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### TEMPORAL AND SOCIAL SCALES IN PREHISPANIC MESOAMERICA

#### Olivier de Montmollin

Bailey has noted that "past behaviour...represents an amalgamation and intersection of many different processes operating over different time spans..." (1983, 166-167). As a general rule, 'internalist' (social) approaches have focused on short-term process; this, however, is not inevitable, as social phenomena may be shown to have a temporal hierarchy (Bailey 1981, 105; 1983, 180-1). In this paper I examine various social temporalities, involving prehispanic Mesoamerican spatial scales, social scales, and both etic and emic time scales (Table 1). The theme selected for special attention here is time management at household and polity scales. To fully explore this theme both etic and emic time scales are considered.

### Time Management at the Household Scale

Time Allocation [TA] study is one form of etic analysis that has been applied to 'home economics' and time budgets at the household scale, involving fairly short daily, seasonal or yearly time-spans (Gross 1984). A prominent Mesoamerican example concerns a Late Formative shift to ceramic (and other craft) specialisation in Oaxaca, in which it is proposed that a change from a single crop (wet season) to a two-crop (wet and dry season) irrigation regime caused a re-ordering of familial time-budgets, and cost-benefit calculations leading to household specialisation in either agriculture or crafts (Blanton et al. 1982, 22-23; 1981, 27; Feinman 1986).

Conceptual differences exist between 'maximisation' models (Blanton and Feinman, above) and 'satisfiser' models (Flannery and Marcus 1976, 376-377) in analysis of commoner household time management. Maximisation models, using principles similar to those of microeconomics, fall within a formalist anthropological economics (Halpernin 1985). Satisfiser models are more closely constructed from Mesoamerican ethnographic studies (eg. informant statements about Zapotec family farming strategies and views of nature). Accompanying general principles of risk minimisation, an ideological framework stressing an "image of limited good" (Foster 1965) makes satisfiser models more similar to substantivist anthropological economics (Halpernin 1984).

Household economics may be related to a general anthropological model -- Sahlins' Domestic Mode of Production [DMP] (1972, ch. 2-3). Sahlins uses concepts from rural sociology (Chayanov) to extend the temporal dimension of householding into a multi-generation domestic cycle (Goody 1962). The idea is that time-use decisions in a peasant (or any DMP) household vary at any given moment according to the family's proportion of producers to non-producers, which in turn depends

on the stage reached in a demographic and social domestic cycle. While notentially interesting, such a socio-temporal factor has not been introduced into arguments for Mesoamerica: the domestic cycle is rarely taken into account as a potential dynamic affecting development of prehispanic societies. Suitable household scale data have not been collected or analysed to make the impact of a domestic cycle a practical object of study, nor does it seem that such data will ever be very accessible. In the Oaxacan example, cited above, conclusions about household behaviour rest primarily on chains of inferences concerning surface artefact scatters (mostly pottery), a few agricultural features, and site location with reference to resources. None of the bridging arguments are grounded in clear archaeological household contexts, such as residential structures, middens or workshops. Even if one accepts the interpretation's behaviourist premises, the bridging arguments still need work (methodological critiques of the Oaxaca analysis abound; an acidulous sample is appended to Kowalewski and Finsten 1983).

The DMP model rests on an assumption that the household social scale (usually a nuclear or else a small extended family) is the basic and irreducible economic managerial unit. In the prehispanic record, various lines of archaeological and ethnohistoric evidence suggest that sometimes corporate entities larger than the small extended family served as basic units. The celebrated Teotihuacan 'apartment' compounds (Millon 1981, figures 7-4) or the historically described Aztec calpullis (Hicks 1986) clearly indicate situations where the individual household is subsumed into a larger corporate economic entity.

The results of TA analysis may be changed if a more inclusive building block than the family household is used: time budgeting becomes less constrained when there are greater numbers of hands. For example, the Oaxacan farmers' problem concerning conflicting demands of a two crop system and ceramic production could be more easily resolved in a large multi-family organisation. Several more general consequences flow from positing large corporate (vs. small household) economic units: the potential for economic and demographic failure of individual households diminishes within a corporate matrix, changing the survival-planning calculus; corporate durability tends to be longer than that of the individual household; autonomy of individual household decision-making is lessened by inclusion in a larger corporate entity. Thus a relatively small shift in social scale requires substantial rethinking of economic time management analyses.

Variation occurs in relation to social status at the household or corporate lineage scale, with differences becoming evident between time calculations at commoner and elite levels. In this discussion, the focus will now shift from economy to politics.

Anthropological studies of the domestic cycle have revealed temporally interesting political calculations in commoner households. Family headship eventually devolves to the designated heir, whose support for the family head may be interpreted as an 'investment' with deferred reward. Other present and future rewards are held out for non-heirs.

In small household regimes, non-heirs fission away from the family to establish new families (Goody 1962). Such dynamics are documented for Mesoamerican ethnographic cases (eg. Siverts 1969), while the possibility of a domestic cycle can sometimes be inferred archaeologically from domestic architectural remains, with the precise political strategies left unspecified (de Montmollin 1985).

Anthropological studies suggest that succession to family headship differs among elite households in several temporally interesting ways.

- 1. Elite family size tends to be greater, often reaching corporate lineage dimensions. Corporate elite groups are often more complicated in composition, featuring a mix of kin, retainers, and clients.
- 2. Elite political stakes are much higher, especially as family headship usually entails access to high (apical) political office. Apical political office tends to be impartible, since fission options are only exercised at the cost of destroying political integrity (Goody 1966).
- 3. An important temporal factor is the tendency for corporate elite groups to increase their size through such alliance-building practices as polygyny, thereby increasing the potential for intra-group competition. Of the several strategies generally used for meeting this problem, one has an interesting cyclical quality -- rotating succession in which various eligible lines take turns at holding apical office (Goody 1966). Such rotation figures importantly in succession to high political (and ritual) office for Mesoamerica, particularly in the Maya zone (Bricker 1981; Edmonson 1979, 1982; Fox and Justeson 1986; Coe 1965; Farriss 1984; Rounds 1982). This relates to the cyclical quality of various emic calendrical time spans (see below).
- 4. Another important temporal factor directly relevant to Mesoamerica is writing-aided calculation of succession which takes into account multiple past or future successions (for turn-taking), stretching over many generations. In contrast, commoner household headship succession calculations need not involve kin reckoning beyond one or two generations.

My discussion now focuses on the <a href="mailto:emic">emic</a> domain. For day to day activities of the individual life cycle, a key <a href="mailto:emic">emic</a> time-scale was the Sacred Round (<a href="mailto:Tzolkin">Tzolkin</a> in Maya), one of the <a href="mailto:calendar">calendar</a>'s shortest cycles (Thompson 1971, 66-103). Each of the <a href="mailto:Tzolkin">Tzolkin</a> is 260 days had omens and associations, and was used as a divination instrument. Unrelated to natural or economic cycles, and in fact overriding any natural, political, or demographic periodicities, the <a href="mailto:Tzolkin">Tzolkin</a> provided a framework for evaluating mundane activities. Household economic and political planning was thus conducted within a matrix of divination practiced by specialist shamans. Such practice would have introduced factors into the planning process that are not considered within the formal maximising or satisfising strategies assumed in <a href="mailto:etic">etic</a> TA management studies. To achieve the fullest understanding, therefore, <a href="mailto:etic">etic</a> TA management studies. To achieve the fullest understanding, therefore,

studies need to be supplemented by approaches which take into account emic time concepts which affect planning.

## Time Management at the Polity Scale

For prehispanic Mesoamerica, polities are usually equatable with small kingdoms rather than megastates or empires. How might 'management' differ at the polity versus the household scale? My general contention is that the relatively short-term considerations involving careful husbanding of resources, associated with commoner households in TA studies, differs in fundamental ways from 'management' carried out by rulers and their courts at the polity scale. A successful, long-lived Mesoamerican polity was not just a well-run household 'writ large'.

An opposite view stresses the short and long term adaptive importance of sound polity management, invoking a similar husbanding logic for political and economic management. This view is associated with influential interpretations of complex societies based on information theory (for Mesoamerica -- Blanton et al. 1981, 1982; Kowalewski and Finsten 1983; Spencer 1982). Such interpretations stress that political rulers must attempt to maximise the cost effectiveness of their information processing activities. In effect, 'managerial' interpretations claim universality for specific European forms of political administration (a formalist version of political anthropology).

Evidence in the ethnohistoric sources suggests that managerial interpretations of what Mesoamerican rulers thought and did about their polities are suspect. Such judgements are not nearly as effectively made using archaeological data because our capacity to interpret the archaeological record does not yet provide a sufficiently sharp focus on the <a href="emics">emics</a> and <a href="etics">etics</a> of Mesoamerican politics. Several general properties of Mesoamerican polities are relevant to the issue of time management. Four of these are enumerated below:

- 1. Rulers were seldom involved in close supervision or management of economic production; their role was rather to skim off tribute from subject producers, and management was done at smaller social scales (Carrasco 1978).
- 2. There were no fully professional bureaucracies (Weber's faceless file shufflers); many state office holders were elite individuals who took part in a variety of military, religious, and political activities, besides managing information (Carmack 1981; Hicks 1986; Spores 1967). In this sense, Mesoamerican polities clearly fall into Giddens' general class of 'traditional states' (class-divided societies), with very low levels of administrative activity by the governing group. According to his essentially substantivist analysis, we should not expect to find fully developed bureaucratic organisations before the emergence of nation-states in Europe (Giddens 1985).
- 3. A political logic for rulership contrasted with and overrode a hypothetical economic (management) logic (Bray 1983). Political logic

stressed power and political resources in a New World version of a Machiavellian framework (Brumfiel 1983; Davies 1973, 1980). It was only managerial in the minimal sense that 'political resources' had to be mobilised to some effect. Lives and economic livelihood of many subjects did not need to be husbanded by rulers to achieve their political ends. In contrast, management at the (commoner) household scale depended much more closely on the preservation of each constituent member for survival.

4. One might be tempted to infer that the animatistic Mesoamerican world view, with its deep respect for the spirit of all living and many inanimate things (Thompson 1970), carried over to polity management, as part of a 'conservation ethos'. However, a closer look at elite belief and ritual practice shows they were charged with maintaining a cosmic balance, not through husbanding resources, but through warfare and prisoner sacrifice (Boone 1984; Freidel 1986; Conrad and Demarest 1984). Even though ritually 'regulated', this could involve destruction of many people and considerable quantities of economic wealth.

Much of the above has been focused on emics -- the attitudes to management that shape behaviour. Proponents of a managerialist thesis, however, might discount such assertions as 'paleopsychology' and maintain that better managed systems would tend to survive longer than poorly managed ones. Bailey has reviewed a general adaptationist argument of this kind:

Maladaptive or non-adaptive patterns may persist...alongside the adaptive...[which] entails a...looseness of fit between behavior and environment, in which factors on either side of the relationship may be varying at different rates and thus appear to be out of phase over short time spans (Bailey 1981, 109).

One implication that may be drawn from this is that the ethnohistoric evidence on which the anti-managerialist position is based lacks utility because it covers a shorter span (300 years) than the very long prehistoric archaeological sequence (2500 years). Many Mesoamerican polities, however, do not appear to survive longer than the several-century time span covered by some Postclassic ethnohistoric sources. Therefore, the ethnohistoric temporal scale is not necessarily inappropriate for study of dynamics at the polity scale.

Ethnohistorical sources, in addition, provide some chance (however imperfect) of evaluating rulers' managerial or non-managerial interests, which can only be inferred indirectly from purely archaeological sources. For example, from an adaptationist and managerialist perspective, it can be argued that when a polity survived for a long time it must indicate that its rulers acted as better managers than those of shorter-lived polities. Another form of argument from archaeological data is to cite 'unintended consequences': what seems like good management 'at the time' (over the short term) appears as bad management

over the long term, but at any given time rulers do try to manage resources (Blanton et al. 1981, 1982). Both arguments lack the independent means of evaluating prehistoric motivations which are afforded by ethnohistoric sources. As suggested above, such sources indicate that Mesoamerican rulers had largely non-managerial interests. Even when one sets aside the issue of motivations to focus on behaviour, ethnohistoric sources challenge the managerialist-adaptationist argument with evidence that cycles of polity successes and failures occurred independently of economic (management-related) cycles, due to the play of dynastic contention (see below).

If polity rulers were not interested or engaged in carefully managing the body politic and its economy, what were they thinking about and doing? Two spheres of activity were centrally important.

- Rulers were custodians of relations between their polities and the cosmos with reference to maintaining cosmic balance, as suggested above.
- 2. Rulers and their higher ranking supporters participated in a complex set of interactions involving a shifting 'balance' between available political offices and the numbers of contending individuals and groups. Such interactions occurred both within and among polities. Problems associated with access to high office were mentioned above. It bears repeating that time-spans involved in the scheming over succession to high political office generally transcend the human life cycle or the ordinary commoner domestic cycle. This is because a long (written) history of past and future successions can enter into elite calculations. For access to high office, lineal succession, rotation (orderly turn taking), and usurpation followed by counter usurpation (disorderly turn taking) are all well documented ethnohistorically. The range of variability in Mesoamerican dynastic contention went from disorderly 'conflict', with relatively little agreement on rules, to more orderly rule-respecting 'competition' (the contrast between competition and conflict is taken from Lloyd 1968). Central Mexican dynastic politics usually fell towards the disorderly end of the continuum (Brumfiel 1983; Davies 1973, 1980), as did Highland Maya politics (Carmack 1981). Mixtec succession politics were more rule-governed, in an alliance-based kinship matrix (Spores 1967). Lowland Maya dynastic politics were also relatively orderly, sometimes with reference to kinship rules (Fox and Justeson 1986; Farriss 1984), sometimes according to calendrical cycles (Farriss 1984; Bricker 1981; Edmonson 1979, 1982).

Cross-cutting the differences outlined, all Mesoamerican dynastic systems featured shifting emphases on orderly observation of kinship and calendrical rules or on contingent manipulative action around the rules. Furthermore, dynastic affairs were inextricably related to cosmic-calendrical affairs, as evidenced in the close relation between usurpations, warfare, human sacrifice, and elite religious service (Freidel 1986; Conrad and Demarest 1984; Boone 1984). Cosmic affairs can be interpreted as orderly 'structure' to be contrasted with more disorderly dynastic 'events'. However the contrast is not absolute. There was a

degree of instability in cosmic affairs (Conrad and Demarest 1984; Davies 1973; Thompson 1970) and a degree of stability in dynastic affairs (Freidel 1986; Edmonson 1979, 1982; Spores 1967).

Of particular interest is the relation between calendars and political rotation. In cosmic calendrical thought, sacred bearers of units of time arrived in turn to rule a moment (Thompson 1971), on the terrestial plane, rulers also arrive in turn to rule a term. Some Postclassic Maya rotations suggest close calendrical coordination for political and ritual office tenure terms (Edmonson 1979, 1982; Coe 1965). Other Classic Maya political rotations are related to individual life spans of irregular length, but also to fairly regular 'rules' for rotation among the hereditary lines represented by individuals (Fox and Justeson 1986). Unlike Maya examples, Central Mexican and Oaxacan ethnohistoric examples do not suggest rotation as a principle, although their dynastic systems operated within the same general pan-Mesoamerican calendrical framework. Much remains to be learned concerning political rotation and its relation to calendrics in all parts of Mesoamerica.

Rather than sober management, heated and occasionally chaotic dynastic contention was a key factor producing political change. Contra Braudel, dynastic contention was not just short-term surface froth. It was potentially a basic phenomenon of the long or at least the 'middle' term. In relatively conflic-ridden settings such as Central Mexico, displaced dynastic lines did not disappear but remained 'lurking in the wings' to become involved in succession crises generations later (Brumfiel 1983; Davies 1973). In more orderly settings such as Maya civilisation, members of different dynastic lines might wait their turn according to a kinship rotation logic. One Classic Maya centre has a sequence of steady alternation in rulership between two dynastic lines lasting from 160 to as long as 300 years (Fox and Justeson 1986, 16). In Postclassic Yucatan, primacy rotated among chosen centres for terms of 256 years, the length of a Short Count cycle (Edmonson 1979, 162-163; 1982, xvi). Such culturally constructed time, projected into the past and the future, extends well beyond the short term -- the daily round, individual life cycle, and most domestic cycles. In fact, the 256 year tenure for Yucatan's Short Count cycle is no briefer than the major environmental periodicities that have been tentatively reconstructed by archaeologists for the post Formative period, such as the 200-300 year trends of rainfall variation (Folan  $\underline{et}$  al. 1983). This illustrates the point that social temporality need not always be shorter than environmental temporality (Bailey 1983, 180-181).

### Conclusions

For prehispanic Mesoamerica time management at the commoner household scale differed greatly from management at the elite household and polity scales. Elite and polity 'management' involved much higher stakes, looser husbanding of economic resources, and calculations extending over much greater time spans. The last point can be taken even further into the the <a href="mailto:emic">emic</a> domain by looking at the linkage between social scales and calendrical time spans (summarised in Table 1). Elite

	Spatial Scale	Social Scales	Etic Time-Scales	Emic Time-Scales (Calendrics) *
:	dwelling	individual	daily round (TA studies)	- Tzolkin (260 day Sacred Round)
.2	dwelling	nuclear family household	domestic cycle	x = 20 20 21
	patio group	extended family household	domestic cycle	
4	patio group cluster	multi-family corporate lineage	lineage cycle	
5.	site (and hinterland)	community	community cycle	- 4 year "Year "Bearer" cycle
9	subregion	district		- Festival Round
	region	polity	state	- 52 year Calendar Round cycle - 20 year Katun
· .	macroregion	polity-network alliance	alliance cycle	- 256 year Short Count cycle
. 6	culture subarea	"civilisation" (e.g. Maya)	rise and fall of civilisation	- Short Count cycle - 400 year Baktun (Long Count)
0.	10. 2 or more culture subareas	empire (e.g. Aztec)	imperial cycle	
[1.	11. culture area (e.g. Mesoamerica)	megacivilisation		- World-Sun (5200 years)

consulted in Thompson 1971 Mesoamerican scale heirarchies. Calendar and its components can be Table 1: Matrix of Prehispanic \* Detailed descriptions of the C individuals whose social universe encompassed the polity and beyond, had the full calendar (with both short and long time spans) as part of their world view. In contrast, commoners, whose social universe was primarily the household and the immediate community, used partial versions of the same calendar (limited to its relatively shorter time spans) as part of a locally rooted world view. At social scales such as the community, it is possible that intermediate length calendrical cycles were tied to local politics and ritual affecting community leaders (Coe 1965). Overall, individuals concerned with events occurring at more encompassing social scales were routinely dealing with longer emic (and etic) social time spans.

Mesoamericanist archaeologists need to draw more fully on the work of ethnohistorians and epigraphists in order to integrate <a href="mailto:emic">emic</a> time structures into their models and analyses. If made to stand alone, <a href="mailto:etic">etic</a> approaches such as TA analysis at the household scale or 'managerial' analysis at the polity scale, produce excessively austere results. In a combined approach, <a href="mailto:etic">etic</a> analyses can provide an interesting set of abstract benchmarks against which to evaluate the different motivations and behaviours suggested by more emically oriented analyses, eganalyses of household scale divination frameworks or of polity scale dynastic contention on a cosmic stage. Finally, I hope to have established that <a href="mailto:etic">etic</a> or <a href="mailto:emic</a> analysis of temporal issues in prehispanic Mesoamerica would benefit from close attention to the effects of social scale as well as social stratification.

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