Title

CROW-OMAHA KINSHIP: REVITALIZING A PROBLEM OR GENERATING A SOLUTION?

Permalink

https://escholarship.org/uc/item/5dh0m6bd

Journal

Kinship, 1(2)

Author

Dziebel, German

Publication Date

2021

DOI

10.5070/K71249787

Peer reviewed

CROW-OMAHA KINSHIP:
REVITALIZING A PROBLEM OR
GENERATING A SOLUTION?

German Dziebel
Ph.D., Independent Scholar
216 Good Hill Rd.
Weston, CT 06883
USA
E-mail: dziebelg@gmail.com

Abstract: *The article discusses the long-standing Crow-Omaha problem in kinship studies with a focus on the volume* Crow-Omaha: New Light on a Classic Problem of Kinship Analysis *(2012), edited by Thomas Trautmann and Peter Whiteley. While successful in restoring the importance of the Crow-Omaha problem to kinship studies and contributing to the revival of "traditional" kinship studies in anthropology, the book misses an opportunity to advance a solution to this problem. Drawing on a global database of kinship terminologies and the author's own treatment of the Crow-Omaha problem in* The Genius of Kinship: The Phenomenon of Human Kinship and the Global Diversity of Kinship Terminologies *(2007), the article uses empirical material from multiple language families represented in the Trautmann & Whiteley volume to demonstrate the importance of alternate-generation equivalences, Bifurcate Collateral grouping and sibling terminologies in the evolution of "Crow-Omaha skewing." Methodologically, it is recommended to shift kinship terminological analysis from using representative "case studies" to drawing on large-scale databases of global kinship-terminological variation, from discussing narrow "types" to discussing kinship terminologies as systems, from anthropology-only approaches to interdisciplinary studies marrying anthropology and linguistics, from semantics-only approaches to approaches combining semantics, etymology and speech pragmatics.*

Introduction: Revitalization vs. Evolution in Kinship Studies

The contributors to the Crow-Omaha volume (Trautmann & Whiteley 2012) must be congratulated on providing another testament to the resilience of "traditional kinship studies." Laudable as it is, the collective effort led by University of Michigan's Trautmann and American Museum of Natural History's Peter Whiteley, the conveners of the Amerind Foundation Advanced Seminar in 2010, chooses revitalization over evolution. There are a few new names in the volume as compared with those who would have been the contributors in the 1960s but essentially the

"classic problem" of Crow-Omaha terminologies has remained what it always was. A puzzle. And this may very well be the intent of the volume: to bring together scholars to celebrate an enigma, to bask in the unswerving ability of Mother Kinship to baffle scientists and to fancy the future times when a brilliant solution will miraculously arrive. But this mood of the Trautmann & Whiteley volume is so different from the constructive and adventurist pragmatism I expressed in *The Genius of Kinship* (Dziebel 2007)—written in the spirit of Lewis H. Morgan's pioneering work—that I wished more of my findings drawn from a publicly available database of 2500 kin terminologies and a global bibliography of 20,000+ entries were applied by the Trautmann & Whiteley team to their respective regional cases of Crow-Omaha.

When I published "Fenomen rodstva" in 2001 (Dziebel 2001b) in the midst of passionate debates around Nick Allen's tetradic theory, kinship studies and comparativist linguistics, descent and filiation that raged on the pages of the Russian kinship studies almanac, *Algebra rodstva*, I had no illusions that it wouldn't reach a Western reader. Because we knew that our Western colleagues read no Russian. An "iron curtain" that separated the Soviet bloc from the West for 40 years is a see-through veil compared with the intractable language barrier between Russia and the West going back perhaps to the time of the original divergence of Indo-European languages. But then when I put my original Russian research on "Stanford steroids" and came out with *The Genius of Kinship* I was certain it would be widely read and applied. Because it was written in the language everyone can read: English. Not so fast! Although the themes raised in the (Dziebel 2007) fall squarely within the theme raised by Trautmann & Whiteley's Crow-Omaha, Trautmann & Whiteley still failed to address my approach and findingscagain, the findings that drew on a publicly available database of 2500 kin terminologies and summarizing years of research on both sides of the Atlantic and the Urals.

A particularly disappointing statement can be found in Trautmann's "Crossness and Crow-Omaha" (2012:48):

> We may hope that ultimately kinship analysis will join with archaeology and primatology to elucidate the deep history of kinship systems. A beginning has already been made (Allen et al. 2008; Chapais 2008; Trautmann, Feeley-Harnik, and Mitani 2012), but the process clearly has a long way to go.

As a matter of fact, *The Genius of Kinship* had already made quite a few strides in assessing global kinship variation from the point of view of deep population prehistory and comparing it with population genetic and linguistic findings. Alan Barnard (2012) who is exploring the links between social anthropology and modern human origins recently compared my interpretation of kinship and linguistic evidence to the traditional out-of-Africa view. McConvell's article in Trautmann & Whiteley's volume is aligned with my belief that kinship terminological patterns (including "Crow-Omaha") can reflect population and demographic processes. Kinship studies was one of the first disciplines to conduct studies of global trait variation and to amass worldwide databases of trait types. The progress that has been made in the past 30 years by geneticists and linguists imposes high standards on kinship studies in terms of typologizing, mapping, quantifying and historicizing kinship terminological variation, and it's time for students of kinship to catch up with these developments.

At the same time, population genetic studies would benefit from gaining an understanding of how the evolution of marriage practices among *Homo sapiens sapiens* (say, from elementary to complex forms of alliance, in the famous Lévi-Straussian model) affected the continental patterns of genetic variation. If, as social anthropologists argued throughout the 20th century, ances-

tral human societies were not panmictic but heavily structured due to culturally induced prescriptive marriages with close kin (especially bilateral cross-cousins), then the statistics of modern human genetic variation and the inferred phylogenetic trees should be different.

Crow-Omaha and the Varieties of Generational Skewing

The Trautmann & Whiteley volume approaches Crow-Omaha from an inherently flawed angle inherited from the earlier kinship typologies such as George P. Murdock's. In this tradition Crow-Omaha is considered to be a version or a transformation of Iroquois or Bifurcate Merging systems.

One quote from Trautmann (2012:31) that "Crow-Omaha kinship—by which I mean kinship terminologies containing skewing—invariably also contains crossness" may be invoked as a justification for the overall Bifurcate Merging-centric stance, but Trautmann's claim is simply not true cross-culturally. Crow-Omaha equations are readily found in terminologies without crossness (see Popov 1977). The kinship terminology of Crow Indians themselves groups female categories of Gen +1 in a "Hawaiian" fashion: *masake* (ref.), *iga* (voc.) M, MZ, FZ (Lowie 1917).

Popov's (1977) worldwide survey of Crow-Omaha patterns discovered that only Lineal terminologies are known not to be compatible with Crow-Omaha equations. Crow-Omaha cannot be described as a version or an evolution of Bifurcate Merging because a Bifurcate Merging principle is a principle of *horizontal* (same-generation) grouping of kin categories, while Crow-Omaha is a principle of *vertical* (cross-generation) grouping. They are different in principle and one doesn't evolve from the other and can't be a subset of the other. (This doesn't mean that they cannot be related or cannot co-vary on the scale of a *kin terminological system* as a whole.) When it comes to the horizontal types of nomenclatures, Trautmann & Whiteley stick to the canonical quadripartite model made of Bifurcate Merging (Iroquois and Dravidian), Generational (Hawaiian), Bifurcate Collateral (Sudanese) and Lineal (Eskimo) (see Table 1).

Table 1: Kinship Typologies

Kintype merging equations	Morgan	Lowie	Murdock
F = FB = MB	Classificatory	Generational	Hawaiian
F = FB ≠ MB	Classificatory	Bifurcate merging	Iroquois
F ≠ FB ≠ MB	Descriptive	Bifurcate collateral	Sudanese
F ≠ FB = MB	Descriptive	Lineal	Eskimo

Modified from Table 2.1 iin Trautmann 2012:32.

Notably, Table 1 does not show female kintypes. It doesn't show them because it's assumed that female kintypes simply mirror the mergers affecting male kintypes. This creates an impression that horizontally kin terminologies only merge and bifurcate at the Connecting-Relative Sex nexus (FB and MB are different because their connecting relatives—Mother and Father —are not at the End-Relative Sex nexus). In the meantime, worldwide sampling reveals that kin termi-

nologies may mix and match male and female kintypes in Gen +1. For instance, Bogaya in Papua New Guinea call *mamuwn* MB and MZ, while keeping MB and FZ different from F/FB, on the one hand, and M and FZ, on the other (Sillitoe 1995:185). Similar classificational approaches were taken by speakers of some North American Indian and Australian languages—and taken to a more complete degree!—, as I documented in (Dziebel 2007), so the Bogaya situation is geographically widely attested. This example illustrates that there is a whole lot of categorical variation going on in the "real world" that classic typological labels are not capturing (see Figure 1).

Table 1. Empirically attested and structurally important kin terminological types involving bifurcation and merging.

Bifurcate Collateral
$M \neq MZ \neq MB \neq F \neq FB \neq FZ$

Bifurcate Merging
A. $M \neq [FB = MZ] \neq [MB = FZ] \neq F$
B. $FZ \neq [M = MZ] \neq [F = FB] \neq MB$

Lineal
A. $M \neq [MZ = MB] \neq [FB = FZ] \neq$
B. $M \neq [MZ = FZ] \neq [FB = MB] \neq$

Split Incorporating

Absolute Incorporating
$[M = MZ = FZ] \neq [F = FB = MB]$

Collateral Incorporating
$F \neq [MZ = FZ = FB = MB] \neq M$

Relative Incorporating
$[M = MZ = MB] \neq [F = FB = FZ]$

Full Incorporating
$M = MZ = MB = F = FB = FZ$

Parental Bifurcate Merging
$[FZ = MZ] \neq [F = M] \neq [FB = MB]$

Parental Incorporating
$[MZ = FZ = FB = MB] \neq [F = M]$

Parental Lineal
$[FZ = FB] \neq [F = M] \neq [MZ = MB]$

Parental Bifurcate Collateral
$FZ \neq FB \neq [F = M] \neq MZ \neq MB$

Figure 1: Image of Table 1 in Dziebel 2007:204. Reproduced by permission from German Dziebel, *The Genius of Kinship: The Phenomenon of Human Kinship and the Global Diversity of Kinship Terminologies* (Amherst, NY: Cambria Press, 2008).

Omaha equations are a subset of vertical equations described in (Dziebel 2007) as Alternate Generation Sibling Skewing type, Alternate Generation Cousin Skewing type, etc. It's an open question whether "Crow-Omaha" is a true terminological type clearly separated from others in the "family" of vertical, cross-generational equations. Dousset (2012:274), *pace* R. H. Barnes, quotes from Godelier who had Needham in mind when he said that "some anthropologists ... refuse to recognize Crow-Omaha systems as a separate type." For instance, it's often forgotten that many Crow and Omaha terminologies equate older siblings with MB and FZ and younger siblings with ZC and BC. The terminology of the Crow Indians (and Hidatsa, for that matter) has a fully developed system of these equations (*biika* moB, mMB, mMMB, *basare* woB, wMB, wMMB, *matsuka* yB, mZS, *basakata* oZ, M, MZ, FZ, *basatsiita* myZ, mZD [Lowie 1917:59-60]). Uralic and Altaic systems in Siberia that have both Omaha skewing and Siberian Generational equations include such equations as FZ = oZ, yZ and BD). Now, it's accepted that equations such as GF = MB are Omaha and GM = FZ are Crow, but less known and widely dis-

tributed equations such as GF = oB, GM = oZ (see "Alternate Generation Sibling Skewing" type in Dziebel 2007) are not. The reasons for this biased membership of cross-generational equations in the "elite" Crow-Omaha class have never been addressed in the literature. The Trautmann & Whiteley volume glosses over this problem, too, although they do acknowledge that the "Crow-Omaha" label is controversial.

A more all-encompassing definition of generational skewing would help in the cases such as South Asia where according to Trautmann (2012:42):

> only Dravidian crossness has been shown—not a single instance of Iroquois crossness and no skewing.

While textbook Crow-Omaha equations are indeed nonexistent in South Asia, equations such as GF = oB, GM = oZ, PPF = FoB, PPM = MoZ, MMB = MB = OB, etc. are fairly common among both Dravidians and Munda (see e.g., Parkin 1988; http://kinshipstudies.org/kinship-studies/ database/) and are attested among in the Bod-Garo group of Sino-Tibetan languages (see below). In addition, instead of Iroquois, Dravidians and Munda often possess Bifurcate Collateral systems tied to Self-Reciprocity and Relative Age in Gen +1/-1, which, as I argued in (Dziebel 2007) (see also below) empirically yield Bifurcate Merging (Iroquois and, possibly, Dravidian—see below about Byansi) nomenclatures in a number of well-documented cases from different parts of the world. Bifurcate Collateral systems tied to Self-Reciprocity, Relative Age and Relative-Age-based Generational Skewing is an areal feature frequently found in Munda, Dravidian, Sino-Tibetan, Uralic and Altaic kinship terminologies. (Tyler [1990] suggested that in Munda these forms may have been borrowed from Dravidian.) So South Asia is not as aberrant as it appears. In fact it looks rather systematic if Crow-Omaha and Iroquois are placed into a broader picture of worldwide kinship terminological variation along, respectively, vertical and horizontal axes.

Crow-Omaha: Crossness vs. Self-Reciprocity

A no-less-important omission in the Trautmann & Whiteley's volume is the role of Self- Reciprocal terminologies or Alternate-Generation equations in the genesis of Crow-Omaha terms and systems. Notably, it was Lewis H. Morgan who, again, was the first to detect these unusual systems found among westernmost North American Indians. In Dziebel (2007) I fleshed out a hypothesis (first put forth in Dziebel 1992 and later independently alluded to by Alf Hornborg; see Dziebel 2007:243) that Crow-Omaha skewing originates from Alternate- Generation equations. Not from Iroquois or Dravidian systems, which is a sheer conceptual confusion, but in a very literal sense from systems in which MB = mZC, FZ = wBC, FB = mBC, MZ = wZC, GF = mCC, GM = wCC (actual terminologies may have some of these equations or all of them and they may exhibit variation in the way they express them logically). Symmetric equations that maintain the separation between parallel and cross-relatives are severed and asymmetric ones linking parallel and cross-relatives (MB = MBS, MZ = MBD, ZS = FZS, FZ = FZD, FB = FBS, BD = MBD) are erected in their stead.

One of the contributors to the Trautmann & Whiteley volume, McConvell (2008), in his review of my book, wrote,

> Among the related hypotheses is the idea that Crow-Omaha skewing systems descend from earlier self-reciprocity between adjacent generations (pp. 245-6). Dziebel acknowledges that other functional motivations might be involved (e.g., the association of skewing with lineality). Dziebel predicts however that in addition to this, ancestral adjacent-generation self-reciprocity

will also be found in the history of groups with Crow or Omaha skewing. I am very doubtful about this, but having such a hypothesis on the table is a useful spur to research.

The reasons for McConvell's a priori doubts are unclear to me. It's also strange that he has not tested my hypothesis with his extensive Pama-Nyungan data on the distribution of "skewed" reflexes of the ancestral *kaala* MyB (> MBC in many Pama-Nyungan daughter languages). McConvell is compelling in showing how the progressive Omaha skewing of the ancestral *kaala* MyB is emblematic of the westward expansion of Pama-Nyungan languages from their Cape York homeland in the early Holocene times (see Figure 2). The associated rules of exogamy and patrilineal inheritance were well suited to the task of securing control of the land by an expanding population.
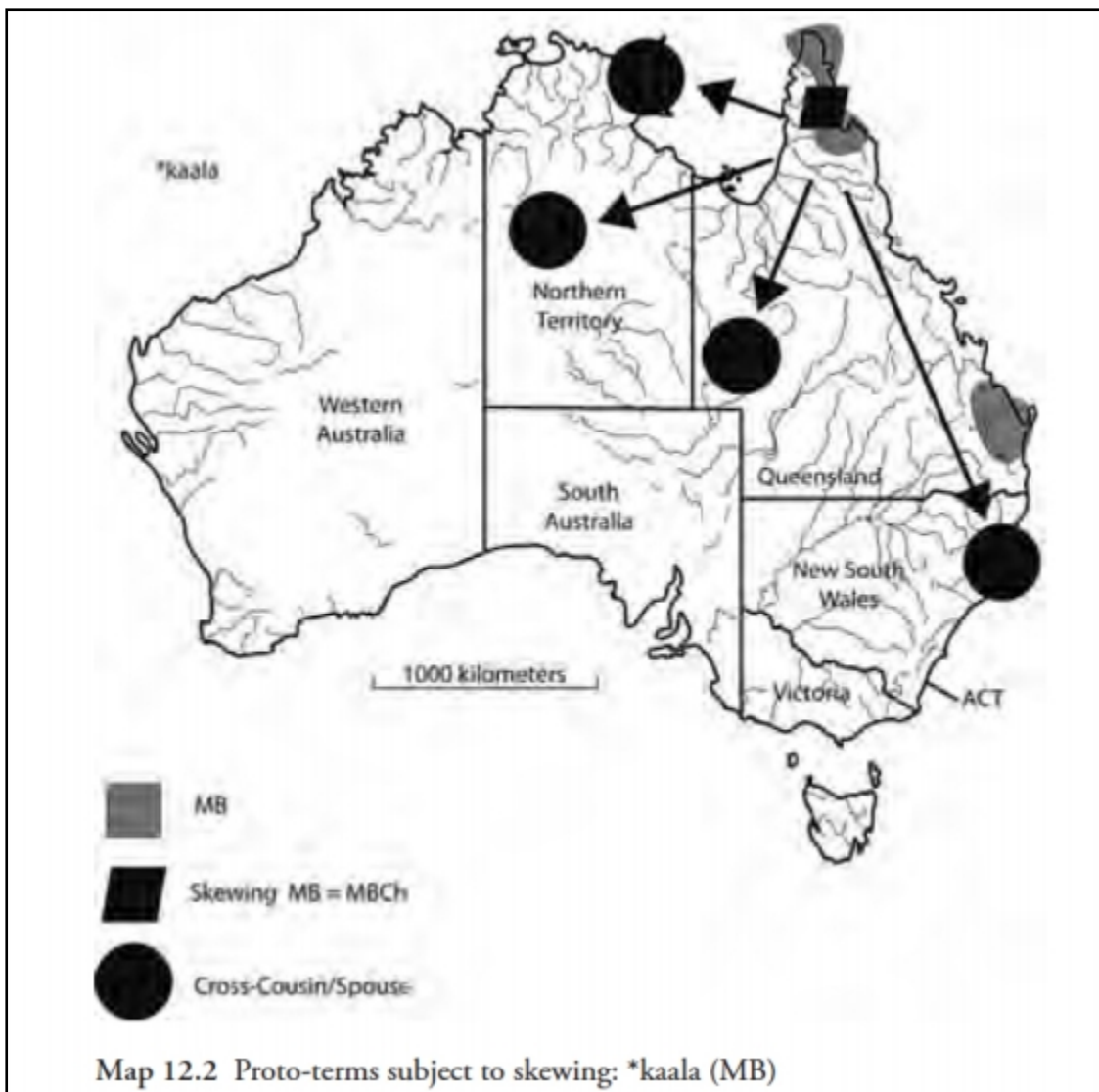

Map 12.2 Proto-terms subject to skewing: *kaala (MB)

Figure 2: Image of Map 12.2 in McConvell 2012:254. From *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis* edited by Thomas R. Trautmann and Peter M. Whiteley. © 2012 Arizona Board of Regents. Reprinted by permission of the University of Arizona Press.

What McConvell fails to mention is that Cape York has some of the most intricate systems of self-reciprocal equations in Australia (Dziebel 2007:224). While Australian kinship terminologies are famous for their equations of grandparents and grandchildren, adjacent generations (+1 and -1) are rarely seen linked by self-reciprocal terms. (The trend is reversed in Papua New Guinea.) In Wik-Mungkan (Middle Pama) and Kandju (Northeastern Pama), *muka* MoSib is clearly cognate with *mukaiya (mukato)* yZC. The MyB terms have already lost self-reciprocity (*kala* MyB) but MoSib (< MoB; note the rare and unorthodox equation MB = MZ discussed above) still carries it. Cross-linguistically, there are terminologies in which both MoB and MyB (or MoZ and MyZ) kintypes are associated with self-reciprocal terms, so it's not a stretch of imagination that Cape York systems used to have this feature on both MoB and MyB. In fact, a full set of self-reciprocal equations involving FoZ = wyBC, FyZ = woZC, FoB = myBC, FyB = woBC, MoZ = wyZC, MyZ = woZC can be provisionally suggested for proto-Pama-Nyungan based on Cape York data (Kandju *pinya* FoSib, *pinyato* yBC, *pipa* FyB, *pi'ato* oBC, with the patrilateral side holding the self-reciprocal "charge" better than the matrilateral side). Outside of Cape York, all of these self-reciprocal equations were lost (in the course of the Pama-Nyungan expansion, to follow McConvell's lead) and *kaala MyB, moZC was likely the first one to go.

Pending further research, McConvell's own Australian material is fully consistent with my hypothesis that Crow-Omaha skewing evolved from Self-Reciprocal terminology. It's likely that the same picture will emerge from the study of Papua New Guinean systems. McConvell (2009) applied the interpretative framework that he developed for Pama-Nyungan to Trans-New Guinean arguing, following Cook & O'Brien (1980:464) that the same proliferation of Omaha-type kinship terminological systems occurs at the edge of the Trans-New Guinean expansion, namely west of the Strickland Gorge but not in eastern Papua New Guinea. This observation can be paired with another one: a preliminary review of the Papuan database at http://kinshipstudies.org/kinship-studies/database/ reveals that it's precisely in eastern Papua New Guinea that one finds symmetrical systems with both Amito- (FZ = wBC) and Avunculoreciprocity (MB = mZC) and without skewing. Strong examples include: Barai, Koitabu, Managalasi, Tairora, Usurufa, Kuman, Oksapmin. In a number of languages, Avunculoreciprocity without Amitoreciprocity and Amitoreciprocity without Avunculoreciprocity were detected.

Let's see if the same evolutionary pathway from Self-Reciprocal terminology can be inferred for Crow equations. Chris Ehret (2008) contributed another iteration of his wonderfully detailed reconstructions of kin terminological evolution among Nilo-Saharan peoples in Africa. Nilo-Saharan offers another case of Holocene language spread. Archaeological, paleoecological and linguistic evidence work hand-in-hand documenting the stepwise transition from a) post-glacial climate improvement in eastern Sahara between 12,700 and 10,800 BC that resulted in the initial expansion of proto-Nilo-Saharan to b) the early period of foraging to cattle-breeding evolution around 8500 BC corresponding to the proto-Northern Sudanic stage to c) the development of full-blown pastoralist economies that led to the westward expansion of proto-Sahelians after 6000 BC from their east Saharan homeland (see Figure 3).

Ehret did not find evidence for "Dravidian kinship" in proto-Nilo-Saharan because affinal-consanguineal equations are not typically found in any of the branches of Nilo-Saharan. He therefore reconstructs "Iroquois" for proto-Nilo-Saharan. But then he starts finding evidence for Crow skewing (FZ = FZD) at several nodes of the Nilo-Saharan language tree beginning with the very deepest ones represented by Gumuz (proto-Koman), Kunama (proto-Northen Sudanic), For (proto-Sahelian) and Songhay (proto-Western Sahelian). He interprets the evidence as showing multiple back-and-forth shifts from Iroquois to Crow and back to Iroquois (FZ > FZD > PxSibC)
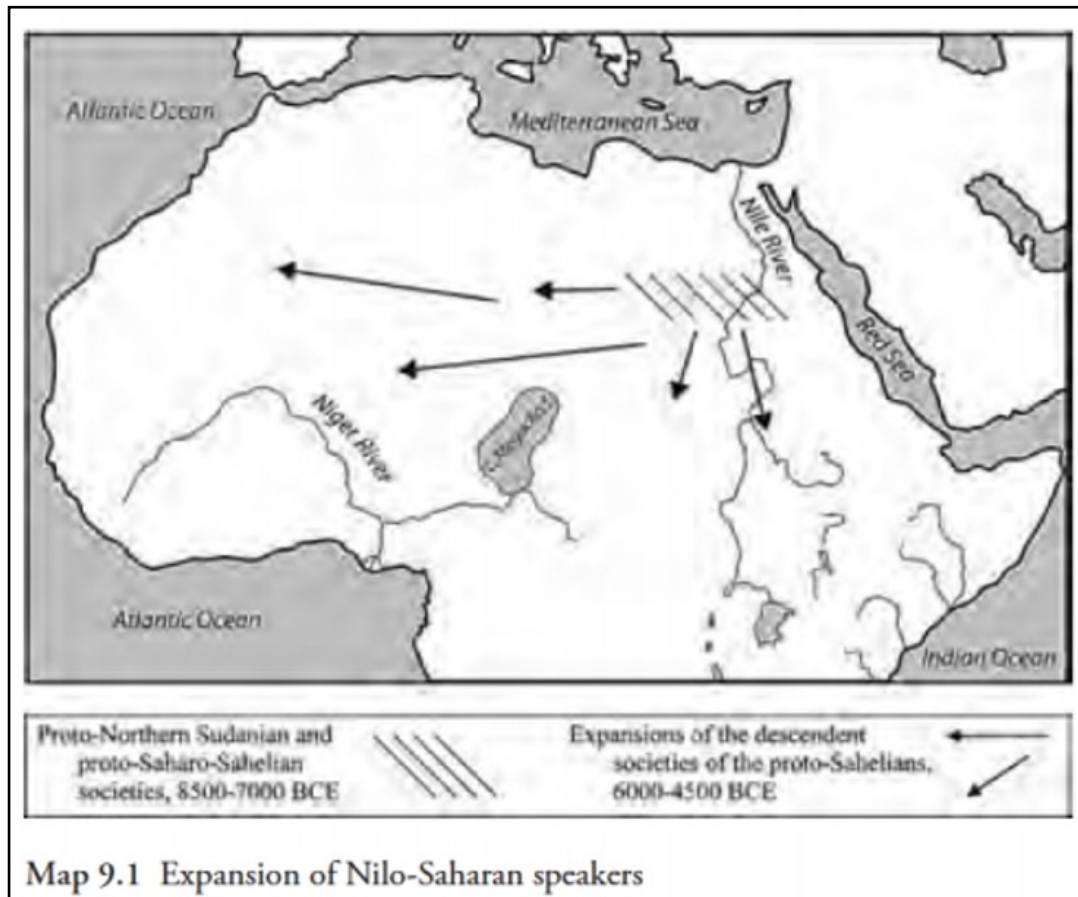
Map 9.1 Expansion of Nilo-Saharan speakers

Figure 3: Image of Map 9.1 in Ehret 2012:176. From *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis* edited by Thomas R. Trautmann and Peter M. Whiteley. © 2012 Arizona Board of Regents. Reprinted by permission of the University of Arizona Press.

after the founding Iroquois-to-Crow shift. He calls attention to this unique and surprising case of *ancient* phylogenetic reticulation that contrasts with such *more recent* unilinear evolutionary sequences as Iroquois > Crow, Iroquois > Omaha, Iroquois > Sudanese, Crow > Sudanese, etc.

Ehret misses an opportunity to sink his teeth deeper into Nilo-Saharan kin terminological evolution by ignoring a set of ancient self-reciprocal equations with clear proto-Nilo-Saharan roots. In his earlier work (Ehret 2008:259-260), he reconstructs PNS **nam* 'mother's brother; sister's child (ms)' on the strength of Uduk ZC (ms); CSud: Mbay MB, ZC (ms), Gula MB; Kunama FZ, DH (ws); Maban: Aiki MB; Ik HZ. Interestingly, the Kunama form is associated with consanguineal-affinal semantics, which cast doubt on Ehret's assertion that "Dravidian" equations are not visible in Nilo-Saharan. MB is a kintype instrumental in creating Omaha equations (MB = MBS). According to Ehret, Omaha equations are recent (1400-1500 A.D.) and geographically restricted in Nilo-Saharan and don't show up until the time of the formation of the Western Nilotic (e.g., Acholi, Lango), Eastern Nilotic (e.g., Bari, Maasai) and Southern Nilotic (e.g., Nandi, Endo mentioned by Ehret, plus Tugen and Kipsigis, see http://kinshipstudies.org/kinshipstudies/database/) branches. This is not entirely so. Although it's true that the Nilotic cluster is

especially rich in Omaha systems, other cases have been recorded as well. In the Surmic group Mursi has *oine, ona* MB, MBS, MBSS, *ngosoni* ZC, FZC (Jorgensen 2011:50-54, 83-84); Suri (Chai) *maama* M, MBD (Abbink 2006). Although the examples of Omaha in Surmic languages lengthens the pedigree of this terminological feature in Nilo-Saharan languages, they don't take away from Ehret's conclusion that Omaha systems in Nilo-Saharan are recent developments, and, one might add, they emerged more than once independently in different branches of Nilo-Saharan.

Ehret (2012:191) repeats the erroneous assumption of the editors of the volume that Crow-Omaha emerges from earlier Iroquois systems;

> The speakers of two near-neighbor Kalenjin dialects in western Kenya, Endo (Marakwet) and Nandi, also have Omaha systems. In these dialects the development of Omaha terminology dates to the period following the separate divergences of Nandi and Endo out of proto-Central Kalenjin, which had an Iroquois system.

Meanwhile, Endo features *mamaa* with *both* self-reciprocal and skewed meanings MB, mZC, MBS (Moore 1986). So does Keiyo wherein *mama* MB, MBS, FZC, ZC (Tornay 1969). Tugen has dropped Avunculoreciprocity (the term for the MB = mZC equation introduced in Dziebel 2007) from the polysemy resulting in the pure Omaha equation *mamae* MB, MBS, MBSS (Kettel 1975). The etymological status of such key Omaha lexemes as Bari *mana'nye* MF, MB, MBS (Seligman 1928:438), Acholi *nera* MMB, MBS, MBS (Seligman 1965:117) or Lango *nero* MB, MBS (Driberg 1923:176), Endo, Keiyo *mama(a)* in relation to PNS **nam* is unclear but the structural sequence Avunculoreciprocity (not "Iroquois") > Omaha seems to be well supported by the Nilo-Saharan-to-Nilotic evidence. At the same time, it's noteworthy that precisely in Nilotic dialects we find the mirror image of Avunculoreciprocity, namely Amitoreciprocity. Forms such as Endo *sanga* and Tugen *sengee* mean FZ, wBC.

Uduk, one of the two languages from the most divergent Koman branch of Nilo-Saharan, has preserved a number of self-reciprocal terms, which are important to understanding the origins of Crow skewing in Nilo-Saharan. In Uduk one finds *diti* FZ, wBC, *tata* MB, mZC and *iya* FB = mBC (James 1979:282-283). The phonetic reflex of PNS **nam* is represented by Uduk *nam* ZC but PNS avunculoreciprocity is preserved in the semantics of *tata* (or *shwakam* in Southern Uduk [James 1979:284]). Now, Uduk *tata* MB is a formal descendant of PNS **tatha* 'father's sister' found with this meaning (without Amitoreciprocity) in Kunama as well as in Ik and Soo (Eastern Sahelian) (Ehret 2008, 260). While the details of phonetic and semantic development need to be clarified by Nilo-Sahararianists it seems highly plausible that the original PNS arrangement included FZ = wBC, FB = mBC and MB = wZC—three alternate generation equations later replaced by an ancient Crow shift and a more recent Omaha shift. (The Southern Nilotic Barabaig or Datooga system that includes both Crow and Omaha features may not be aberrant after all, see Ehret 2012:191). The dialects that went the Crow way maintained avunculoreciprocity, while the dialects that went the Omaha way (Nilotes) maintained vestiges of Amitoreciprocity. What Ehret refers to as the Crow-to-Iroquois transition FZC > PxSibC in Gen 0 seems to have been replicated in Gen +1 by the semantic development of PNS **tatha* FZ through the non- canonical (from the point of view of Trautmann's quadripartite matrix above) equation FZ = MB (PxSib) to MB in Uduk.

There are other self-reciprocal forms sporadically found across Nilo-Saharan dialects (see TableAfrica.xls at www.kinshipstudies.org), and their antiquity and role in the genesis of generational skewing will remain to be clarified. Since Ehret was not advised by anthropologists to

look for self-reciprocal terminologies in his search for the genesis of skewing in Nilo-Saharan, his expertise in the Nilo-Saharan languages remained underutilized.

On the horizontal side, Uduk *iya* FB = mBC suggests that ancient self-reciprocity tended to spread across both cross and parallel relatives in Gen +1/-1. (McConvell's Pama-Nyungan data analyzed above supports this observation.) This means that Uduk may have preserved an original Bifurcate Collateral situation in Gen +1/-1 from which an Iroquois structure evolved after the collapse of alternate-generation equations. Ehret reconstructs PNS **eeya* with the gloss 'father' (an alternate to another PNS terms for father **baaba*) but puts a question mark against the FB position. Uduk *iya* FB = mBC suggests that PNS **eeya* meant 'father's brother; man's brother's child leaving **baaba* as the sole term for F. If this hypothesis proves to be correct, then Crow skewing in Nilo-Saharan is a cross-generational counterpart to Bifurcate Merging, both emerging with the dissolution of alternate generation equations in the early post-glacial stages of the evolution of the Nilo-Saharan family. It's therefore possible that the original horizontal background of Crow skewing in Nilo-Saharan was Bifurcate Collateral, so that it started with FZ = FZD, FB = FZS, with F = FB being a later development occurring next to other horizontal shifts such as MB = FZ referred to above.

Thus, we have seen in two widely separated geographical areas—Australia and Africa—that self-reciprocity is a more primitive principle of vertical equations than Crow-Omaha. Crow-Omaha arises with the dissolution of alternate-generation equations. A third area represented in the Trautmann & Whiteley volume, North America, also furnishes an example of the historical primacy of Self-Reciprocity over Crow-Omaha. Whiteley's own Hopi case study (Whiteley 2012) illustrates this evolutionary pattern. According to Whiteley (2012:85), Hopi *kya* FZ = FZD represents a core Crow equation. But from the general Uto-Aztecan perspective one can observe that Hopi *kya* is a reflex of Proto-Uto-Aztecan (PUA) **ka* which has self-reciprocal meanings 'grandmother; granddaughter' in a number of daughter languages, as in item No. 496 in Wick Miller (1967:67):

> … grandmother **ka*. Cm kakuʔ (maternal?); SP kaku-; Ca né-qaʔ 'My…'; Sr –kaʔ (sg.), -kakam (pl.) 'father's parent; son's child'; Hp -kaʔa 'father's sister'; Pg kaak ~ kaʔa (paternal); káʔa-mad 'son's child' (of a woman).

Self-reciprocal terminology is a PUA feature (Shimkin 1943). It's noteworthy that Hopi is an independent branch of Uto-Aztecan coalescing with other branches carrying alternate- generation equations at the PUA level and it's the only branch that's characterized by generational skewing. With Self-Reciprocity comes preference for Bifurcate Collateral arrangements in Gen +1/-1, so "crossness," as defined by Trautmann & Whiteley ("father's brother is equally a father (crossness)" 2012:6), may well be a derived feature in Uto-Aztecan speech communities.

Horizontal and Vertical Dimensions in Kinship Terminological Systems

There are reasons to believe that horizontal and vertical principles of grouping co-vary in kin terminological systems but their interactions are complex. For instance, in (Dziebel 2007) I reported high correlation between Crow skewing and the relative-sex classification of siblings and, correspondingly, between Omaha skewing and relative-age sibling classification (comp.: Heady 2018:3). However, the Trautmann & Whiteley volume is creating an impression that all Crow-Omaha systems indiscriminately are an evolutionary step forward from the more basic, non-skewed Bifurcate Merging (Dravidian or Iroquois) situation as defined by the merger F = FB and M = MZ. Dousset (2012) likens the Hawaiianization of Gen 0 terminology found in such classic

examples as Aluridja in Australia and sometimes called "Cheyenne type" in North America to generational skewing because both regulate marriages in a similar way by making cross-cousins (or a subset thereof) unmarriageable. (It's worth pointing out that Vladimir Popov introduced the notion of chirality ("sided-ness") to describe the mirror-image relationship between Crow and Omaha skewing and he considers Generational and Bifurcate Collateral as another example of this principle in kinship terminological systems [Popov 1982:69, n. 106].)

I concur with Trautmann that we need to discriminate between more primitive Cheyenne type and Hawaiian type proper. Trautmann (2012:40) writes:

> Cheyenne is unmistakably Iroquois in crossness, and the suspension of crossness in ego's gener-ation does not change that. It is necessary to emphasize this point, because Murdock, in his cross-cultural comparisons, which use ego's generation as the criterion, regularly assigns the Cheyenne pattern to the Hawaiian sector of the fourfold typology. This is wrong and misleading, giving, for example, an impression that there are many terminologies of Hawaiian laterality in North America, among others of Iroquois type. True Hawaiian or generational terminologies are the negation of crossness.

There is a problem with Trautmann's thinking, however. He focuses on "Cheyenne type" be-cause it allows him to still celebrate crossness in its canonical F = FB ≠ MB form but he leaves out another North American Indian type called by Leslie Spier (1925:76-77) "Mackenzie Basin." Mackenzie Basin *neutralizes* the cross-parallel distinction in Gen 0 (just like "Cheyenne" type) but it *enhances* it in Gen +1/-1 by distinguishing three categories of relatives—MB, FB and F, or FZ, MZ and M. As I argued in (Dziebel 2007), in the same way as the cross-parallel neutraliza-tion in Gen 0 has nothing to do with straight "Hawaiian" systems (see above the quadripartite matrix) the Bifurcate Collateral configuration in Gen +1/-1 has nothing to do with "Sudanese" type. In archaic kinship systems (Nick Allen's tetradic theory reaches the same conclusion [see Allen 2012:52] but through a different logical path), Gen 0 and Gen +1/-1 were categorically opposed and structured differently, hence Generational classification in Gen 0 and Bifurcate Collateral in Gen +1/-1 are not disharmonious or aberrant in any way. What is definitively de-rived in kinship terminological systems is Generational, or Hawaiian nomenclature in Gen +1/-1 and Bifurcate Collateral, or Sudanese nomenclature (especially with Descriptive term morphol-ogy) in Gen 0. But, contra Trautmann, this has nothing to do with negating or affirming cross-ness as defined by F = FB ≠ MB. There are well-documented cases of Bifurcate Merging sys-tems developing from Mackenzie Basin systems (see Dziebel 2007*)*. Hence, the merger of adja-cent generations in Crow-Omaha (and the breaking down of symmetricity inherent in Self-Reci-procal Terminology) and the merger of adjacent horizontal categorical positions in Bifurcate Merging (coming to replace the symmetricities of the Mackenzie Basin type) may be more of a legitimate analogy than Dousset's dubbing of cross-parallel neutralization in Gen 0 "horizontal skewing."

It's rewarding to see the contributors to the Crow-Omaha volume citing the work of the Sovi-et social anthropologist Mikhail Kryukov on the evolutionary typology of kinship terminologi-cal systems. My own initiation into kinship studies wouldn't have happened if it weren't for Kryukov's magnum opus *Sistema rodstva kitaitsev* (Chinese Kinship System) published in Mos-cow in 1972. It's a classic text in Russian anthropology and Kryukov drew on his original re-search into the history of Chinese kinship to formulate a general theory of kinship terminological change that was made available to English readers in 1998 (Kryukov 1998). However, *Sistema rodstva kitaitsev* not only impressed me but also frustrated. The deepest stratum of Chinese kin-

ship terminology accessible through direct archival research (3d century BC) was still too shallow of a time period to base a world-historical model of evolutionary transformations on. In addition, Kryukov's postulation of Bifurcate Merging as the ground-zero of Chinese kinship evolution was based on an assumption that one of the earliest attested kinship terms relevant to the typological attribution of Chinese kinship system such as *shifu* FyB and *shufu* FoB as well as *tsunmu* MZ actually presuppose earlier *fu* FB and *mu* M explicitly recorded in the earliest relevant Chinese text "Erya" only with the meaning 'father'. Presumably the morphological differentiation between F and FB happened later out of the need to differentiate the two kintypes conceptually. But what evidence do we have to be sure that not the reverse happened? In pre-*shufu/shifu* times FB used to be called by an entirely separate stem and then kintype FB merged with kintype F and the merger received a formal expression. There are kinship terminological systems such as Keraki (Papua New Guinea) where FyB is morphologically linked to F, while FoB is fully merged with its direct reciprocal myBC (Williams 1969). Kryukov went on to adduce Lat *patruus* FB and *matertera* MZ as supposedly showing the same morphological differentiation from earlier **pater* F = FB and **mater* M = MZ. But in no IE language does a reflex of PIE **pater* mean both F and FB or a reflex of PIE **meh$_2$ter* mean both M and MZ. In a number of branches the terms are connected morphologically. Similarly, Lat *avunculus* MB is derived from *avus* PF and one may argue that originally *avus* (PIE **h$_2$euh$_2$o-*) meant both PF and MB. But this polysemy is not attested in any Indo-European language (Mallory & Adams 1997: 610) and several MB isoglosses in Indo-European languages are derived from PIE **h$_2$euh$_2$o-* through independent morphological processes. As a matter of fact, the actual evidence shows that that PIE **h$_2$euh$_2$o-* had a self-reciprocal, not a skewed meaning (see below).

Worldwide cases of Bifurcate Collateral <> Bifurcate Merging in Gen +1/-1 and Generational <> Bifurcate Merging in Gen 0 need to be thoroughly re-examined to ascertain which direction transformation actually goes. The situation has been clouded for many decades by the implicit assumption that the derived nature of "Hawaiian" in Gen +1/-1 and "Sudanese" in Gen 0 automatically means the ancestrality of Bifurcate Merging across all generational levels. Anthropologists should not automatically assume that if the term for FB is derived from the term for F (and the term for MZ from the terms for M) that both kintypes were called by exactly the same form at the previous stage in the evolution of the kinship terminological system. The linguistic aspects of the formation of kinship terms need to be typologized holistically, cross-linguistically and globally in their own right (see Dziebel 2007) and not used as props for semantic typologies.]

Crow-Omaha: Self-Reciprocity, Dravidian and Tetradic

My hypothesis of the origin of Crow-Omaha systems from Self-Reciprocal systems is consistent with Nick Allen's tetradic theory (see "Tetradic Theory and Omaha Systems"). Tetradic theory postulates the absence of generational distinction in archaic kinship systems and the merger of alternate generations. This means the following set of equations: PF = mCC, PM = wCC, MB = mZC, FZ = wBC, MZ = wZC, FB = mBC (James 2012:146-148 mentions this latter equation in the context of Uduk *iya* FB = mBC). Allen (2012:53) writes:

> To transform into an Omaha type, the tetradic model ... must be unfolded so as to introduce generations in the normal sense. Ascending generations now contrast with descending, by having (at least some) different kin terms.

But here the similarity between my thinking and Allen's seems to end. While well familiar with the argument I put forth in (Dziebel 2007), Allen does not explicitly say that alternate-generation merging as dictated by tetradic logic is the formal antecedent of Crow-Omaha generational skewing. The reason for this reticence is not entirely clear, but it may reflect the fact that Allen's own geographic area of expertise—Tibeto-Burman-speaking South Asia—furnishes an example of a transition from "Dravidian" to "Omaha" without any alternate- generation merging in sight. Byansi and Sherpa, Allen writes, speak related Western Tibeto- Burman languages but Byansi has a "Dravidian" terminology and a rule of bilateral cross-cousin marriage, while Sherpa (and, one might add, a large number of other Tibeto-Burman languages) has an "Omaha" terminology and no marital prescription. But "Dravidian" terminologies (as an analytical type) do not have alternate-generation equations. So, Allen is left with suggesting that it is the rupture of prescriptive equations only that led to the formation of skewed Omaha terms. But this doesn't explain the skewing! The issue needs to be resolved with the help of lexical reconstruction of proto-Tibeto-Burman kinship. While Tibeto-Burman languages are dominated by Omaha skewing (no Crow systems pop up in my database), one of the most divergent branches, namely Bodo-Garo (part of Sal) features a set of alternate-generation equations. E.g., Bodo *-b?w* PF, CS, *-b?y* PM, CD, *ma-may* MB, mZC, *a-doi* FyB, moBC, *yon* PPF, FoB, yBC, *a-noi* FZ, wBD (Kelkar 1968; Benedict 1941:251ff, 467). (The retention situation is reminiscent of Nilo-Saharan where the divergent Uduk language harbors a number of alternate-generation equations from which generational skewing in core Nilo-Saharan languages can be derived.) These equations may still be visible in some Northern Naga languages (Tase Naga *aghu* MB, *aghek* ZC) (Dutta 1959) but the data is incomplete.

A separate problem is the troubling uncertainties in the existing recordings of Bodo-Garo kinship terminologies. In 2009, I corresponded with Robbins Burling regarding these alternate generation equations in Bodo-Garo languages, including Riang, Rabha and Bodo. He was intrigued by this evidence as alternate-generation equivalences "seem strange in this group of languages" but could not verify the data. Bodo *mamay* is a likely borrowing from Indo-Aryan where MB and ZC terms are not self-reciprocal, but this only suggests that there used to be a native Bodo term with the self-reciprocal meaning recently replaced by *mamay*.

Since my correspondence with Burling the existence of a set of alternate generation equations in the Bodo-Garo group has been confirmed for Dimasa, Bodo, Koch, Rabha, Tiwa and Riang by Bouchery & Longmailai (2018) who cited (Dziebel 2007). Bouchery & Longmailai (2018) also detected a self-reciprocal grandfather-grandson term in the extinct Moran language as reported by Gurdon (1904). In all of these languages alternate-generation equations co-exist with "skewed" equations such as GF = oB, GM = oZ, PPF = FoB, PPM = MoZ, MMB = MB = OB (see about them above).

Now that the existence of full sets of alternate generation equivalences in Bodo-Garo has been established, a "Dravidian" configuration does not need to be the only option for a proto-Tibeto-Burman system considering that pan-Tibeto-Burman "Omaha" structures can be derived from the self-reciprocal equations. Another problem for Allen is that Bodo-Garo systems are also Bifurcate-Collateral in Gen +1/-1 and their Bifurcate Collaterality is tightly linked to the alternate-generation equations (*a-doi* FyB, moBC, *yon* PPF, FoB, yBC, but *ba* F). But, then, if we re-read Allen (1975), Byansi is a Bifurcate Collateral nomenclature in Gen +1 (*ba* F, *babu* FoB,

kaku FyB, *na* M, *pochi* MoZ, *chenchi* MyZ), despite the presence of symmetric-prescriptive equations for cross-relatives. So, it's nor really "Dravidian" in the first place because it doesn't have "crossness," at least in Trautmann's definition thereof. Bifurcate Collateral is not part of the tetradic model, which assumes Bifurcate Merging, but the question arises: do classificatory, pre-scriptive and alternative generation equations co-exist in the "real world," or does one tend to conflict with the other?

Allen notes that the "Dravidian," prescriptive equations in Byansi are an anomaly among Ti-beto-Burman languages. Unlike Dravidians of India or Amazonian Indians "Dravidian" systems do not form a systematic areal feature and the Byansi language is not a divergent language in the Tibeto-Burman linguistic phylogeny. The reconstruction of "Dravidian" crossness for proto-Ti-beto-Burman is therefore problematic from a linguistic perspective, although may be favored by an anthropologist on typological grounds.

Interestingly, this is not the only example of "Dravidian" crossness occurring at the terminal branches of a linguistic phylogeny. Trautmann praises (p. 41) Per Hage's discovery of "Dravidi-an" in Africa but Hage (2006) detected it in Yao, again an isolated instance of a Bantu language in Nyasaland, which is much downstream from the root of the Niger-Congo phylogeny and the geographic source of the Niger-Congo expansion. Khoisan peoples which are generally consid-ered to be the oldest population in Africa don't have "Dravidian" kinship. Hage thought the 'Dra-vidian" pattern in Yao could evolve from an Iroquois system and that ultimately only a linguistic reconstruction can decide on the direction of evolution. Similarly, Hage (2001) showed that the West Futuna-Aniwa kinship terminological system in Polynesia belongs to the "Dravidian" type. While a number of Polynesian societies (Bellona, Rennell, Taumako, etc.) picked cross-cousin marriage as a result of demographic depression and created separate terms for cross-cousins (Generational > Bifurcate Merging), only West Futuna-Aniwa developed a full-blown "Dravidi-an" nomenclature. It's clear that considering the downstream position of the West Futuna-Aniwa language in Austronesian and the late colonization of Polynesia its "Dravidian" system is sec-ondary to the earlier cognatic system. Hage interpreted the unique case of "Dravidian" in Ocea-nia as the product of a substrate effect exerted on the original cognatic system by a pre-Aus-tronesian, "Papuan" social structure. This may be the explanation to be used for the sudden emergence of isolated instances of "Dravidian" kinship in Byansi and Yao but this substratum hypothesis can hardly be tested. It's possible that we're dealing here with some forms of late, pseudo-Dravidian and pseudo-Amazonian kinship no more archaic than the Lineal pattern in English that merges affines and consanguines in such a recent pattern as, e.g., Eng *father* F and *father-in-law* SpF, *mother* M and *mother-in-law* SpM, etc. Be it as it may, the use of these pseu-do-Dravidian examples as sources for more standard kinship terminologies within a linguistic family (like Allen does for the Sherpa among Tibeto-Burman peoples) is problematic.

Crow-Omaha: Social Anthropology Meets Philology, or Does it?

In his paper, Allen who has spent decades researching Indo-European mythology and ritual draws a connection between the hypothesis of "Omaha" kinship in Proto-Indo-European (PIE) and his own theory (build off of Georges Dumezil's triad) that proto-Indo-European ideology was based in 5 functions (transcendence, knowledge, force, plenty and devaluation) that mir-rored 5 patrilineal clans engaged in a semi-complex marital exchange model. Indeed, it has been suggested (Friedrich 1966; Mallory & Adams 2006:202-218) that PIE kinship was "Omaha" in type. But, as Hettrich (1985) pointed out, the diagnostic Omaha pattern in IE languages (Lat

avunculus, Bret *eontr*, Lith *avynas*, Slav **uijos*, OHG *oheim* MB, all from PIE $*h_2euh_2o$- 'grand-father') is branch-specific and there is no single form reconstructible for PIE that would indicate an Omaha-type of polysemy. (Only the Latin and Celtic forms above may indicate Proto-Italo-Celtic **awentlo* MB). This means that Omaha skewing took place independently in a number of IE branches but that PIE was *not* "Omaha" but pre-"Omaha." Albanian offers an interesting evidence for ancient Omaha skewing: its 'brother' term *vella* derives from **awnlada-*< **awentlo-* (Huld 1984:128-129), the same form that underlies the Italo-Celtic isogloss above. Albanian term for 'sister', *motre*, comes from **matriia*, which is derivative of PIE **mater* 'mother' and, judging by its morphology, most likely meant 'mother's sister' (see Huld 1984:95-96 who, however, assumes an unmodified PIE $*meh_2ter$ M, MZ). One can hypothesize that pre-proto-Albanian **awentlo-* MB and **matriia* MZ also included, respectively, MBS = MZS = B and MBD = MZD = Z. With the loss of the skewing and a shift from Generational to Lineal nomenclature in Gen 0, the semantic range of these terms shrank to include only B and Z. Depending on the position of Albanian in the IE language tree, this may be indicative of Omaha skewing in PIE or Omaha skewing in an ancient Albanian-Italo-Celtic protolanguage or contact area. The latter is more likely considering that a) other IE languages that have Omaha skewing used their own morphological means to derive the MB from the term for PF and not the putative PIE $**h_2euh_2$-*n-tlo;* b) a number of key branches such as Greek, Armenian, Indo-Aryan, Tocharian and Anatolian do not show "Omaha" terminology at all. In the case of Anatolian and Tocharian this may be a matter of poor lexical preservation. In any case, at present, there is no evidence that "Omaha" skewing was a PIE feature. Allen's argument for a semi-complex alliance in PIE times forming a foundation for a pentadic structure of PIE ideology loses its force because it was originally based on some selective reading by a social anthropologist of IE philological literature.

What Indo-European data does show is that PIE $*h_2euh_2o$- (attested in Hittite *huhhas* PF and morphologically stable across IE dialects) was likely a self-reciprocal term because in Old Irish its reflex *(h)aue* means 'grandson'. Naturally, *-ntlo-* in Latin, Celtic and Albanian, **-ijos* inproto-Slavic, *-ynas* in Lithuanian and **-haimaz* in Proto-Germanic were affixed to the originally self-reciprocal stem to create the term for MB (and MBS in Albanian) once the self-reciprocal equation broke down. Most likely, MB used to be called by an entirely different stem and then an Omaha-kind skewing brought PF and MB closer to each other conceptually while maintaining some degree of formal separation.

Rodney Needham (1987:9) once commented that

> to the present, however, neither the original nature of Indo-European terminologies nor their relation to prescriptive systems has been satisfactorily worked out.

One of the reasons for this strange gap in knowledge—considering how well-studied the IE language family is—is the lack of collaboration between historical linguists and social anthropologists at the level of etymological work itself. In Dziebel (2006) I reported a strong sign of marital prescription in PIE detected through a more in-depth etymological work enhanced by knowledge of kinship typologies. The PIE root **mer-* yielded both consanguineal (IE **bhreh_2ter* 'brother') and affinal (Gk **μεῖραξ** 'girl; boy, Lat *maritus*, Germ. **brudi* 'bride', etc.) meanings in Gen 0 in the IE daughter languages. Pending the acceptance of this new etymology by Indo-Europeanists, the hypothetical Nostratic extension of PIE **mer-* can be found in Dravidian languages where the root **mar-* means 'younger cross-cousin; grandchild; wife's brother; brother's wife" (Alternate Generation Cousin Skewing type with additional prescriptive polysemy) (see Tyler 1990:159). Social anthropologists such as Allen (also Hage 2003) and historians (e.g., Kul-

landa 2002) are making a mistake by relying on purely linguistic theories of Indo-European and Nostratic kinship terminological reconstruction, which are not informed in their very core by comparative kinship studies. Needham's skepticism is a more realistic attitude. Unlike American anthropology where linguistics and ethnology originally, in the Boasian times, formed a unity of method and practice, Indo-European linguistics evolved in Europe as an entirely autonomous discipline. But kinship studies is a field in which social anthropology and linguistics, or phonology and semantics, should be inherently tied together for both phonological and semantic reconstructions to be accurate (Dziebel 2000a, 2000b, 2001a). The reduction of the formal diversity of kin terminological systems to a few rigid evolutionary types (including "Crow-Omaha") by social anthropologists is one negative outcome of keeping social anthropology and linguists separate. The phonology-only approach to etymology practiced by the majority of historical linguists is another one.

Crow-Omaha, the Semiotic Status of Kinship Terms and the Nature of Human Kinship Systems

I believe that the contradictions surrounding the ancestral state of classificatory and prescriptive equations stem from the presence in ancient kinship terminological systems of additional "categorical constraints" in addition to the need to just encode relations by birth (consanguinity) and relations by marriage (affinity). As I propose in Dziebel (2007), one of them is *adoption*, the other one is *death*. Cross-culturally, FB and MZ and their reciprocals are prototypical adoption categories, hence their separation from F and M in Bifurcate Collateral terminologies with Self-Reciprocity (FB = mBC, MZ = wZC) may reflect an *adoption prescription* parallel to the *marital prescription* that sets apart cross-categories such as MB and FZ.

There is a growing interest on the part of scholars to see human kinship as an *ontological* category succinctly expressed by Pitt-Rivers's term "consubstantiality" (see Pitt-Rivers 1973; Dziebel 2001, 2007; Sahlins 2011; Dousset 2013). This reinterpretation of the nature of kinship should lead to the correlative reinterpretation of the *semiotic* (*logical and linguistic)* nature of kinship terms. As a first step, to follow the lead of the British logician, Augustus de Morgan (1806-1871), kinship terms need to be understood as relational nouns (see Dziebel 2007). This puts kinship terms on the same test bench as proper names and personal pronouns as linguistic items that not only communicate *meanings* but also point to (index), pick out and construct *referents,* including Ego. The referents exist in a field of consubstantiality spanning a broad ontological universe demarcated by the axes of birth-death and alliance-adoption and segmented by relative age, relative sex (Ego Gender, parity), speech act roles, baptism act roles and reciprocity.

Instead of taking this holistic and ontological view of "kinship," the Trautmann & Whiteley volume is biased toward naturalistic and alliance-only explanations for Crow-Omaha skewing. While its contributors are aware of high cross-cultural correlation between Crow system and matrilineal descent, on the one hand, and Omaha systems and patrilineal descent, on the other (and Kronenfeld continues to explain Crow skewing in Fanti as product of inheritance rules), there is a clear desire on the part of Trautmann & Whiteley to reduce Crow-Omaha to various alliance configurations. This does not mean that forms of alliance do not contribute to the shape of kinship terminological systems. They do but only as part of a more holistic social system. One paper in the *Crow-Omaha* volume that bucks the trend to focus narrowly on alliance is Marcela Coelho de Souza's 1967 book, *The Making and Unmaking of "Crow-Omaha" Kinship in Central Brazilian Ethnology*. She explicitly argues that generational skewing in Northern Ge
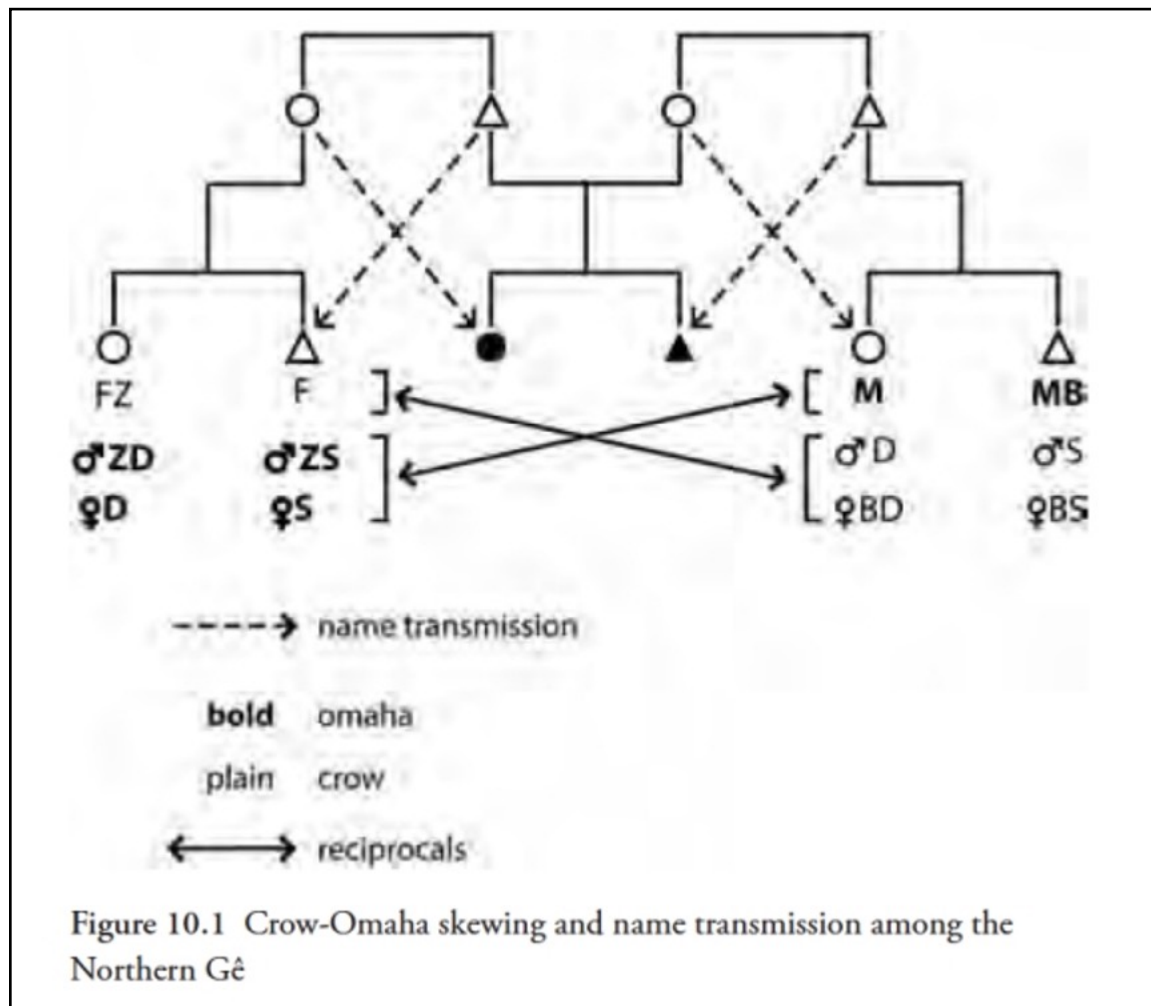
Figure 10.1 Crow-Omaha skewing and name transmission among the Northern Gê

Figure 4: Image of Figure 10.1 in Coelho de Souza (2012:211). From *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis* edited by Thomas R. Trautmann and Peter M. Whiteley. © 2012 Arizona Board of Regents. Reprinted by permission of the University of Arizona Press.

speech communities comes from their cross-generational naming practices (see Figure 4). (Similarly, Robert Parkin [1988] tied what I call "Alternate Generation Cousin Skewed" and "Alternate Generation Sibling Skewed" terminologies to name and soul substance transmission in South India.) Crow and Omaha systems form an east-west gradient from Crow among Eastern Timbira to Omaha among Kayapó, Xikrin, and Kïsêdjê, with Krinkati, Apinaye and others in the middle combining both Crow and Omaha features.

Ge individuals typically inherit ceremonial names from their MB, for men, and FZ, for women. The sharing of names means sharing of identities (substances), so namesakes end up calling their relatives by the same kinship terms. This creates Crow-type polysemies if male name transmission is assumed, or Omaha-type of polysemies if female name transmission is assumed. By suggesting that identification between MB and mZS and FZ and wBD derived from ceremonial naming practices causes Crow-Omaha skewing in everyday kinship terms, Coelho de Souza echoes my Self-Reciprocal hypothesis for the origin of Crow-Omaha skewing (see

above). (On her Fig. 10.1 reproduced above one would need to replace M with MZ and F with FB to begin seeing an underlying Self-Reciprocal pattern we encountered above among aborigines of Cape York and Nilo-Saharan-speaking Uduk.) Importantly, it appears that in Ge societies cross- consanguines are re-adopted as ceremonial namesakes and thus become "true relatives" or perfect substitutes for each other in the event of death. Coelho de Souza writes (2012:214):

> What Amerindians are trying to produce or create, most of the time, is *people*, that is, *persons* of a particular kind: fully social, *human* persons—*relatives*—as opposed to other types of persons that inhabit their cosmos (animals, spirits, enemies, strangers. . .). What I suggest is that an understanding of the way Northern Gê employ certain symbolic devices in the constitution of their relationships for the making of human beings or relatives is the key to understanding what we call their "kinship systems"—to its dynamic (or "dialectical") structuring, too often lost in our segregation of terminology/behavior, synchrony/diachrony, classification/action, and so forth. Naming may be seen as a specific transformative route in the making of persons correlated with another route: marriage. My argument is that both are directed to the making of kinship. If kinship has to be made, it is because it is not given; even when it is already there, as a product of the kinship making of previous generations, it has to be sustained, for otherwise it lapses. Naming may be viewed as a way of blocking such lapsing and marriage as a means to reverse it.

By submitting to naming dynamism, kinship terms reveal their referential continuity with proper names. Personal names entered kinship studies relatively late but the dependence of kinship term usage on underlying name and substance transmission patterns have now been amply documented from such diverse societies as African Khoisan (Marshall 1957), Inuits in the American Arctic (Fienup-Riordan 1983) and the various tribes of Amazonia. Personal names complicate the standard division of forms of classification into relative or egocentric (kinship terms) and absolute or sociocentric (names of social categories such as Australian sections (reiterated in this volume by Allen 2012:51) as they are neither. In addition to the intersections between kinship terms and personal names, recent research has brought up similar formal synergies between kinship terms and pronouns. In a number of Australian aboriginal languages (Arrernte/Aranda, Lardil, Arabana, Nyungar, Parnkalla, etc.) personal pronouns are marked not only for grammatical categories such as person, number, exclusive and case but also for such social categories as moiety belonging. For example, in Kaytej non-singlular pronouns come in 3 forms; form I is used when referents are in the same patrimoiety and generation (section); form II when referents are in the same patrimoiety but opposite generation (section) and form III when referents are in the opposite moiety (Koch 1982).

Coelho de Souza notes (2012:208) the richness of social deixis in Ge languages. Ge Indians are also the only example in the New World of triadic kin terms (forms such as "your mother, who is my sister), which are otherwise found only in aboriginal Australia. Ge don't live by a rigid classificational model but operate with several flexible sociosemiotic systems. This is something Kronenfeld (2012) also notes about Fanti in West Africa. They operate with three kinship terminological systems—unskewed, Crow skewed and courtesy—depending on social context. Kronenfeld (2012:164) believes the Crow-type system is "an overlay on the unskewed variant." Other contributors to the volume concur that generational skewing is a surface-level "social technology" (Trautmann & Whiteley 2012:290) sitting on top of the more fundamental semantic structures based on the horizontal principles of merging and bifurcation. But isn't it just "anthrospeak" for what linguists and semioticians have already invented better terms, namely "pragmatics" or "pragmatics" and "syntactics"? Kronenfeld's paper exemplifies this self-absorbed focus

on kinship terms as a "semantic system" subject to a formal mathematical analysis, which was characteristic of kinship studies in the 1950s and 1960s. Since then,. linguists, ethnolinguists and sociolinguists have brought attention to the fact that kinship terminological systems are grammatical systems (Dahl & Koptjevskaja-Tamm 2001) and pragmatic systems (Luong 1990) in addition to forming a semantic system. And this in turn can be seen as a revival of the convictions of Kroeber and Sapir who were led to believe by American Indian kin terminologies (including Self-Reciprocal terminologies) that kinship systems express not as much sociology as language and thought (see Dziebel 2007:96-97). With respect to Kryukov's typology, linguists working with North Caucasian languages criticized it on formal syntactic grounds because it failed to differentiate between the Arabic version of Bifurcate Collateral in which all the terms are morphologically simple and those other systems (Abkhazian, Ossetian and others) that use only descriptive phrases to form kinship terms for any collateral categories (Shinkuba 1985).

A pragmatic and syntactic account of generational skewing will not take us away from the core anthropological interests in the sociological rationale behind skewed terminologies. On the contrary, reaching an understanding of what sociological, cultural or demographic reality generational skewing actually reflects requires a proper method of describing what Crow-Omaha is and what antecedent terminological form it descends from. In this context an interpretation of Crow-Omaha skewing among Kayapo by Terence Turner (2012:238-239) provides a relevant starting point:

> The most important point, in my view, is that the generation skewing of crosscousin terms is a product of schemas for producing extended family segments of standardized form out of linked elementary families. The specific relations involved in linking elementary families to form the segment may take various forms, such as descent, residence, marriage exchange, or other types of collective grouping, ritual performance, or combinations of these...To implement such a regular pattern of relations of production of segmentary extended family units virtually requires that a society possess a superstructure of collective groupings or ritual processes that coordinate the reproduction of segments of the same type by the community as a whole. This is my second general point: societies with Omaha or Crow terminologies will generally be found to constitute hierarchical systems, with a lower level of segmentary units of identical structure, and an upper level comprising a communal framework of collective groups and ritual activities…. This is not to dispute the relevance of specific forms of interfamily linkage and segment formation that have been foregrounded by many attempts to account for generation skewing terminologies, such as forms of descent or prescriptive marriage, demographic fluctuations, or other causes. Rather, it is to supply the need, unmet in a number of existing theories, of a specific social and conceptual mechanism for mediating the effects of such factors to forms of classification.

Not content with a narrow marriage alliance-kind of explanation, Turner argues that Crow-Omaha represents a higher level of encoding of social relations corresponding to higher level social structures that coordinate the reproduction of society as a whole through orchestrating connections between lower-order social segments such as nuclear families. This resonates with McConvell's hypothesis that Omaha skewing in Pama-Nyungan languages expresses the sociodemographic macrorealities associated with a population spread as well as with Mikhail Kryukov's (1993) observation that Crow-Omaha systems tend to pop up in geographic areas characterized by the proliferation of cross-ethnic clan identities. What is the semiotic depth of Crow-Omaha polysemy, what is that macrosociological reality that non-skewed terminologies

cannot express and how the need for a linguistic sign to orchestrate those powerful global processes affects its formal properties?

Crow-Omaha systems remain a stumbling block for the students of human kinship. Trautmann & Whiteley contributed more thinking and regional data to the problem but the volume is weakened by a number of "blind spots." Whether the fixation on "crossness" on the theoretical level, or the drawing on a handful of examples at the time when large databases should form a basis for judgment, or on kinship terminologies as a "semantic" system divorced from other facets of language and discourse, the Crow-Omaha volume restores dignity to some of the old debates but doesn't take full advantage of the research that has taken place globally over the past 40 years.

References

Allen, N.J. 1975. Byansi kinship terminology: A study in symmetry. *Man* 10 (1):80-94.

Allen, N.J. 2012. "Tetradic Theory and Omaha Systems. " In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis,* edited by T.R. Trautmann, and P. M. Whiteley, pp. 51-68. Tucson: University of Arizona Press.

Allen, N.J., H. Callan, R. Dunbar, and W. James, eds., 2008. *Early Human Kinship*. Oxford: Blackwell.

Barnard, A. 2012. *Genesis of Symbolic Thought*. Cambridge: Cambridge University Press.

Benedict, P. 1941. *Kinship in Southeastern Asia*. Ph.D. dissertation. Harvard University.

Bouchery, P., and M. Longmailai. 2018. The kinship terminology of the Dimasa: Alternate generation equivalence in the Tibeto-Burman area. *Anthropological Linguistics* 60 (3): 226-254.

Coelho de Souza, M. 2012. "The Making and Unmaking of 'Crow-Omaha' Kinship in Central Brazilian Ethnology." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*, edited by T.R. Trautmann, and P. M. Whiteley, pp. 205-222. Tucson: Arizona University Press.

Cook, E.A., D. O'Brien. 1980. "Patterns in Highland New Guinea Kinship: an Overview." In *Blood and Semen: Kinship Systems of Highland New Guinea*, edited by E.A. Cook, and D. O'Brien, pp. 463-474. Ann Arbor: University of Michigan Press.

Dahl, Ö., and M. Koptjevskaja-Tamm. 2001. "Kinship in Grammar." In *Dimensions of Possession*, edited by I. Baron, M. Herslund, and F. Sørensen, pp. 201-225. Amsterdam and Philadelphia: John Benjamins.

Dousset, L. 2012. "'Horizontal' and 'Vertical' Skewing Similar Objectives, Two Solutions?" In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis,* edited by T.R. Trautmann, and P. M. Whiteley, pp. 261-280. Tucson: University of Arizona Press.

Dousset, L. 2013. From consanguinity to consubstantiality: Julian Pitt-Rivers' 'The Kith and the Kin.' *Structure and Dynamics* 6 (1).

Driberg, J. H. 1923. *The Lango, a Nilotic Tribe of Uganda*. London: T.F. Unwin.

Dutta, P. 1959. *The Tangsas of the Namchik and Tirap Valleys*. Shillong: North-East Frontier Agency.

Dziebel, G.V. 1992. *Sistemy terminov rodstva shoshovov*. B.A. thesis. St. Petersburg State University.

Dziebel, G.V. 2000a. K teorii i metodologii ideneticheskoi rekonstruktsii protosistem terminov rodstva. *Algebra rodstva* 5: 5-52.

Dziebel, G.V. 2000b. Teoriia i praktika v sravnitel'noistoricheskikh issledovaniiakh. *Algebra rodstva* 5: 98-188.

Dziebel, G.V. 2001a. Esche raz o idenetike, sravnitel'noistoricheskom iazykoznanii i indoevropejskikh terminakh rodstva. *Algebra rodstva* 7: 66-136.

Dziebel, G.V. 2001b. *Fenomen rodstva*. St.Petersburg.

Dziebel, G.V. 2006. Reconstructing 'Our' kinship terminology: Comments on the Indo-European material in A. V. Dybo's and S. V. Kullanda's "The Nostratic Terminology of Kinship and Affinity." *Algebra rodstva* 10.

Dziebel, G.V. 2007. *The Genius of Kinship: The Phenomenon of Human Kinship and the Global Diversity of Kinship Terminologies*. Youngstown, NY: Cambria Press.

Ehret, C. 2008. "Reconstructing Ancient Kinship in Africa." In *Early Human Kinship: From Sex to Social Reproduction*, edited by N. J. Allen, H. Callan, R. Dunbar, and W. James, pp. 200-231. Oxford: Blackwell.

Ehret, C. 2012 "Deep-Time Historical Contexts of Crow and Omaha Systems Perspectives from Africa." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*, edited by T.R. Trautmann, and P. M. Whiteley, pp. 173-203. Tucson: University of Arizona Press.

Fienup-Riordan, A. 1983. *The Nelson Island Eskimo: Social Structure and Ritual Distribution*. Anchorage: Alaska Pacific University Press.

Friedrich, P. 1966. Proto-Indo-European kinship. *Ethnology* 5 (1): 1-36.

Gurdon, Major P. R. T. 1904. The Morāns. *Journal of the Asiatic Society of Bengal* 73: 36-48.

Hage, P. 2001. The evolution of Dravidian kinship systems in Oceania: Linguistic evidence. *Journal of the Royal Anthropological Institute* 7 (3): 487-508.

Hage, P. 2003. On the reconstruction of the proto-Nostratic kinship system. *Zeitschrift für Ethnologie* 128 (2): 311-325.

Hage, P. 2006. Dravidian kinship systems in Africa. *L'Homme* 177-178: 395-407.

Heady, P. 2018. Heady's Comment on D. Read "Generative Crow-Omaha terminologies." *Mathematical Anthropology and Cultural Theory* 12 (2): 1-8.

Hettrich, H. 1985. Indo-European kinship terminology in linguistics and anthropology. *Anthropological Linguistics* 27 (4): 453-480.

Huld, M.E. 1984. *Basic Albanian Etymologies*. Columbus: Slavica Publishers.

James, W.R. 1979. *'Kwanim Pa: The Making of the Uduk People. An Ethnographic Study of Survival in the Sudan-Ethiopian Borderlands*. Oxford: Clarendon Press.

James, W.R. 2012. "A Tetradic Starting Point for Skewing? Marriage as a Generational Contract: Reflections on Sister-Exchange in Africa." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis,* edited by T.R. Trautmann, and P. M. Whiteley, pp. 135-152. Tucson: University of Arizona Press.

Kelkar, A.R. 1968. "Boro Kinship Terms." In *Studies in Indian Linguistics. Professor M.B. Emeneau Sastiprti Volume*, B. Krishnamurti, editor, pp. 166-178. Annamalainagar: Deccan College, Poona University and Annamalai University, Centers of Advanced Study in Linguistics.

Koch, H. J. 1982. "Kinship Categories in Kaytej Pronouns." In *Languages of Kinship in Aboriginal Australia*, edited by J. Heath, F. Merlan, and A. Rumsey, pp. 64-71. Sydney: University of Sydney.

Kronenfeld, D. 2012. "Crow- (and Omaha-) Type Kinship Terminology: The Fanti Case." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis,* edited by T.R. Trautmann, and P. M. Whiteley, pp. 153-172. Tucson: University of Arizona Press.

Kryukov, M. V. 1993. Sotsial'noe i etnicheskoe: problemy sootnosheniia. *Rasy i narody*. 1992. Moscow.

Kryukov, M. V. 1998. "The Synchro-Diachronic Method and the Multidirectionality of Kinship Transformations." In *Transformations of Kinship*," edited by M. Godelier, T.R. Trautmann, and F. Tjon Sie Fat, pp. 294-313. Washington and London: Smithsonian Institution Press.

Kullanda, S. 2002. Indo-European "Kinship Terms" revisited. *Current Anthropology* 43 (1) : 89-111.

Lowie, R.H. 1917. Notes on the social organization and customs of the Mandan, Hidatsa, and Crow Indians. *Anthropological Papers of the American Museum of Natural History* 21 (pt. 1): 1-99.

Luong, H.V. 1990. *Discursive Practices and Linguistic Meanings: The Vietnamese System of Personal Reference*. Amsterdam and Philadelphia: John Benjamins.

Jørgensen, S.L. 2011. *Ethnographic Reflections on Marriage in Mursi: A Group of Transhumant Agro-Pastoralists in Southwestern Ethiopia*. M.A. thesis. Oslo: Norwegian University of Science and Technology, Faculty of Social Sciences and Technology Management, Department of Social Anthropology.

McConvell, P. 2008. Review of *The Genius of Kinship*, by German V. Dziebel. Unpublished Manuscript.

McConvell, P. 2012. "Omaha Skewing in Australia and New Guinea: Overlays, Dynamism and Change." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*, edited by T.R. Trautmann, and P. M. Whiteley, pp. 243-260. Tucson: University of Arizona Press.

Mallory, J.P., and Douglas Q. Adams. 1997. *Encyclopedia of Indo-European Culture*. London: Taylor & Francis.

Mallory, J.P., and D.Q. Adams. 2006. *Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World*. Oxford: Oxford University Press.

Marshall, L. 1957. The kin terminology system of the !Kung bushmen. *Africa* 27 (1): 1- 25.

Miller, W. 1967. *Uto-Aztecan Cognate Sets*. Berkeley: University of California Press,

Moore, H. L. 1986. *Space, Text and Gender: An Anthropological Study of the Marakwet of Kenya*. Cambridge: Cambridge University Press.

Needham, R. 1987. "Editor's Introduction." *In Imagination and Proof: Selected Essays of A. M. Hocart*, pp. 1–14. Tucson: University of Arizona Press.

Parkin, R. 1988. Reincarnation and alternate generation equivalence in middle India. *Journal of Anthropological Research* 44 (1): 1-19.

Popov, V.A. 1977. Kistoricheskoi tipologii sistem terminov rodstva: tipy Crow i Omaha. *Sovetskaia etnografiia* 2: 43-54.

Popov, V.A. 1982. Sistemy terminov rodstva akanov kak etnosotsiologicheskii istochnik. *Afrikanskii etnograficheskii sbornik* 13: 50-79.

Sahlins, M.D. 2011. What kinship is. *Journal of the Royal Anthropological Institute* 17 (1): 2-19: (2): 227-242.

Seligman, C.G., B.Z. Seligman. 1928. The Bari. *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 58: 409-479.

Seligman, C.G., B.Z. Seligman. 1965. *Pagan Tribes of the Nilotic Sudan*. London: Routledge & Kegan Paul.

Shimkin, D.B. 1941. The Uto-Aztecan System of kinship terminology. *American Anthropologist* 43 (2, pt. 1): 223-245.

Shinkuba, A.E. 1985. Opyt analiza terminov rodstva u abkhazov. *Izvestiia Abkhazsskogo instituta iazyka, literatury i istorii. Seriia istoria i ekonomika*. Vol. 13. Tbilisi.

Sillitoe, P. 1995. "A Blend of Cultures: The Bogaia of the Southern Highlands." In *Papuan Borderlands: Huli, Duna, and Ipili Perspectives on the Papua New Guinea Highlands,* A. Biersack, ed. Ann Arbor: University of Michigan Press.

Spier, L. 1925. The distribution of kinship systems in North America. University of *Washington Publications in Anthropology* 1 (2): 69-88.

Tornay, S. 1969. Essai sur le vocabulaire de parenté des Keyo du Kenya. *L'Homme* 9 (4): 113-135.

Trautmann, T.R. 2012. "Crossness and Crow-Omaha." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*, edited by T.R. Trautmann, and P. M. Whiteley, pp. 31-50. Tucson: University of Arizona Press.

Trautmann, T.R., and P.M. Whiteley, eds. 2012. *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*. Tucson: Arizona University Press.

Turner, T. 2012. "Schemas of Kinship Relations and the Construction of Social Categories among the Mebêngôkrê Kayapó." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*, edited by T.R. Trautmann, and P. M. Whiteley, pp. 223-239. Tucson: University of Arizona Press.

Tyler, S.A. 1990. "Alternating Generation Kinship Terminology in Proto-Dravidian." In *Die Vielfalt der Kultur: Ethnologische Aspekte von Verwantschaft, Kunst und Weltauffassung. Ernst Wilhelm Müller zum 65. Geburtstag, K.-H. Kohl, H. Muszinski, I. Strecker, hrsgb*. Pp. 144-166. Berlin: Dietrich Reimer.

Whiteley, P.M. 2012. "Crow-Omaha Kinship in North America: A Puebloan Perspective." In *Crow-Omaha: New Light on a Classic Problem of Kinship Analysis*, edited by T.R. Trautmann, and P. M. Whiteley, pp. 83-108. Tucson: University of Arizona Press.

Williams, F.E. 1969. *Papuans of the Trans-Fly*. Oxford: Oxford University Press.