’ inherited from Latin. The recent origin of this nursery form in Rumanian is certainly questionable. One cannot exclude its inheritance from the Latin address term *tata* ‘dad’! Rumanian would be then and, to our knowledge, the only Romance language having inherited *tata* from Latin. Another possibility, of course, is that Rumanian *tata* was borrowed from the neighboring Slavic languages.

Now let us consider French *papa*, which Trask believes is newer than the “formal” term *père*. It is hard to believe that the author ignores that *papa* is inherited from Latin *pappa* (irregular vocative of *pappas*), just like *père* is inherited from *pater*.

It is hard to believe, but it happens again with the Modern Greek *babbas* ‘daddy’, which Trask pretends “cannot be ancient in Greek,” contrary to *pateras* ‘father’ F, “because the consonant /b/ of classical Greek changed in every case into /v/ in the postclassical period. For example, Classical Greek had the word biblos ‘book’ [...] But the Modern Greek form of the word is vivlio, with the earlier /b/s changed into /v/s.” This linguistic argument is absolutely irrelevant in the particular example of the modern *babbas* ‘dad.’ This Modern Greek word finds a very similar, well attested counterpart in Homeric Greek *pappas* ‘dad’ (vocative *pappa*), which certainly must be considered as a very good candidate for ancestry of Modern Greek *babbas* ‘dad’.

Once again, these three examples are not supporting Trask’s thesis, quite to the contrary. And there is more to come.

4.1.4. Bengali and Hindi *baba*

Trask takes another example from Bengali and Hindi. In these Indic languages, the “formal word” *pita* F, inherited from Proto-Indo-European *pater* ‘father,’ now coexists with the “informal” *baba* or *bap*. Trask implicitly suggests that Bengali and Hindi independently created the nursery forms *baba* ~ *bap*, and that the opposition between *pita* F and *baba* is recent in these languages. How could Trask miss the fact that this opposition already existed in Sanskrit, from which Bengali and Hindi obviously inherited both *baba* and *pita*? As we mentioned in section 3.1.1, *baba* was not an innovation in Sanskrit, either, but belongs to the common Indo-European vocabulary, together with *pater* F and *attila* F.

4.1.5. Dravidian *appa*

The last of Trask’s examples that we will consider is the Tamil “formal word” *takappan* F, opposed to the “informal” term *appaa* F. According to Trask, informal *appaa* is just another case of innovation. A closer look at the sister Dravidian languages of Tamil should have made the author a little more cautious.

Eleven Dravidian languages for which we have accurate data do display *appa* words for ‘father.’ The use that each of these languages makes of the term varies. Trautmann (1981) does not give additional terms for father F in Tulu, Kodagu, Malayalam, Kui, and Konda, so we can infer that, in these languages, *appa* forms are used for both address and reference, or that no distinction is made between formal and informal usages. Similarly, the Konku (a Tamil-speaking group) use *appa* for both address and reference (Beck 1972: 287). In Kannada, *appa* is a vocative (address) term, while *thande* is a denotative (reference) term (Srinivas 1942: 204-205). In Telugu, Starostin (2003) gives three terms for ‘father’: *appa*, *aya* and *tandri*, but doesn’t give details about the way they are used. In Kurukh, *abba* is the reference term and *bā* the address term (Emeneau 1955: 184). For Brahu, the same author reports that *abba* is a “respectful address term.” Finally, in Hill Maria Gondi, *tappe* is a referential term (Grigson 1949: 309).

The near phonetic identity of these Dravidian words clearly shows that Tamil *appaa* is not a recent innovation. On the contrary, specialists of Dravidian reconstruct *ap* ~ *appa* ‘father.’ Moreover,
Tamil “formal” takappan F was obviously formed on appaa F. Once again, one of Trask’s alleged new words proves to be very old.

Dravidian data also raise the issue of the opposition between referential and address terms. Data show that, depending on language, appa words may be either address or reference terms, or both. This variation suggests that the usage of kin terms cannot be reduced to a simple opposition between “informal” nursery words used for address, and more “formal” inherited terms for reference, as Trask seems to believe. Dravidian is not the only stock displaying this situation. A cautious examination of data has convinced us that there is a good amount of languages in Niger-Congo, Afroasiatic, Indo-Pacific and elsewhere which do not show the reference and address dichotomy in kin terms, and for which there is no other term for father F but the “canonical” apa ~ papa, ata ~ tata forms.

4.1.6. Conclusion: the age of nursery kin terms

After close scrutiny, all of the “innovations” revealed by Trask proved simply erroneous. All of them had been merely abstracted from their comparative and historical context. Once they are replaced in perspective with data from closely related languages, they immediately appear as obvious cognates – both phonetically and semantically – of words from sister languages, that must have been used through millennia with the same meaning. The Turkish word ata has not varied a bit since the time of the Orkhon inscriptions; nor has Welsh tad since the Romano-British period, nor Bengali baba, etc.

Tables III and IV contain the examples discussed above with other evidence taken from ancient written languages and modern languages derived from them, clearly illustrating the amazing resistance – both phonetical and semantical – of the nursery kin terms to linguistic change. This evidence certainly gives a blow to the theory of “innovations.”

### Table III. (r)ata forms in ancient languages reflected in modern related languages.

<table>
<thead>
<tr>
<th>Language</th>
<th>Archaic terms</th>
<th>Derived languages and terms</th>
<th>Minimal time span</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical Latin</td>
<td>tata F</td>
<td>Possibly Romanian tata F</td>
<td>2,500 years</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>tāta F</td>
<td>Pali tāta F, Kol dādā F</td>
<td>3,000 years</td>
</tr>
<tr>
<td>Avestan</td>
<td>tā F</td>
<td>Besud atā F, Jaghuri atai F</td>
<td>3,000 years</td>
</tr>
<tr>
<td>Brythonic</td>
<td>tad F</td>
<td>Briton, Welsh tad F, Cornish tat F</td>
<td>2,000 years</td>
</tr>
<tr>
<td>Uighur</td>
<td>ata F</td>
<td>Azeri ata F, Sary-Yughur ata F, etc.</td>
<td>1,300 years</td>
</tr>
</tbody>
</table>

### Table IV. (θ)aba forms in ancient languages reflected in modern related languages.

<table>
<thead>
<tr>
<th>Language</th>
<th>Archaic terms</th>
<th>Derived terms</th>
<th>Minimal time span</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical Latin</td>
<td>pappa F</td>
<td>French papa F, Italian papa ‘pope’</td>
<td>2,500 years</td>
</tr>
<tr>
<td>Homeric Greek</td>
<td>pappas F</td>
<td>Modern Greek babbas F</td>
<td>2,900 years</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>bābā F</td>
<td>Bengali bābā F</td>
<td>3,000 years</td>
</tr>
<tr>
<td>Orkhon, Uighur</td>
<td>apa ancestor, GdF</td>
<td>Karakhanid aba F, ‘ancestor’</td>
<td>1,300 years</td>
</tr>
<tr>
<td>Akkadian</td>
<td>abu F</td>
<td>Modern Arabic ?ab F</td>
<td>4,500 years</td>
</tr>
<tr>
<td>Written</td>
<td>aba F</td>
<td>Mongguor aba</td>
<td>800 years</td>
</tr>
<tr>
<td>Middle Korean</td>
<td>ṃ̣p̣i F</td>
<td>Modern Korean appa F</td>
<td>1,000 years</td>
</tr>
<tr>
<td>Archaic Chinese</td>
<td>ba F</td>
<td>Modern Mandarin baba F</td>
<td>4,500 years</td>
</tr>
</tbody>
</table>

Before we close this section, we will take a final and conclusive example, well documented historically. This example is the Semitic word ?ab F, the attested existence of which dates to some 4,400 years ago.
We find abu F in Akkadian and abbu ‘elder’ in Eblaic (4,400 BP). In Babylonian, we have abu F, in Hebrew ?aab F, in Aramaic yabbaa F, in Ugaritic ?ab F, in Phoenician ?b F, in Epigraphic South Arabic (VIIth century AD) ?b F, etc. Cognates from the modern period are found in Tigre ?ab F, Amharic abbat F, East Ethiopic aabu F, Ge’ez ?ab F, Gurage ab F, Modern Arabic ?ab F, etc.

Each of these cognates accounts for the extraordinary degree of phonetic preservation of this term since the time of Ebla. To our knowledge, nobody ever ventured to explain them in terms of convergence, or in terms of permanent recreation. To the contrary, there is a wide agreement that these similar terms for ‘father’ are all reflexes of the Proto-Semitic term ?ab- F (Starostin 2004)7.

Table V display supplementary reflexes of (B)ABA and (T)ATA which existed in ancient languages.

4.2. The mother’s choice

Another idea developed through Trask’s article is that the mother (each and every mother individually!) is primarily responsible to “assign” the baby’s babbling sequences to the family members. First, she usually makes the baby associate the easiest sounds sequences of the type ma-ma to herself, then she makes the nursling associate babbling sequences of the type pa-pa or ta-ta indifferently with the father F. Consequently, all the variations that are observed in the forms assigned to each parent, nana instead of mama for mother M, or mama instead of papa for father F, have to be naturally attributed to choices made by individual mothers.

After this first stage, more complicated babbling sequences like the ones that combine velar consonants [g, k] and vowel [a] are assigned, as soon as they can be mastered, to other family members such as uncles, aunts, brothers, sisters, and grandparents. Trask observes that, due to the growing phonetic abilities of the child, variations in the babbling assignments are even more frequent than during the first babbling stages. In the “closely related [Turkic] languages,” there seems to be a “great variation in the choices made.” “Kyrgyz has aga for ‘older brother’, and Uyghur and Uzbek have aka for the same meaning. In Tatar and Turkmen, however, aga means ‘uncle,’ and quite different words are used for ‘older brother.’”

However, examination of the data at a global level shows that such variation is not erratic. As Ruhlen (2000a) precisely demonstrated, with regards to the etymon (K)AKA, this particular alternance of the elder brother B+ and uncle meanings is not specific to the Turkic languages but regularly appears throughout the world’s languages. Moreover, our own studies on (K)AKA (Bancel & Matthey de l’Etang, Matthey de l’Etang & Bancel 2002), based on some 500 cognates, showed that this kinship nursery term is clearly primarily associated with the mother’s brother MB (49.8% of cognates), secondarily with the elder brother B+ (19%), with the grandfather GDF (15.6%), and sporadically with the paternal uncle FB (10.9%), but never with the father F (0.4%). So there is certainly nothing like random in the way speakers of Turkic languages “assign” AKA to ‘elder brother’ and ‘uncle.’

2. Other very similar Afroasiatic roots have been reconstructed: Proto-Southern-Cushitic aba F (Ehret 1980), Proto-Eastern-Cushitic aabba ~ baabó F (Blážek 2002), Proto-Central Cushitic ?ab F (Starostin 2003), Proto-Eastern Cushitic ?ab F (Starostin 2003), Proto-Berber V-?b- F (Blážek 2002), Proto-Western Chadic ?ab- ~ ?ab- F (Starostin 2003), Proto-Central Chadic ?ab F (Starostin 2003), Proto-Eastern Chadic ?ab ‘man’ (Starostin 2003), without forgetting Ongota (which some linguists believe is an independent Afroasiatic branch) ?abba F. All these roots are clear reflexes of Proto-Afro-Asiatic ?ab- F.

It is also worth mentioning that Dolgopolsky (1998, quoted in Hage 2003) reconstructed ?aba or aba father F for Proto-Nostratic. Let us recall that the Nostratic megahymn, as Dolgopolsky defines it, includes Indo-European, Afroasiatic, Kartvelian, Uralic, Altaic, and Dravidian. Greenberg (2001), for his part, proposed appi/a as one of the forms meaning ‘father’ F in Proto-Eurasian. Eurasian, under Greenberg’s definition, is composed of Indo-European, Etruscan, Altaic, Eskimo-Aleut, Uralic-Yukaghir, Gilyak, and Chukchi-Kamchatkan.

Many parallel reconstructions have been proposed for other linguistic stocks: Proto-Northern Caucasian *aba F (Starostin 2003), Proto-Bantu *babá F (Meeussen 1969), Proto-Tibeto-Burman apa ~ *ba F (Benedict 1941), etc. The same holds for ata forms, for which we also have extensive ethnolinguistic data and reconstructions: Proto-Austro-Tai (ta)ta GDF (Hayes 2003), Proto-Siouan ati ~ tāti F, FB (Matthews 1959), Proto-Bantu -tātā F (Guthrie 1970), Proto-Indic tāt’a F (Strand 2003), Proto-Athabaskan ta? F (Hooijer 1956), etc.
Table V. *(b)ABA* and *(t)ATA* in ancient written languages and early records.

<table>
<thead>
<tr>
<th>LANGUAGES</th>
<th><em>(b)ABA FORMS</em></th>
<th><em>(t)ATA FORMS</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Semitic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eblaic 4400 BP</td>
<td><em>abh</em> elders</td>
<td></td>
</tr>
<tr>
<td>Akkadian 4400 BP</td>
<td><em>abu</em> F</td>
<td></td>
</tr>
<tr>
<td>Babylonian 4000 BP</td>
<td><em>abu</em> F</td>
<td></td>
</tr>
<tr>
<td>Ugaritic 4000 BP</td>
<td><em>ṭab</em> F, <em>ād</em> F</td>
<td></td>
</tr>
<tr>
<td>Hebrew 3000 BP</td>
<td><em>ṭab</em> F</td>
<td></td>
</tr>
<tr>
<td>Arabic <em>ca.</em> 1400 BP</td>
<td><em>ab</em> F</td>
<td></td>
</tr>
<tr>
<td>Aramaic 2500 BP</td>
<td><em>ṭab</em> F</td>
<td></td>
</tr>
<tr>
<td>Indo-Hittite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hatti 4000 BP?</td>
<td><em>da</em> F</td>
<td></td>
</tr>
<tr>
<td>Hittite 3500 BP</td>
<td><em>ṭataš</em> F</td>
<td></td>
</tr>
<tr>
<td>Luwian 3500 BP</td>
<td><em>tati</em> F</td>
<td></td>
</tr>
<tr>
<td>Palaic 3500 BP</td>
<td><em>papa</em> F</td>
<td></td>
</tr>
<tr>
<td>Lycian 2500 BP</td>
<td><em>tedi</em> F</td>
<td></td>
</tr>
<tr>
<td>Greek 3000 BP</td>
<td><em>pa[ter]/ F, pāppas dad,</em> pappos GdF*</td>
<td><em>atta</em> F</td>
</tr>
<tr>
<td>Latin 2500 BP</td>
<td><em>pa[ter]/ F, pappa dad</em></td>
<td></td>
</tr>
<tr>
<td>Oscan 2500 BP</td>
<td>*pa[tir]/ F</td>
<td></td>
</tr>
<tr>
<td>Gotic 1500 BP</td>
<td>*fa[dar]/ F</td>
<td></td>
</tr>
<tr>
<td>Gaulish 2000 BP</td>
<td>*a[ter]/ F</td>
<td><em>atta</em> F</td>
</tr>
<tr>
<td>Old Irish 1200 BP</td>
<td>*a[thir]/ F</td>
<td></td>
</tr>
<tr>
<td>Old Welsh 800 BP</td>
<td><em>edrydd</em> paternal kin</td>
<td><em>tad</em> F</td>
</tr>
<tr>
<td>Old Cornish 900 BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle Briton 800 BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sanskrit 3000 BP</td>
<td><em>pi[tar], baba</em> F</td>
<td><em>tata</em> F</td>
</tr>
<tr>
<td>Avestan 3000 BP</td>
<td>*pi[tar]/ F</td>
<td><em>tā</em> F</td>
</tr>
<tr>
<td>Old Persian 2500 BP</td>
<td>*pi[tar]/ F</td>
<td></td>
</tr>
<tr>
<td>Scythian 2500 BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tocharian A and B 1500 BP</td>
<td>*pā[car]/ ~ appakke F</td>
<td></td>
</tr>
<tr>
<td>Uralic-Yukaghir</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Koryak 1774</td>
<td><em>appa</em> F</td>
<td><em>atta</em> FB</td>
</tr>
<tr>
<td>Korean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle Korean</td>
<td><em>āpī</em> F</td>
<td></td>
</tr>
<tr>
<td>Elamo-Dravidian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elamite 4000 BP</td>
<td><em>atta</em> F</td>
<td></td>
</tr>
<tr>
<td>Amerind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarascan <em>ca.</em> 1559 AD</td>
<td><em>tata</em> F, FB</td>
<td></td>
</tr>
<tr>
<td>Taino before 1500 AD</td>
<td><em>baba</em> F</td>
<td></td>
</tr>
<tr>
<td>Other languages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etruscan 2500 BP</td>
<td><em>apa</em> F</td>
<td></td>
</tr>
<tr>
<td>Hurrian 4000 BP</td>
<td><em>ate</em> F</td>
<td></td>
</tr>
<tr>
<td>Mittani 3500 BP</td>
<td><em>attai</em> F</td>
<td></td>
</tr>
<tr>
<td>Sumerian 4500 BP</td>
<td><em>abba</em> F, elder, ancestor</td>
<td><em>adda</em> F</td>
</tr>
<tr>
<td>Mede 2600 BP</td>
<td><em>atu</em> F</td>
<td></td>
</tr>
</tbody>
</table>
Now, how can we account for this recurrent pattern? It seems to us that there are only two solutions. Either, for some obscure reasons, every language – putting aside the famous *mama* ~ mother association – spontaneously associates sound sequences combining consonants \([p, t]\) and the vowel \([a]\) with the paternal figure, while it spontaneously associates sound sequences combining velar consonant \([g, k]\) and the vowel \([a]\) with the maternal uncle and the elder brother, or every language inherited these nursery words from some ancestral language. Jakobson (1960: 129) certainly felt inclined towards the first solution, as he suggested complementary studies to determine to which degree the naming of the different familial relationships corresponded to the different stages of language acquisition. Ruhlen (2000a: 124) soundly remarked that this idea of spontaneous associations between relatives in the order in which they “appear on the scene” with the child phonological development was artificial, and it did not seem to him plausible that human society could be organized so neatly.

We believe that this conception is not only unlikely but simply false, and here is the reason why. Let us admit for a minute that languages really associate their closest relatives by order of their importance and appearance in the child emotional environment to babbling sequences in the order of their phonetic complexity: first, mother M with *ma-ma* sequences, then father F with *pa-pa* or *ta-ta* sequences, then mother’s brother MB with *ka-ka* sequences. How, then, could we find also *pa-pa* and *ta-ta* sequences associated with the paternal uncle FB? The father’s brother FB, either specifically or in association with the father F, is the second most frequent relationship to which *(P)APA* and *(T)ATA* reflexes refer (20% of the *(P)APA* ~ *(b)ABA* cognates, and 18.1% of the *(T)ATA* ~ *(d)ADA* cognates). Do the father’s brother appear earlier than the mother’s brothers in the child’s environment? Certainly not. With regard to the father’s and mother’s brothers, the theory of sequential semantic assignments does not work.

4.3. CONCLUSION

We have been discussing two arguments presented by Larry Trask based on linguistic examples. None of them, as we have demonstrated, resists examination. On the one hand, the nursery kinship terms, that he believes are innovations in Turkic, Brythonic, Indic, French, Rumanian, Greek, and Dravidian, clearly derive from the lexicon of their respective proto-languages, as the immense majority of kinship nursery terms certainly do. On the other hand, a large scale comparison clearly shows that random has nothing to do with the distribution of nursery kinship terms. Factors other than maternal choices are behind the nursery terms various meanings. These factors, as our previous and present studies reveal, are to be sought in the way that the Proto-Sapiens society organized kinship. To these factors will be dedicated the next section, starting with the meaning of our etyma *(P)APA* and *(T)ATA*.

5. THE ORIGINAL MEANING OF *(P)APA* AND *(T)ATA*

5.1. THE MEANING OF *(P)APA*

We will address the meanings of *(P)APA* that are statistically representative, in the decreasing order, looking for their distribution through the linguistic family spectrum.

5.1.1. The father F and the father’s brother FB relationships (48%)

This meaning is present in all the linguistic macrofamilies and in numerous families of inferior level, with the sense of ‘father’ F and/or ‘father’s brother’ FB. It is no wonder, as most classificatory kinship systems have just one term for both relationships.

The occurrences of these two relationships, taken together, cover 48% of our sample. Reflexes referring to these relationships in ancient written languages or early ethnological data are gathered in Table V. The general comparative list (Appendix A) also presents most of the linguistic reconstructions proposed so far with this meaning, particularly with the *aba ~ apa* forms: Proto-Dravidian, Proto-Semitic, Proto-Cushitic, Proto-Omotic, Proto-Mongolic, Proto-Turkic, Proto-Caucasian, Proto-Munda, Proto-Sino-Tibetan, etc. The word is also found in numerous families where another proto-form for ‘father’ F is reconstructed, as in Proto-Eskimo *ata* F (but Nunamiut *apa* F), Proto-Na-Dene *ʔata* F (but Carrier *apa* F), Proto-Austro- *ʔama* F (but Vietnamese *ba* F, Tausung *apa* F, Malay *bapa* F, East Keo *bapa* F, etc.)
Baduj bapa F, Tuamotu paapaa F, etc.). We have no doubt that these two positions are originally linked and constitute the ‘focal’ relationships (Lounsbury 1964) to which this term referred.

5.1.2. The grandfather GdF relationship (13%)

Distinguishing the maternal grandfather from the paternal grandfather (FF, MF) in our sample is not feasible, as a lot of terms refers to both of them, if not to all grandparents GdPt and sometimes even to grandparents and grandchildren GdPt-GdCh. This is why we deliberately termed grandfather GdF every relationship referring to either the paternal or the maternal side or both. At the same time, we maintained the grandparent-grandchildren class as a separate relationship. The result is that we certainly underestimated the number of grandfather GdF relationships covered by the reflexes. The grandfather GdF ratio is however very significant: 13%.

5.1.3. The elder brother/brother B+/B relationship (9.7%)

The root is present with this precise meaning in a majority of linguistic macrofamilies. If we include the different categories of brother B, this category’s percentage goes up to 9.7% of the sample. Miller (1967) reconstructed Proto-Uto-Aztecan pa ‘elder brother’ B+ (see Appendix A). Greenberg (1987) published a lot of reflexes of (P)APA with the same meaning in numerous languages, notably in Chibchan-Paezan, Central Amerind, Hokan, Penutian, etc., which are not included into our statistical account. In Australian, reflexes of (P)APA have been collected in 25 out of 93 languages (both Paman and non-Paman), notably reduplicated terms like baba (see Appendix A).

5.1.4. The grandmother GdM relationship (4.7%)

The number of occurrences for this relationship is not negligible (49 = 4.7%) but, as it is not globally distributed, and is frequently subsumed under the ‘grandparent’ GdPt relationship, we will not assume that it was originally referred to by (P)APA.

5.1.5. Self-reciprocal grandparents-grandchildren GdPt/GdCh relationship (4%)

Some scholars believe that the existence of terms like those addressing both the grandparents and the grandchildren GdPt-GdCh are possible remnants of a type of kinship terminology that was original to most languages of the world (Allen 1998). The number of occurrences of these reciprocal relationships is substantial (4%), but as most of them are found in a limited number of language families (Oceanic, Uto-Aztecan, and Niger-Congo), we will not make, at this time, any general inference.

5.1.6. The grandchildren GdCh relationship (3.7%)

The significant presence of many reflexes referring to this relationship (3.7%) has perhaps something to do with the occurrences of the reflexes covering the grandparent level and the combined grandparent-grandchild level, with possible implications in terms of system types. This question needs to be addressed separately.

5.1.7. The father’s sister FZ relationship (3.5%)

Because of the weakness of its geolinguistic distribution, this relationship is not accepted as part of the original meaning.

5.1.8. The mother’s brother MB (3.2%) and the mother M relationships (1.9%)

Percentages of occurrences of these relationships are low. Moreover, most of them are found in a small number of linguistic families: Cushitic, Burmic, and Indo-Pacific. So we will not consider these relationships as originally covered by the etymon.

5.1.9. The sister Z relationship (2.6%)

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3. Lounsbury (1964: 346, 361) uses this expression to refer to a kin type (often a relationship close to ego) to which more remote kin types can be “reduced” by applying “transformation” or “equivalence” rules pertaining to the particular system in which this kin type is found. For example, in the omaha-type system of the Fox (North America), the mother’s mother’s father’s son’s son MMFSS can be reduced to a mother’s brother MB.
As this relationship is not very representative and is far from being widely distributed geographically, we will not consider that it was originally referred to by (P)APA.

5.1.10. The mother’s sister’s husband MZH relationship

This relationship is not expressed in our statistical table, as it is almost always mentioned as a secondary position: (P)APA terms that clearly designate both the father F and the mother’s sister’s husband MZH are fairly numerous in our sample, and a lot of them even refer to three kinship relationships at the same time, the father F, the father’s brother FB, and the mother’s sister’s husband MZH (see Appendix A). Mother’s sister’s husband is certainly part of the classificatory meaning of (P)APA.

5.2. The meaning of (P)APA: conclusion

The relationships that we will ultimately retain are those that are statistically significant and distributed through a large number of linguistic stocks. The father F, the father’s brother FB, the grandfather GdF, the elder brother B+. This group of relationships {F, FB, GdF, B+} displays a consistent semantic pattern as it includes all masculine elders, the mother’s brother MB being excluded. What is most remarkable is that this pattern is highly consistent with the semantic (K)AKA pattern [MB, GdF, B+]. The mutual exclusion of the mother’s brother MB from the (P)APA series, and of the father’s brother FB from the (K)AKA series, must be significant in terms of kinship system types, as we will see in section 6. We will posit that {F, FB, GdF, B+} were the relationships addressed by the etymon (P)APA in the Proto-Sapiens language.

Of course, such a classificatory semantic pattern will not astonish kinship anthropologists familiar with terms that cut across generations, like the ones that are in use in crow and omaha kinship systems. We already addressed some of the similarities that these systems have with the semantic pattern of (K)AKA (Matthey de l’Etang & Bancel 2002). Systems which equate the male members of the father’s clan to the father are crow systems (Lounsbury 1964, 371 sqq.). But crow classificatory patterns include all generations. Our own study revealed many examples of societies referring to the members of the patriline as aba or baba. In Tsimshian, âb said by a woman refers to the male members of the father’s clan (Boas, quoted in Mayer-Durlach 1928: 143). In Teda, aba means ‘father’ F and ‘elder;’ in Pashto, aba means ‘father’ F and ‘elder;’ in Zande, baba refers to a ‘male member of the father’s clan in the generation of the father F;” in Baule, baba refers to an ‘elder.’ Most interestingly, in Sumerian, abba refers to ‘father’ F, ‘grand-father’ GdF, and the ‘ancestors’ (Halloran 1999).

5.3. The meaning of (T)ATA

The observations made about the series (P)APA also apply, with some variations, to the series (T)ATA (Table II). The substantial contribution of reflexes referring to the mother’s brother MB (5,5%) to this series is certainly due to their highly significant presence in Uto-Aztecan and in some Oceanic languages, notably from New Ireland4. Another noticeable difference with the series (P)APA is the quasi-absence of reflexes reciprocally referring to the grandparents and the grandchildren GdPt-GdCh. The most ancient reflexes of (T)ATA attested in written languages have been collected in Table III.

Here again, we will tentatively propose to retain the father F, the father’s brother FB, the grandfather GdF and the elder brother B+, as the relationships covered by (T)ATA in the Proto-Sapiens language, in other words a class of kin including ego’s masculine elders, the mother’s brother MB excluded {B+, F, FB, GdF}. Close modern and ancient examples of this kinship semantic pattern are found notably in Navajo tâ‘ ‘father’ F, ‘males of the father’s clan’ (Hoijer 1956: 325), Altai and Uighur ata ‘father’ F, ‘ancestor,’ Bole daadā ‘senior,’ Sanskrit dādda ‘elder paternal kinsman,’ etc.

5.4. Why two etyma?

The existence of two global etyma addressing the same class of relationships raises two questions. The first is whether the two words coexisted in the original Proto-Sapiens language. The second is, assuming that the answer to the first is positive, what could have been the semantic relationship between them in this original language? To answer these questions, we must consider how these roots are or were distributed and used in languages for which we obtained data (ancient languages for which documentation is accessible as well as various kinship nomenclatures and lexicons).

4. Uto-Aztecan apparently uses two variations of the canonical form (T)ATA to refer to both ‘mother’s brother’ MB and ‘father’ F. Miller (1967: 65) notably reconstructed tata or ta ‘father’ F, while Shimkin (1941: 225) proposed tati ‘mother’s brother’ MB.
5.4.1. Did (T)ATA and (P)APA coexist in the Proto-Sapiens language?

We think they did. There are two good reasons for it: the first is their common global geolinguistic extension; the second is that many languages do include both of them in their kinship terminology.

As we just pointed out in section 3.2 (geographical validity of the etyma), both (P)APA and (T)ATA are widely distributed with an equal semantic consistency. There is almost no linguistic family, displaying only one of the two roots.

In most language families, both roots are apparently randomly distributed with regard to one another. In Burmic, Lisu has ipa F, while Nasupo has ade F; in Paren Koryak, we find apa F, in Kamenskoye Koryak we find tata F (but apa Gdf); in Berber, Siwa has abba F, Nefusi has dada F; in Cushitic, Afar has abba F, Zaysse has ada F; in Chadic, Gidar has Подробнее F, Sha has Подробнее F, etc. In some families, one root is overwhelmingly represented. It is well known that most Eskimo terms for father are reflexes of (T)ATA, but Nunamiut has apa F, and North Alaskan Inuit has aapa F. The same happens in Athapaskan, where most of the terms for father F are also reflexes of (T)ATA, but Sekani has abba ‘my father’ and Carrier a’pa ‘my father’. Conversely, most Semitic terms for ‘father’ are reflexes of (B)ABA, like Arabic ’ab- F, but Ugaritic also used ád F (Blážek 2002: 111).

In Africa, the situation is very contrasted. Khoisan languages predominantly display (B)ABA F forms. In Niger-Congo, while West Atlantic and North Central Niger-Congo predominantly display (B)ABA forms (e.g. in Gbay, Banda and Zande), the Bantu phylum offers the most intricate situation. The CBOLD database produces online maps taken from Guthrie’s data, showing how these two roots are distributed in the Bantu zones delineated by Guthrie. There are regions where apparently (B)ABA cognates are predominant (the Northwest), and others (the West) where (T)ATA cognates are predominant. Finally, in other regions, most notably the Southwest, both roots are present. Our own data clearly illustrate this latter configuration for the southern zone. Tonga, Lozi, Tswana, Luvale, Mbundu, Wakwando, Ngonde have tata F, while Tsawa, Ndebele, Venda, Zezuru, Swazi have baba F. Guthrie (1970, vol. 4, C.S. 1686-1687) reconstructed Proto-Bantu -tââta father F, while expressing some doubts about -baaba F (1970, vol. 3, C.S. 7) because it is a nursery form. For his part, Meeussen (1969)” reconstructed both roots, and posited a substantial semantic difference between them. He stated that -baba referred to the father F and the grandfather GdF, while -tââta meant ‘my father.’ More recent reconstructions, dating from 1998, are also accessible online⁸. They display the same roots with the same glosses.

Both words coexist in the same kinship nomenclature of many languages. They may refer to different relationships, sometimes very close (Table VI), or they may refer to the same meaning, as if they were synonyms; Table VII lists some examples⁸ of terms meaning father F or grandfather GdF.

5.4.2. The original usages of (T)ATA and (P)APA

How can we explain, then, that two roots with the same meaning may have existed in the Proto-Sapiens language? A possibility is that there were specific usages attached to each of them. The fact that one language may possess more than one term to designate a kin relation is well known. Linguists and anthropologists generally distinguish between what they call address terms (appellatives), i.e. terms that are most commonly used by people since their early childhood to address their closest relatives, like Daddy in “Daddy, where are you?” and the reference terms, that are used to refer to someone who is not necessarily present and not necessarily ego’s own relative, like father in “John’s father is tall.”

Unfortunately, the ways languages perform the appellative and referential functions cannot be illustrated on a large scale, because appropriate information is not systematically provided in the ethnological data. Consequently, our discussion will be reduced in the present study to a brief outline of the status of “nursery” kin terms with regard to reference and address. As we already noticed, papa and tata, commonly regarded as “baby talk” as they are, have been almost systematically assigned to the appellative category. If this is really the case, we would then have two appellative etyma in Proto-Sapiens,

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6. We accessed Meeussen’s Bantu lexical reconstructions (1969) by the CBOLD database, where they are labelled as BLR1.
7. These recent reconstructions are termed BLR2 on the CBOLD site.
8. Terms are given with specification of the way they are used (address or reference) whenever this information is available.
which seems very unlikely. It is even another argument raised by Trask (s.d.) to discard the etymological value of the (τ)ATA and (π)APA words.

Table VI. Languages displaying (π)APA and (τ)ATA forms with different meanings.

<table>
<thead>
<tr>
<th>Language</th>
<th>(π)APA Form</th>
<th>(τ)ATA Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shasta</td>
<td>apo B, ata F</td>
<td>Gusii</td>
<td>baabá my M, taatá my F</td>
</tr>
<tr>
<td>Atsugewi</td>
<td>apun FF, pupa B, tata F</td>
<td>Shilha</td>
<td>biaába F, adda ~ dada uncle</td>
</tr>
<tr>
<td>Plains Miwok</td>
<td>appa F, papa GdF, tata FB</td>
<td>Zenaga</td>
<td>baba F, laddaGdF</td>
</tr>
<tr>
<td>Lake Miwok</td>
<td>api F, papa GdF, ata B, tata FB</td>
<td>Kabyle</td>
<td>baaba F, dadda B, FB</td>
</tr>
<tr>
<td>Coast Miwok</td>
<td>api F, papa GdF, ata B, tata FB</td>
<td>Somali</td>
<td>aabbe (ref. &amp; ad.) F, aadeer (ref. &amp; ad.) FB</td>
</tr>
<tr>
<td>Mixe (Quintana)</td>
<td>ap GdF, apunk GdCh, teit F</td>
<td>Old Turkish</td>
<td>aba ancestor, ata F</td>
</tr>
<tr>
<td>Mixe (Tetontpec)</td>
<td>ap GdF, GdCh, tata F</td>
<td>Kirghiz</td>
<td>aba F, ata F, ancestor</td>
</tr>
<tr>
<td>Tequistlástec</td>
<td>papá (ad.) F, GdF, tatawelo GdF</td>
<td>Byangsi</td>
<td>ba F, tata Z+</td>
</tr>
<tr>
<td>Tarascan (mid XVIth cent.)</td>
<td>tata F, FB, papa MB</td>
<td>Nunniut Eskimo</td>
<td>apa F, atata GdF</td>
</tr>
<tr>
<td>Mayoruna</td>
<td>papa F, dada distant brother (ego m.)</td>
<td>Kanganerlmer Eskimo</td>
<td>a.paj F, tata GdF</td>
</tr>
<tr>
<td>South Munda</td>
<td>apu F, tata FF, MF</td>
<td>Hindi</td>
<td>baap F, taatii FB</td>
</tr>
<tr>
<td>North Munda</td>
<td>ba F, tata FF, MF</td>
<td>Punjabi</td>
<td>daaddaa FF, babbbaa F</td>
</tr>
<tr>
<td>Santali</td>
<td>apun F, dada B+</td>
<td>Kolami</td>
<td>appa FZ, daadaa B+</td>
</tr>
<tr>
<td>Kukukuku (Manki)</td>
<td>apo F, ato FB</td>
<td>Tamil</td>
<td>appaa F, tatta FF</td>
</tr>
<tr>
<td>Kikuyu</td>
<td>faaßa ~ Baba (ad.) F, tata FZ, MZ</td>
<td>Yinwum</td>
<td>tata F, ifše FB–</td>
</tr>
<tr>
<td>Kuria</td>
<td>baabá M, tata F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table VII. Languages displaying (π)APA and (τ)ATA forms with the same meaning.

<table>
<thead>
<tr>
<th>Language</th>
<th>(π)APA Form</th>
<th>(τ)ATA Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sekani</td>
<td>abba my F, ta F</td>
<td>Northern Wintun (Shasta Cty)</td>
<td>hapa (ref.), tata (ad.) F</td>
</tr>
<tr>
<td>Carrier</td>
<td>a’pa my F, tai F</td>
<td>Ojibwa</td>
<td>nin baba, nin dede my F</td>
</tr>
<tr>
<td>Tsetsaut</td>
<td>a-ba F, ta F, FB</td>
<td>Popoluca</td>
<td>?apanaa, ?pana F</td>
</tr>
<tr>
<td>Tibetan</td>
<td>p’a F, ta (ad.) F</td>
<td>Cuna</td>
<td>pap, tata F</td>
</tr>
<tr>
<td>Balti</td>
<td>ba-wa (respectful) F, a-ta F</td>
<td>Vietnamese</td>
<td>ba, thay F</td>
</tr>
<tr>
<td>Lak</td>
<td>p:u F, tātā (endearment) F</td>
<td>Ugaritic</td>
<td>?ab, ād F</td>
</tr>
<tr>
<td>Lolo</td>
<td>a-bu F (adult use), a-ta (child use) F</td>
<td>Tamashk</td>
<td>abba, adda F</td>
</tr>
<tr>
<td>Baka</td>
<td>dåà, bāább F</td>
<td>Awlemidden</td>
<td>abba, adda my F</td>
</tr>
<tr>
<td>Thonga</td>
<td>baba, WB+, tatana (ad.) F</td>
<td>Wargli</td>
<td>baba F, dadda (ad.) F</td>
</tr>
<tr>
<td>Xhosa</td>
<td>ubawo, utata my F</td>
<td>Ayr</td>
<td>abba, adda my F</td>
</tr>
<tr>
<td>Nama</td>
<td>īp (ad.), abob (rare) F, tatab my F</td>
<td>Dac’e</td>
<td>aawa, ade F</td>
</tr>
<tr>
<td>Bashkir</td>
<td>apra F (dialect), ata F</td>
<td>Sumerian</td>
<td>abba F, GdF, ancestor, adda F</td>
</tr>
<tr>
<td>Tuva-Tolófor</td>
<td>ava, ada F</td>
<td>Avestan</td>
<td>pitar, tā F</td>
</tr>
<tr>
<td>Kirghiz</td>
<td>aba, ata F</td>
<td>Sanskrit</td>
<td>baba (ad.) F, tata (ad.) F</td>
</tr>
<tr>
<td>Balkar</td>
<td>aba, ata F</td>
<td>Rajasthan</td>
<td>baabaa, daadaa FF</td>
</tr>
<tr>
<td>Khakassian</td>
<td>aba, ada F</td>
<td>Hindi</td>
<td>baabaa, daadaa FF</td>
</tr>
<tr>
<td>Mongouo</td>
<td>aba, ata F</td>
<td>Classical Greek</td>
<td>pater (ref.), ataa (ad.) F</td>
</tr>
<tr>
<td>Besud</td>
<td>baabaii (ad. &amp; ref.) F, stai (ad. &amp; ref.) F</td>
<td>Latin</td>
<td>pater (ref.), papa (ad.), tata (ad.) F</td>
</tr>
<tr>
<td>Telugu</td>
<td>appa, ātta F</td>
<td>Gotic</td>
<td>fadar (ref.), ataa (ad.) F</td>
</tr>
<tr>
<td>Tamil</td>
<td>appă, attan F</td>
<td>English</td>
<td>father (ref.), dad (ad.) F</td>
</tr>
</tbody>
</table>
Ethnological reports do not always distinguish between address and reference. However, those which make this distinction do not support the view that (T)ATA and (P)APA forms should always be appellatives. To the contrary, their data highlight the great diversity of usages attached to them.

Reflexes of (T)ATA are diversely used to express:


2. **Reference**: Briton *tad* F, Santali *dada* F. Agta *dada* aunt, Tibetan (dial.) *ata* F, Kal’Asa *d’ada* F, FB, Khow *tat* F, Vā *tāta* F, and apparently most of the Athapaskan (T)ATA terms for father F.

3. **Indifferently direct address and reference**: Somali *adeer* FB, Medlpa *ta* F, ‘dad,’ Iafar *atok* FB, apparently all the Eskimo ATA terms for father F, the same for most Siouan (T)ATA terms, Rundi *data* F, ‘dad,’ Mbuti *tata* GdPt, etc.

The situation is the same for the reflexes of (P)APA:


2. **Reference**: Tibetan *ap*a F, Newari *bā* ~ *abu* F, Santali *appa* F, Angami *apo* F, Kwoma *apok* F, Kewa *apa* F, Javanese *bapaq* F.


6. **ANTHROPOLOGICAL DISCUSSION**

### 6.1. (K)AKA: A MALE ELDER ON THE MOTHER’S SIDE

In Matthey de l’Etang & Bancel (2002), we established that *(K)AKA* originally referred to the mother’s brother MB, the elder brother B+ and the grandfather GdF, *i.e.* a class of parents including male elders, but not the father F and the father’s brother FB {B+, MB, GdF} (Diagram A).

![Diagram A](https://via.placeholder.com/150)

**Diagram A.** Relative positions of *(P)APA* and *(K)AKA* showing overlapping situations. *(T)ATA* positions are the same as *(P)APA.*
Two conclusions were drawn from this cross-generational semantic pattern. The first was that this class of parents which excluded the ‘father’ F was probably the masculine side of a group of relatives to which the mother M belonged, and was thus pointing to the existence of groups where filiation and blood ties were recognized (exogamous groups). The second conclusion was that distinction (or status) based on age was certainly of pre-eminent importance in the Proto-Sapiens social organization; two features, by the way, that Rivers (1907: 319-322) suggested were characteristic of the “classificatory” kinship system at the time of its origin.

However, the filiation group hypothesis entailed some difficulties since actually, none of the filiation lines, either patrilineal or matrilineal, exactly accounted for the relationships given in the etymological series. On the one hand, the male elders of the mother’s group, when it was patrilineal, are the mother’s brother MB and the mother’s father MF, but certainly not the elder brother B+, who belongs then to the father’s group. On the other hand, the male elders of the mother’s group in a matrilineal situation are the elder brother B+, the mother’s brother MB and the mother’s mother’s MMB (a great-uncle on the maternal side), but not the father’s father FF. Consequently the presence of a grandfather GdF and the elder brother B+ in the same series were apparently inconsistent. To overcome this apparent inconsistency, we appealed to two hypotheses: cross-cousin marriage and filiation changes.

We indicated that cross-cousin marriage equated at generation +2 the father’s father FF with the mother’s mother’s brother MMB. This “miracle” occurs when the mother’s brothers mother MMB marries the mother’s father’s MFZ (diagram C). Consequently, matrilineal cross-cousin marriage accounted for three relationships: \((K)AKA = \{B+, MB, GdF (FF = MMB)\}\). But there was still one relationship left to be explained: the mother’s father MF. So we posited that at some point in the past, the lines of filiation changed in some of the societies that were issued from the ancestral root. These changes explained why both grandfathers were addressed in the comparative data. Finally, we constructed a double model (matrilineal and patrilineal) based on cross-cousin marriage, that we represented on diagrams B and C.

The cross-cousin marriage hypothesis not only explained the grandfathers problem, but in fact made envisionable that all the relationships (above ego), either consanguineal of affinal, were expressed by a limited number of terms. Such a system also leads one to suppose that the Proto-Sapiens social organization functioned on the basis of two intermarrying groups, or exogamous moieties, comparable to the Australian marriage classes. It was clear, though, that a lot of questions remained to be answered, notably how it was that such a terminology ignored generation levels, how such a system dealt with relatives younger than ego, what were the terms used to address the male elders belonging to the father’s group, and finally what could have been the terms used to address the feminine relatives in the original system.

### 6.2. \((P)APA\) AND \((T)ATA\): A MALE ELDER ON THE FATHER’S SIDE

It was not long before we found out that \((P)APA\) and \((T)ATA\) were precisely the terms designating the male elders of the opposite father’s group.

As we already stated in section 5.2, there is a striking symmetry between the respective semantic patterns of \((P)APA \sim (T)ATA\) and of \((K)AKA\). \({(B+), MB, GdF}\) is consistently mirroring \({(B+), F, FB, GdF}\) and consequently, all the remarks that were made concerning the first pattern must apply to the second one. The first observation was about the existence of filiation groups, the second one was about age distinction, that we guessed was a major custom shaping the Proto-Sapiens society, just as it still does today in numerous pre-industrial societies. We already mentioned in sections 5.2 and 5.3 societies for which status based on age is essential and thus classify or used to classify with such terms all the males above ego on the father’s side – the same happens on the mother’s side.

Just the same way that we explained the discrepancies of the \((K)AKA\) pattern, we can explain those pertaining to the pattern \((P)APA\) and \((T)ATA\) \({B+, F, FB, GdF}\). The patrilineal version accounts for \({B+, F, FB, FF}\), and the matrilineal filiation, and cross-cousin marriage explains \({F, FB, MF (\neq FMB)}\). Diagrams B and C clearly illustrate both situations.

### 6.3. \((P)APA\) AND \((T)ATA\) VIS-A-VIS \((K)AKA\)

Now, more precisely, in a matrilineal filiation (Diagram B), \((K)AKA\) refers to the elder brother B+, the mother’s brother MB, and the father’s father FF, while \((P)APA\) and \((T)ATA\) refer to the father F, the father’s brother FB, and the mother’s father MF. In a patrilineal filiation (Diagram C), \((K)AKA\) refers to the mother’s brother MB and to the mother’s father MF, while \((P)APA\) and \((T)ATA\) refer to the elder brother
B+, the father F, the father’s brother FB and the father’s father FF. This is the only explanation that accounts, with no overlapping, for all the relationships comprised in the semantic series, stemming from the statistical calculations. Moreover, in such a model of cross-cousin marriage, as we already mentioned, great-uncles on either the paternal or the maternal side are assimilated to grandfathers. This fact is frequently observed in the ethnological data. Below are these patterns given as equations:

Matrilineal filiation: \((P)APA\) and \((T)ATA\) = \{F, FB, MF (= FMB)\}; \((K)AKA\) = \{B+, MB, FF (= MMB)\}

Patrilineal filiation: \((P)APA\) and \((T)ATA\) = \{B+, F, FB, FF (= MMB)\}; \((K)AKA\) = \{MB, MF (= FMB)\}

![Diagram B. (P)APA and (K)AKA in a matrilineal filiation. (T)ATA positions are the same as (P)APA.](image)

![Diagram C. (P)APA and (K)AKA in a patrilineal filiation. (T)ATA positions are the same as (P)APA.](image)

6.4. A POSSIBLE ORIGIN FOR OTHER KINSHIP SYSTEMS

With respect to the compatibility of our model with extant types of kinship systems, all the conclusions drawn in Matthey de l’Etang & Bancel (2002) are in no way modified by the present study.
In the first place, this model can be the starting point for crow-omaha system types. Both Lowie and Radcliffe-Brown emphasized how crow and Omaha systems could derive their architecture from the fact that ego calls all members of one lineage (except his own) or clan with just two terms: one for the feminine relationships, the other for the masculine (Lowie 1934: 109; Radcliffe-Brown 1941: 9-17 and 1956: 68-88). In the (matrilineal) type II crow system, as defined by Lounsbury (1964), ego calls ‘father’ F every male of the father’s clan (i.e. the father, the father’s brother, and the father’s mother’s brother: {F, FB, FMB}), and calls every female of the same clan ‘father’s sister’ FZ. At the same time, ego calls every male of the mother’s clan (i.e. B+, MB, MMB) ‘elder brother’ B+. In the (patrilineal) type II omaha system (Lounsbury: 1964), ego equates to a ‘mother’s father’ MB all the masculine members belonging to the mother’s clan except at generation + 2, and equates to a mother M all the feminine members of the mother’s clan.

One of the conceivable transformations of our model into crow and omaha system types would be into the type II crow system that we just briefly outlined. In our matrilineal model (Diagram B), ego calls KAKA the male elders of the mothers group, i.e. the elder brother, the mother’s brother, and the father’s father who is at the same time the mother’s mother’s brother: {B+, MB, MMB (= FF)}. He calls (P)APA or (T)ATA the male elders of the father’s group, which includes the father F, the father’s brother FB and the mother’s brother MF, which is also the father’s mother’s brother FMB {F, FB, FMB (= MF)}. Aren’t these relationships precisely the ones that we described just above for the crow system? Naturally, the transformation of our model into this type of system or other crow-omaha systems would entail some transformations, notably the creation of additional filiation groups (clans) and the naming of relationships for the generations below ego.

In other respects, the kinship configuration, illustrated by Diagrams B and C, articulated on cross-cousin marriage as it is, is likely to be the starting point for a dravidian system. Generating from our model such a system (or any system based on exogamous moieties) would basically imply its splitting into generation levels. This splitting would entail marriage between cross-cousins within a given generation. The terminological consequences would be the reduction of the (K)AKA and (P)APA ~ (T)ATA designations to only one generation and the invention or remoulding of terms, in order to clearly differentiate each of the remaining generational relationships of the system.

7. CONCLUSION AND PERSPECTIVES

Our two papers, we believe, finally answer a question, which has been greatly debated since the XIXth century, as to why so many apparently non-related languages use phonetically similar terms of the shape (P)APA or (T)ATA to refer to the father F. Languages across the world use them because these forms inherited them from an ancestral common language, from which they all descend. This Proto-Sapiens language must date at least to 50,000 BP. This may be an irritating statement, but none of the answers that have been proposed for decades to explain this (P)APA and (T)ATA worldwide ‘convergence’ adequately accounts for the phonetic and semantic properties of these words. In consequence, our knowledge of our ancestral kinship terminology now extends to three terms: (P)APA, (T)ATA and (K)AKA.

But these are not, essential as they seem to be, the only conclusions that the global comparison allows us to reach. Not only can we conclude that these nursery kin terms are beyond any doubt among the oldest words of mankind, but we can also tell what they originally meant. (P)APA ~ (T)ATA and (K)AKA referred to male relatives older than ego belonging to the group of ego’s father and the group of ego’s

9. Numerous ethnological examples have been found, which exemplify such cross-generational features, notably some of the terms included in the present article. Mayer-Durlach (1928: 21) mentioned that the matrilineal Tingits used the term k’ak’ to designate the mother’s brother MB and that the plural form of this term was used to refer to the ancestors (apparently masculine) belonging to the mother’s clan. We mentioned earlier (sections 4.1.1 and 4.3) other examples where (P)APA and (T)ATA forms are used to refer to male members of the father’s clan. Last but not least, one of the most striking examples is Miwok, which displays a (matrilineal) omaha type kinship system and has a term kaka to address the mother’s brother MB, the mother’s brother’s son MBS and the mother’s brother’s son’s son MBSS, a term apa to designate the father F, a term ata to designate the father’s brother FB, and papa to refer to the grandfather GdF.

10. The dravidian systems of the Dravidian peoples themselves display numerous cognates of (K)AKA and (P)APA ~ (T)ATA, distributed through the range of kin relationships.
mother, respectively. Taken together, these classificatory meanings are absolutely consistent with the conclusions we already drew in 2002 about the nature of kinship in the Proto-Sapiens society. These conclusions can be summed up as follows:

Gender recognition, age of individuals with respect to ego, membership to a filiation group and prescriptive cross-cousin marriage must have been among the features that the ancestral terminology was designed to express, by means of a limited set of terms, as only classificatory relationships were recognized.

At a social level, exogamous moieties implying cross-cousin marriage as well as status of individuals based on their respective age and maybe their gender, were already in place in the Proto-Sapiens society.

Possible lines of evolution can be delineated from such a model based on age distinction and exogamous moieties to systems comprising multiple clans, thus prohibiting bilateral cross-cousin marriage but still maintaining cross-generational terminology, such as crow-omaha systems, or to prescriptive systems keeping cross-cousin marriage but clearly differentiating generation levels, such as dravidian systems. Other developments into or from systems expressing reciprocity at various generation levels cannot be envisionned at this stage, due to the paucity of information pertaining to younger generations, but cannot be excluded either.

We have certainly been getting through a big step since our study of KAKA, but still more is needed to ascertain or invalidate our propositions. Among our priority tasks, working out the feminine relationships certainly constitutes the most crucial one, as we need to know whether and how the relationships left in blank in our model can be filled in. This is why one of our future publication will be dedicated to the etyma (M)AMA, (N)ANA, and (J)AJA. The second essential goal that we are pursuing is to extend our knowledge of specific and contextual uses of kin terms, looking for some general features that can explain the multiple terminological forms, which are recognized at a global level for a single (or classificatory) kin relationship. Last but not least, emphasis will be put on generation below ego, in order to fully characterize the system that our Proto-Sapiens ancestors conceived.

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