From Chiefdom to State: The Contribution of Social Structural Dynamics

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ABSTRACT

Unlike previous theory that focused on external conditions to explain the rise of the state, this paper proposes an explanation grounded in social structural dynamics. Like previous theory, we see the state as developing out of increasingly intense conflict, but here that conflict is traced, not to population pressure, but to instabilities of the status lineage structures of contending chiefdoms. The social structure of the state is seen as the outcome of strategies adopted to stabilize the chiefdom social structure.

Explanations of prehistoric, historic and contemporary transformations have long been fundamental to the social sciences. Prominent among them is Carneiro's elegant and influential theory of the origin of the state, a theory that includes population pressure, circumscription and conflict as causes (Carneiro 1970, 1981, 1988, 1991, 1998, 2012a, 2012b). In circumscribed regions, population pressure sparks warfare between villages over land and, as that pressure increases, the frequency, intensity, and importance of war also increase. A defeated village, if allowed to remain on its land, faces political subordination to the victor, subordination that results in the

loss of autonomy and the payment of tribute. Thus, ongoing warfare integrates villages under a paramount chief (Carneiro 1998). Eventually, warfare between chiefdoms leads to unification by the strongest polity. That political unit is 'undoubtedly sufficiently centralized and complete to warrant being called a state' (Carneiro 1970: 736).[1] Importantly, while this aggregation process was occurring by external acquisition, 'the structure of these increasingly larger political units was being elaborated by internal evolution' (*Ibid.*). However, Carneiro does not specify those internal changes.

Carneiro's theory has influenced anthropological and archaeological research for more than 40 years: during that time it has withstood many critical examinations (see Claessen 2012; Earle 1997; Feinman 2012; Ganzha and Shinakov 2012; Grinin and Korotayev 2012; Kirch 1988; Marcus 2012; Roscoe 1988; Webb 1988; Yi 2012).[2] Nevertheless, critiques remain (Claessen 2012; Marcus 2012; Roscoe 1988; Webb 1988; Yi 2012), the most fundamental being that, in important circumscribed regions, the state arose without population pressure (Chacon 2014; Marcus 2012; Roscoe 1988).[3] Butzer (1976), Liu *et al.* (2004) and Pollok (1999) show that the Nile, Yiluo, and Tigris-Euphrates river valleys respectively were not overpopulated even after the rise of states (see also Wright and Johnson 1975). And the intense warfare that preceded state formation in Ancient China was not associated with population pressure (Liu *et al.* 2004).[4] In some circumscribed, dense populations with intense warfare, the state failed to appear (Beliaev, Bondarenko, Korotayev 2001). The densely populated Highlands of New Guinea were both environmentally and socially circumscribed yet no chiefdoms or states emerged before Papua New Guinea (Beliaev *et al.* 2001). Furthermore, the state failed to arise in some circumscribed regions with population pressure (Chacon 2014; Fürer-Haimendorf 1962). For example, the environmentally circumscribed and densely populated Apa Tanis villages of northeastern India remain autonomous (Berezkin 1995, 2000; Carneiro 2012b; Chacon 2014; Fürer-Haimendorf 1962). These cases show that population pressure and circumscription are neither necessary nor sufficient for the development of the state.[5] Nevertheless, evidence supports the emergence of states in many circumscribed areas under conditions of extreme conflict (Turchin *et al.* 2013). If not population pressure, what factor or factors caused the transformation of autonomous villages into states?

To answer that question, we examine the internal social dynamics of the chiefdom, the social structure that preceded the state.

Building on conflict elements of Carneiro's theory, we propose a dynamic theory grounded in anthropological, network, and experimentally tested sociological theory to explain the internal evolution of human social organization from chiefdom to the state. By 'chiefdom' we mean a kin-based polity characterized by a status lineage structure in which the chief holds the highest position in the highest status line (Goldman 1955, 1957, 1958, 1960; Hage and Harary 1996; Kirch 1984; Kirchhoff 1959; Oberg 1955; Sahlins 1958: xi–xii; Widmer 1994).[6] The 'state' is an organization that centrally rules coercively and monopolizes the means of violence – at least within its administrative system (Weber 1988 [1896], 1968 [1918]). Its sphere of control reaches the village but does not necessarily extend to the level of the individual (Fortes and Evans-Pritchard 1940: 11–12, 15).[7] All states have formal administrative structures, but, in archaic states, familial relations are often admixed.[8] We hypothesize that 1) status lineage structures along with 2) circumscription and 3) warfare are individually necessary and jointly sufficient conditions for the rise of the state. Our theory focuses on the internal dynamics that result from 1) the instability of the chiefdom's status lineage structure and 2) the social changes instituted to stabilize that structure. We begin by explaining the social structure of status lineages, and show that, as time goes forward, downward mobility destabilizes the structure. Attempts to restore stability result in internal changes, the development of indirect coercive and then of direct coercive structures that become state-level organizations.[9]

THE STRUCTURE OF STATUS LINEAGES

Status lineages rank individuals in an internally consistent ordering, organizing the polity by inducing compliance through the systematic exercise of influence. Figure 1 diagrams a status lineage structure at three points in its development showing directions of influence: the number in each node is its status rank. The founder F holds the highest rank and his descendants are labeled using a procedure proposed by Hage and Harary (1996). At each generation, statuses are unambiguously assigned to each position in the structure. Since influence follows status (Berger, Cohen, and Zelditch 1972; Berger *et al.* 1977; Berger, Ridgeway, and Zelditch 2002), any higher ranked position can influence any lower ranked position.

Since status is ordered without reversals, there is never a case in which the direction of influence is in question. For example, the position labeled 2 can be influenced only by the position labeled 1, but the number 14 position is potentially subject to the influence of 13 higher status others. Given the directionality of the influence structure, the agenda for activities and the determination of who benefits from them will be set by and for those of highest status (Bachrach and Baratz 1962).[10] While status lineages provide the social structure for the simplest form of chiefdom, that structure is inherently unstable.
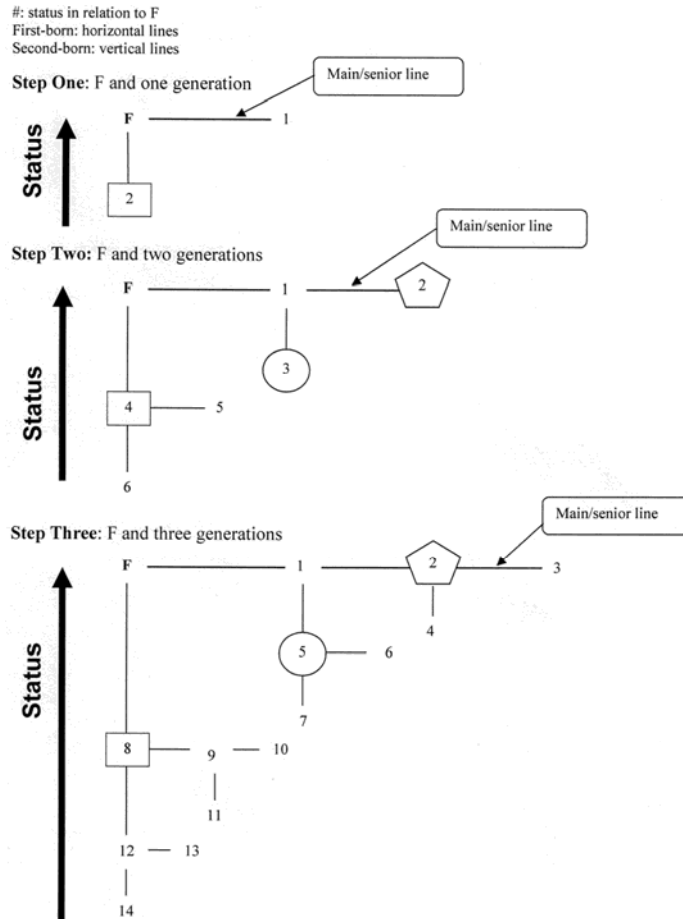

Fig. 1. Status Lineage System Dynamics (based on Chacon 2014)

THE DYNAMIC OF STATUS LINEAGES AND
STATUS RIVALRIES

Over time, all members of the status lineage structure except those in the senior line are downwardly mobile, a downward mobility that is built into the geometry of the lineage structure and cannot be eliminated without eliminating the structure itself.[11] Look again at Figure 1 now focusing on changes in the positions' statuses across Steps One, Two and Three. For purposes of illustration, assume that status is traced on the male side.[12] At Step One, the founder has two sons with birth order determining their relative statuses. The node representing the second son is shown as a box in all three steps to facilitate its identification. In Step Two, both of the founder's sons have had two sons of their own. The first son of the founder's first son has the second-ranked status while the founder's second son's status has declined from second to fourth.

Step Three extends status dynamics to one more generation showing further downward mobility. Note that each node after the first on the senior line preempts the status rank of one or more nodes off the senior line. Just as the senior line preempts the statuses of all those below, each cadet line preempts statuses from lines below it. Leading theorists of chiefdoms, including Kirchhoff (1959) and Goldman (1960), see status ranking as the source of rivalries that destabilize lineage structures. 'The psychology of status is such that inequality provokes rivalry, if not through the entire society, then surely in its upper status ranges' (Goldman 1960: 691). Beyond their psychology of status, we suggest a sociology of status that traces rivalries to downward mobility: recent experimental research shows that the impact of prospective status loss is greater than that of status gain (Pettit, Yong, and Spataro 2010).

As time passes, rivalries increase. Junior line members will be increasingly motivated either to modify their ancestral claims in order to improve their positions in the lineage structure, or to reject the structure by migration or revolt (Goldman 1955: 691–692, 1958: 245–248; Kirchhoff 1959: 268–270; Malo 1903 [1898]: 212ff.).[13] Experimental studies show that 'status disagreements lead to diminished group performance and that this effect is driven by reduced contributions from group members' (Kilduff, Anderson, and Willer 2013: 1). Therefore, status rivalries disrupt the pat-

terns of influence that otherwise make status-influence chiefdoms effective polities.[14]

Influence persuades those low in status that the demands of those high in status are in their interest: it is an importantly limited kind of control. Chiefs' almost universal claims of generosity that Hayden and Villeneuve (2012) see as false should be seen in the context of influence. When chiefs assert that they are generous, they are claiming to be acting in the interest of others, not themselves. As downward mobility disrupts its influence structure, if a chiefdom is to continue intact, it will follow an evolutionary path transitioning toward a coercive power structure.

FROM INFLUENCE TO COERCION

Whereas earlier work by Sahlins (1958: xi, 5, 204) and Service (1962) saw chiefdoms as grounded in economic developments, Carneiro (1970, 1981, 1998) and much recent work places war and coercion at the forefront of the transformation of chiefdoms into more complex polities (Marcus 2012).[15] We hypothesize that, seeking stability, warfare is adopted, a strategy that successively transforms the chiefdom structure (Hayden and Villeneuve 2012).

The Indirect Coercive Chiefdom

Indirect coercion can stabilize the chiefdom by producing power relations between the chief and warrior caste on the one hand and the commoners on the other. Indirect coercion relies, not on the concentration of the means of violence within the chiefdom, but on the threat of negative sanctions, real or imagined, that originate outside of the chiefdom (Wagner 1940: 225, 229). For example, indirect coercion occurs in the USA today when a President demands new laws and higher taxes to defend against terrorists. Experimental studies show that external threats such as intergroup conflict motivate group cohesion and self-sacrifice for the group (Barclay and Benard 2013).

In indirect coercion, the chief uses the threat of an aggressive outsider to gain support from commoners. Barclay and Benard (2013) show that high-ranking group members exaggerate threats to promote cooperation and suppress competition for their positions.[16] Thus, indirect coercion produces power relations stabiliz-

ing the chiefdom, but only when relations between it and neighboring chiefdoms are hostile and conflictive. Because warfare stabilizes chiefdoms, it seems hardly accidental that chiefdoms are warlike. Hayden and Villeneuve (2012) recognized the usefulness of conflict and external threat to chiefs. They found it strange that the two chiefdoms on the island of Futuna could remain at war for more than 500 years without either conquering the other.

Warfare and indirect coercion fuel status differences transforming the status lineage system. When war is a permanent condition, a caste of warriors comes to be separated from a lower caste now called commoners (Malo 1903 [1898]: 78).[17] As that separation progresses, the chief needs no longer rule only by influence, but rules more by indirect coercion. While this development has a strong stabilizing effect on the chiefdom, the chief's rule is not of unlimited power. To the contrary, the rule of the chief is very much limited by the absence of an administrative system (*i.e.,* bureaucracy), an officialdom through which the chief's power could be directed.

The Coercive Chiefdom

Coercive power works through force threat. Direct coercion is an exploitative relation which works to the extent that coercers hold negatives and coercees do not. That is to say, coercion works only through the concentration of the means of violence. Whereas individual muggers concentrate the means of violence only briefly, over time, no individual can singlehandedly concentrate the means of violence over one or more others. Though no chief can coerce alone, a chief and a loyal warrior caste can and will coerce a commoner caste, extracting value and directing labor. War is the condition for the emergence of the warrior caste (Malo 1903 [1898]: 79; Trimborn 1949).

Warfare provides those of lower status who are loyal warriors with pathways to higher status. Recognition of achieved status by the chief, as shown by granting benefits in the form of prestige items and high status wives, legitimates achieved status while building a loyal warrior caste.[18] The warrior caste includes warriors from lower status positions whose loyalty has been recognized by the chief. The possibility of improving social status through com-

bat performance connects status motives to fighting which results in the intensification of warfare (Trimborn 1949).[19]

The warrior caste is composed in part of those once high in lineage status and in part of those upwardly mobile through success in war. The two parts are potentially hostile toward each other. Those from high lineage emphasize their high birth, those from lower status highlight their warrior prowess, and only the chief can resolve the hostility of the two (Malo 1903 [1898]: 80, 82, 93). When resources gained though war such as land and slaves are allocated by status, the ranked society moves toward a class system in which the means of production are distributed to the developing warrior class and separated from the commoners (Goldman 1955, 1957, 1958, 1960). Whereas a stable coercive structure is prior to and necessary for control of the means of production, that control amplifies the power of the chief and his warrior caste (Earle 1991, 1997).

Lacking an administrative structure for exercising power at a distance, the coercive chiefdom structure can rule vertically through coercion, but it cannot be extended horizontally much beyond face-to-face relations (Blitz 1999). It follows that chiefdoms are sharply limited in size, usually maximizing out at a radius of one day's walk (*Ibid.*). The paramount chiefdom is a larger polity horizontally aggregating a set of chiefdoms wherein links between sub-chiefs and the paramount chief are grounded in kinship, not coercion, and thus are weaker. The fact that sub-chiefs are local coercers is grounds for the instability of the paramount chiefly rule.[20] When the paramount chief is more powerful than any one of his sub-chiefs and less powerful than the sub-chiefs together, the paramount chief will rule, only as long as the sub-chiefs do not conspire against him.

From Lineage Instability to the State

Early social structures like chiefdoms were long thought to be static, fixed in tradition. For example, in Weber's (1968 [1918]) authority typology, early societies were legitimated traditionally by habit and practices from the past. In spite of the possibility of charismatic breaks with the past, Weber's is a fundamentally static view that contrasts strongly with theory offered here. This theory sees structurally unstable chiefdoms coming immediately before the state and either evolving into it or breaking apart due to internal

instability. The mechanism of evolutionary transformation is war and the specific direction it takes is a result of the presence or absence of circumscription (Carneiro 1998). When there is space to expand, the system of chiefdoms fissions due to war without further internal change. When the system of chiefdoms is circumscribed, some chiefdoms are subordinated to others as direct coercion develops and paramount chiefdoms arise. Here inter-chiefdom conflict forms a competitive and selective system through which smaller units are incorporated into paramount chiefdoms.[21]

Paramount chiefdoms have the advantage of being larger than simple chiefdoms: they can bring greater military force to bear. As pointed out above, however, while the paramount chief and each sub-chief rules coercively, links across chiefdom parts are familial and thus much weaker. These two qualities are consistent with the repeated 'chiefly cycling' between paramount and simple chiefdoms found by Flannery just prior to the development of four states, Zulu, Ashanti, Hunza and Hawaii (Flannery 1999). The chiefly cycling he reported may have been due to paramount chiefdoms growing due to increasing force in war and then disintegrating due to the weak connection of their parts.[22]

We hypothesize that circumscription together with status lineages are the conditions spurring increasingly intense warfare that leads toward the state. Hawaii and New Zealand illustrate how circumscription and status lineages are both necessary conditions. Both Hawaii and New Zealand were colonized during the thirteenth century CE by status lineage societies (*A Glimpse…* 2001; Firth 1957; Wilmshurst *et al.* 2011). Though warfare was endemic in both (Vayda 1960; Earle 1997), according to Earle 'Hawaii witnessed sustained evolutionary development of complex chiefdoms that verged on state societies' (1997: 200) whereas New Zealand did not in roughly the same amount of time.[23] We suggest that Hawaii's relatively small landmass of 16,558 sq. km, circumscribed vanquished factions by limiting options for flight (Loope 1998). Contrastingly, New Zealand's larger landmass of 269,652 sq. km, provided vanquished factions with more options for escape (*i.e.*, less circumscription) (Loope 1998; *Statistic…* 2013). The Hawaii-New Zealand comparison implies that conflict, sufficient population density and circumscription, along with status lineage are neces-

sary conditions for state development. We hypothesize that they are also sufficient.

The rise of the state is the last step of the process theorized here. States differ from chiefdoms and paramount chiefdoms only in this: they have formal systems of administration. Thus Athens and the Inka, however different they may be, both differ from chiefdoms in that both had planned administrative structures, the positions of which were occupied by office holders competent to carry out assigned duties (Murra 1980; Hansen 2006).[24] Much as Carneiro theorized, those administrative structures grow out of the pressures of war on the coercive chiefdom.

CONCLUDING THOUGHTS

In the evolutionary path theorized in this paper, institutions fail when they are superseded. The status-lineage chiefdom, governing through influence alone, faces imminent failure because of downward mobility of all but those in the senior line. Failure is avoided by war that stabilizes the chiefdom by introducing power based on indirect coercion. Through war, the social structure differentiates into warriors and commoners as the chiefdom becomes increasingly grounded in coercion.

This evolutionary path is not unilinear. To the contrary, the instability of the status-lineage society can have a number of contrasting outcomes. When rivalries truncate the paths through which influence flows, the chiefdom becomes unstable. When there is space to emigrate, cadet lines which are losing status are strongly motivated to leave and establish societies of their own. If the newly established societies are, again, status lineage ones, eventually there will again be cadet lines motivated to leave until the space available is filled. This kind of process might explain some of the great prehistoric migrations of peoples across Eurasia and the Pacific; however, the investigation of migrations is beyond the scope of this paper.

It follows that a necessary condition for the evolution to coercive chiefdom and on to paramount chiefdom is circumscription of the system of competing chiefdoms. By blocking escape, circumscription contains and maintains the instability such that the sole path toward stability is the evolutionary path traced in this paper.

Even then, the evolutionary path from chiefdom to paramount chiefdom is not inevitable. Decisions must be made by actors in the social structure to change it (Marcus and Flannery 1996). That is to say, the conditions of instability and/or threat must be recognized as problematic and the solutions chosen must be the ones delineated here for the evolution to occur.

Proposed here is a theory that, while far from proven, is consistent with an array of previous research and should stimulate future research to either support or falsify it. Previous theorizing on the development of the state and associated social complexity focused on conditions external to the evolving society. The theory proposed here focuses on internal dynamics and then on external conditions including circumscription. Since it is the structure of the society that is changing, the theory proposed here looks first at social structures and then to the potential for change within them.

NOTES

[1] Small (2012) suggests that the concurrence of conflict and the start of the archaic state does not imply that the second results from the first. While Small is certainly right, it is also right to say that, *within* Carneiro's theory conflict and the state are necessarily connected – as they are in the theory to be presented here – though for different reasons than in Carneiro's theory.

[2] For Yoffee (2005: 44), ancient states did not necessarily evolve out of chiefdoms.

[3] For Kottack (1972), a society can glide into institutionalized inequality with commensurate tributary relationships without warfare. Also, Piscitelli (2014) argues that social complexity can arise without the presence of warfare.

[4] Yi (2014) holds that stratified societies can exist without permanent leadership.

[5] See Roscoe (1988) and Webb (1988) for a contrasting view of the role of warfare in state evolution.

[6] A lineage is a descent group whose members can trace or remember genealogical ties (Bates and Fratkin 2003). Status refers to an individual's standing in a group based on the prestige, honor, and deference rendered by other members (Lovaglia and Houser 1996).

[7] In our definitions of chiefdom and state, the former is kin-based and the latter is not. These meanings are consistent with Kirch who found, in the rise of the Hawaiian state, that 'the classic Polynesian lineage structure having been sundered – their new power and authority… had been materially symbolized' (Kirch 2010: 220). As Testart (2012) pointed out, stateless societies are full of private

vengeance. Early states do not attempt to eliminate all private vengeance, but seek to subject it to state regulation (*lex talionis*).

[8] For example, in the western Zhou, according to Feng (2008: 197ff.), while some appointments to bureaucratic office were family based, substantially more than half were not. In the Inka Empire, according to Murra, the expansion of the empire required 'new bureaucratic, military and technical imperatives which could no longer be satisfied by the limited personnel of the twelve royal *ayllu.*' The solution was the creation of 'Incas by privilege' or honorary Inkas (Murra 1980: 36). See also Someda (2004).

[9] This theory is intended to explain the emergence of the state out of chiefdoms with status lineages. Whether or not this theory has broader implications will be addressed in our future research.

[10] When status lineage structures become very large, as explained by Malo (1903 [1989]), the specialization of genealogy develops, the effect of which is to maintain a well-ordered status structure.

[11] In a lineage, descent can be traced via the male line only (patrilineal) or the female line only (matrilineal) or by choosing either the male or the female line (ambilineal) (Bates and Fratkin 2003). A few lineages trace descent by ultimogeniture, that is, through the last born child (Hage and Harary 1996).

[12] Though more complex to diagram, a matrilineal lineage structure has status changes much like those traced here.

[13] As recounted by Malo (1903 [1898]), in a Hawaiian origin myth, Wakea, a second son successfully revolted against his elder brother Lihau-ula.

[14] Fractures in status systems have been known to occur. For example, in India, 'the difference between the rulers and the ruled is initially that between certain descent groups having access to power and others who are excluded and among whom are the non-kin groups, generally providers of labour' (Thapar 2005 [1984]: 79). Additionally, in Hawaii, despite having the same ancestors, some people were ennobled (made into *aliis*) whereas others were converted into subjects (Malo 1903 [1898]). Malo speculates that in the past, all 'people were *aliis* and it was only after the lapse of several generations that a division was made into commoners and chiefs' (1903 [1898]: 86).

[15] See Haas (1982) and Earle (1991, 1997) for similar explanations. But see Roscoe (1988) and Webb (1988) for contrasting views.

[16] Importantly, pairs of chiefdoms can act as external threats for each other. As seen in the case of the nearly 50 Cauca Valley chiefdoms in Colombia (Carneiro 1991), systems of chiefdoms can be in hostile contact with each other.

[17] For example, courageous warriors in Colombia's Cauca Valley enjoyed high status and thus distanced themselves from commoners (Trimborn 1949). In Hawaii, certain feathered adornments were worn exclusively by elites and courageous warriors (Malo 1903 [1898]).

[18] The term 'caste' is sometimes used to designate a status group closed to outsiders. That is not the meaning here.

[19] See Chacon and Mendoza (2007a, 2007b) for documentation of the antiquity and widespread distribution of warfare. See Chacon and Mendoza (2012) for battle participation enhancing warriors' status.

[20] That instability is much like that of feudalism. In feudalism, though the king is more powerful than any one of his nobles, together the nobles are more powerful than the king (Weber 1968 [1918]).

[21] Circumscribed conflict can form a competitive and selective system leading to monopoly. In the third century BCE, China's period of Warring States began with nine major states and ended with a single state (Hui 2005).

[22] Flannery's (1999) discussion of the development of Zulu, Ashanti, Hunza, Hawaii, and Zapotec states is broadly supportive of the theory presented here.

[23] There is considerable disagreement concerning whether Hawaii developed a state prior to western contact. For example, specialists such as Kirch, hold that Hawaii developed states 'around AD 1600' (2010: 219). Hommon (2013: 217ff.) agrees. Others such as Sahlins (1958), Service (1975), Earle (1997), and Johnson and Earle (2000), in more general discussions refer to Hawaiian chiefdoms and, while not explicitly denying state development, do not treat pre-contact Hawaii as having states. We do not have the specialist expertise to take a position on whether the Hawaiian state developed prior to or after contact.

[24] We agree with Kurtz that 'the state is an abstract structure of offices vested with powers and authorities that empower their incumbent who constitute the state's institutional organization or government' (Kurtz 2012: 69 italics removed). The kin-based structure of the chiefdom is of a different type.

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