wend book, Brown reports similar results, obtained independently: more antecedent and stressful life events in persons with depressive disorders than in persons with schizophrenic reactions. Neurotic patients showed a linear relationship between quantitative "stress" scores and severity of symptoms.

These findings for psychiatric illness and antecedent stress are not new or in any way startling. The relationship between loss of loved ones or cherished functions and subsequent depressive symptoms is an old and well-established clinical observation. But clinical findings are frequently criticized because the subjectivity of the clinician and the patient is not compensated by random selection of subjects, independent evaluation, or quantification using operational definitions. These new-style epidemiological studies offer a means for checking and refining clinical observations. They also can extend biological investigations by providing a simplified psychosocial variable for use in large-scale field studies. Heart disease, for example, has been studied largely in terms of physical antecedents such as elevated serum lipids and blood pressure. These life event scaling methods offer a tool for use in prospective studies using the large populations necessary to obtain meaningful results.

The two volumes contain formidable discussions of life event scaling methods, especially on issues such as assessment of degree of stress for groups versus individuals, the advantages and disadvantages of having each subject rate the event for degree of impact, and the danger of circular reasoning with regard to which events are causes and which effects. The participants bring a high level of methodological sophistication to their examination of both the mechanisms that might explain the substantive findings, and the artifacts that might obviate or reduce the size of the effect. The Dohrenwends, in particular, present a well-written concluding overview containing critiques of recent data. This chapter includes a chart on "decision making in definition and measurement of stressful life events" that describes which measures are applicable to specific research aims.

Participants in both conferences emphasize the need for prospective designs, further elaboration of reliable measurements of discrete life events, more epidemiological sophistication in specification of contrasting populations, and comparison of effect sizes for differing contributing variables. For example, future prospective studies may support the retrospective findings of increased life stress in persons with premature heart disease, but they must also relate such a "risk factor" in terms of size of effect and possible common causality to other "risk factors" such as high blood pressure, smoking, personality styles, and family history of heart disease.

These volumes together are the vital texts on the currently powerful issue of the correlation between stressful life events and the onset of physical or psychological illness. If one had to choose between them, the book edited by the Dohrenwends is the more complete.The paradigm central to both volumes follows a strategy of simplification to achieve conceptual clarity and quantification. Both life events and instances of illness are brought into a yes-no or gradient system which allows a quantification of both types of episodes. The moral is that simplification leads to revitalization rather than stagnation. The significant and large-scale findings excite enough interest to assure that further methodological sophistication will be forthcoming and that this area of investigation will not fixate prematurely on these early forms of life event scaling procedures.

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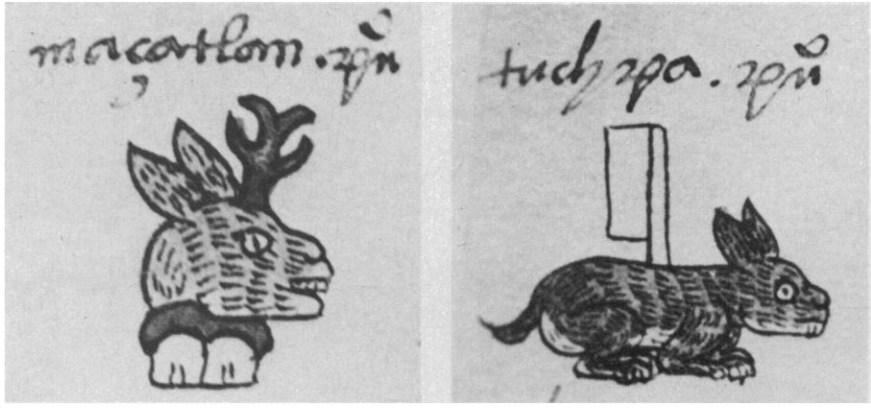
Deciphering Ancient Writing

Mesoamerican Writing Systems. Papers from a conference, Washington, D.C., Oct. 1971. ELIZABETH P. BENSON, Ed. Dumbarton Oaks Research Library and Collections, Washington, D.C., 1973. x, 226 pp., illus. $10.

Prior to the works of A. Caso, H. Berlin, and T. Proskouriakoff most scholars maintained that Mesoamerican hieroglyphic texts and scenes referred to astronomical events and to celestial deities. Pre-Columbian dates were believed to record eclipses and planetary cycles, particularly of Venus, Mercury, and Jupiter. Today, although the astronomical interpretation of certain hieroglyphic passages (for example, pertaining to the moon) is still acknowledged, most researchers agree that the Maya, Zapotec, Mixtec, and Aztec inscriptions have a substantial historical content—information about dynasties, genealogies, wars, tribute, and so on—which is presented within a chronological framework.

This symposium volume contains four papers devoted to Maya writing, one each to Aztec and Mixtec writing, and one to figurines. This last article, "Late Classic figurines from Tlaxcala, México, and their possible relation to the Codex Borgia-group" by B. Spranz, seems a bit out of place, especially since not all of Mesoamerica's writing systems are covered in the book. One other puzzling feature of the book is that none of the authors actually define a writing system or provide a rigorous distinction between partial and true writing systems.

Among the matters the contributions are concerned with are matching sounds to particular hieroglyphic affixes, ascertaining the extent of phoneticism in pre-Columbian writing, recovering the relation-



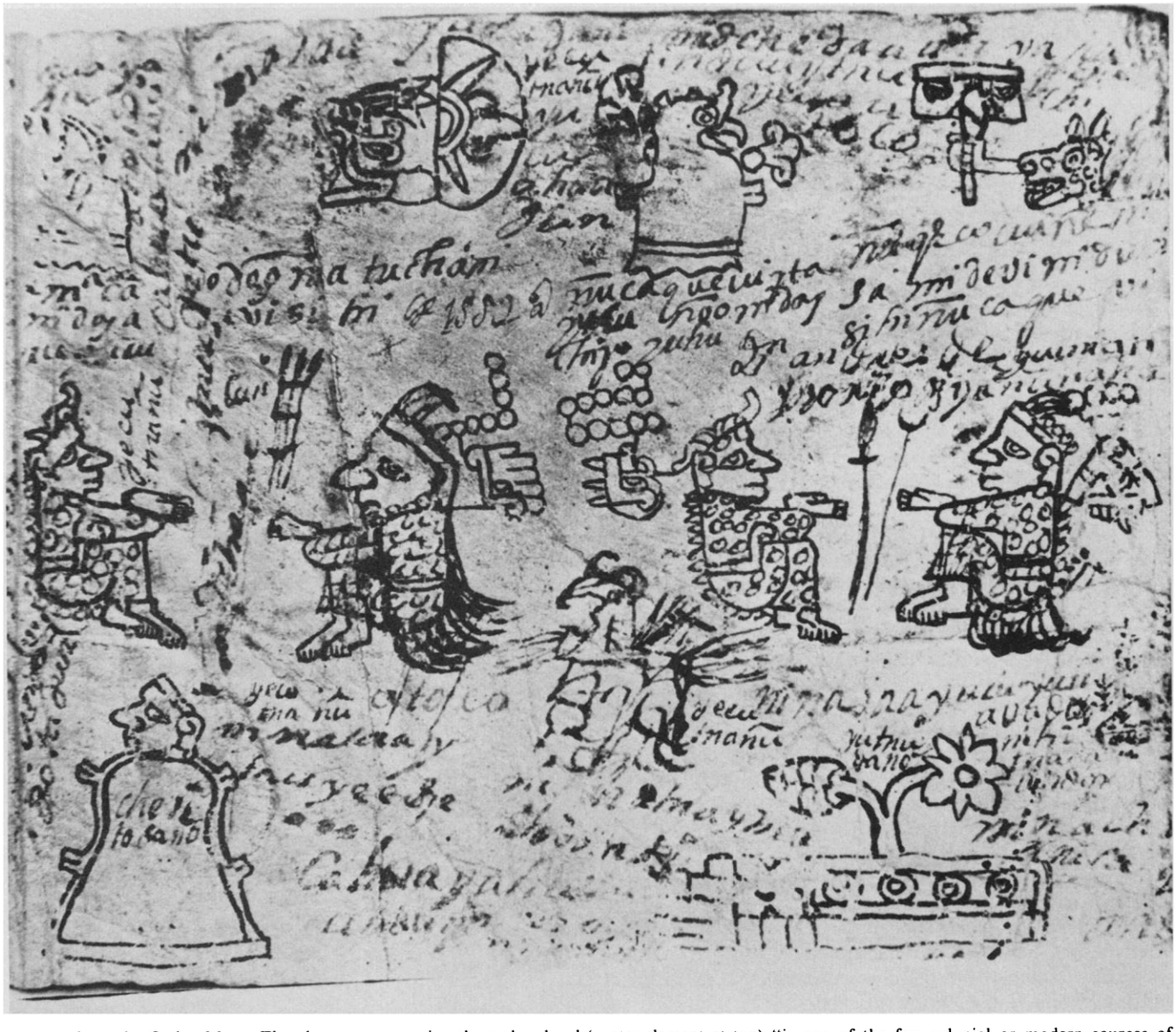
Place signs from the Codex Mendoza. *Left*, Mazatlan, fol. 12r; *right*, Tochpan, fol. 52r. [From H. B. Nicholson's paper in *Mesoamerican Writing Systems*]

ships among ritual, astronomical, and historical hieroglyphs, and understanding the structure of early writing systems.

H. B. Nicholson in his essay "Phoneticism in the late pre-Hispanic Central Mexican writing system" tries to determine the extent of phoneticism prior to Spanish "influence"; actually, he ends up by showing that there are no indisputable cases of phoneticism in pre-Hispanic Central Mexico. However, Nicholson feels that although the Matrícula de Tributos and Codex Mendoza (Aztec books containing tribute lists) were composed after the Spanish Conquest one can definitely regard their phonetic name and place signs as faithful reflections of pre-Hispanic modes. Another Nahuatl scholar, C. Dibble, has argued elsewhere (*Handbook of Middle American Indians*, vol. 10, p. 331) that syllabic writing emerged "as the end result of a generation of colonial influence on Aztec hieroglyphic writing." This phoneticism, whether pre-Hispanic or not, is confined to place names, personal names, and titles. Nicholson concludes that the *tlacuilo* (scribe) had the option of employing certain graphemes for their sound values alone if he felt the need to reduce ambiguity or for expressing foreign (non-Nahuatl) place or personal names. The important thing is that Nicholson has reopened an old debate which was once thought to be closed.

M. E. Smith discusses "The relationship between Mixtec manuscript painting and the Mixtec language: A study of some personal names in codices Muro and Sánchez Solís." These two codices are annotated with glosses in the Mixtec language written in European script. For the Codex Muro, Smith translates all the glosses that refer to personal names which are also illustrated by specific pictorial signs. For the first time, photographs of the 11-page Codex Muro are published, providing us with new genealogical data concerning a group of rulers from the Mixteca Alta.

In order to understand F. Lounsbury's article "On the derivation and reading of the 'Ben-Ich' prefix," one should be aware of the recent controversy in Maya epigraphy. In 1952 the Russian epigrapher Yuri Knorosov announced that he had discovered the key to reading Maya hieroglyphic writing. Knorosov suggested that the Maya constructed a monosyllabic word by taking a glyphic element which corresponds in sound to the opening consonant + vowel and adding to it a second glyph the first letter of which corresponds to the last consonant of the word to be formed. Knorosov called this the principle



A page from the Codex Muro. The gloss accompanying the turkey head (center element at top) "is one of the few colonial or modern sources of vocabulary that provides us with a Mixtec word [(*ti*)*ñoo*] for the native turkey." [From M. E. Smith's paper in *Mesoamerican Writing Systems*]

of synharmony, the key to Maya writing.

J. E. S. Thompson, an eminent Maya scholar, has rejected Knorosov's claim with the following statement (*Maya Hieroglyphic Writing*, University of Oklahoma Press, ed. 3, 1971, p. vi):

> With a phonetic system, as with breaking a code, the rate of decipherment accelerates with each newly established reading. It is now nineteen years since it was announced with such a fanfare of the trumpets of tabarded heralds of the U.S.S.R. that after nearly a century of abortive bourgeois effort, the problem had been solved by this Marxist-Leninist approach. I would gladly make a pilgrimage to Marx's grave in Highgate Cemetery to give thanks, were that really so. Alas! The first flow of alleged decipherments has not swollen to a river, as it should with the successful solving of a phonetic system; it has long since dried up.

Despite Thompson's criticism, Lounsbury offers a phonetic reading of a common hieroglyphic prefix, the "Ben-Ich" glyph, based to a certain extent on Knorosov's approach. This "Ben-Ich" prefix is composed of two elements, which Thompson has read as *Ah*, or lord. Lounsbury maintains that the *Ah* applies only to the Ben element, and he reads the second element, Ich, as *po*. Lounsbury bases this *po* reading on (i) the doubled prefix for the month Pop, which was recorded by the 16th-century bishop of Yucatan, D. Landa, and (ii) Knorosov's reading of *mo* or *(o)m* for a dotted circle around a point. When the Ich element appears inside the dotted circle, Lounsbury reads it as *pom*, the Maya word for "copal" or ball of incense. Lounsbury thus reads the Ben-Ich elements as *Ah po* or *Ah Pop*, which we know was a title of rank among various Maya groups, but so was *Ahau*. Accepting Thompson's reading of *Ah* for both elements resolves the problem of the flexible ordering of the two elements, because both Ben-Ich and Ich-Ben occur.

Lounsbury is in error when he claims (p. 136) that the earliest occurrences of the Ben-Ich prefix are in the 6th century A.D. at Tikal. There are earlier occurrences at the same site on Stela 31 (A.D. 445), where the word order is Ich-Ben and if we phonetically read it as *po ah* it makes no sense. Lounsbury does keep the door open for *Ah po(p)* or *Ahau*. Lounsbury's argument is extremely persuasive in spite of its problems, but the extent of phoneticism will remain controversial.

A new direction of Maya hieroglyphic research is suggested by T. Proskouriakoff in "The *hand-grasping-fish* and associated glyphs on Classic Maya monuments." Her topic involves studying those hieroglyphs which accompany representations of ritual acts. For instance, Proskouriakoff shows that the *hand-grasping-fish* glyph is associated with depictions of women performing the bloodletting rite on lintels at the site of Yaxchilán and that the *shell-fist* glyph is used with posthumous records. Proskouriakoff suggests that if some temples had a funerary purpose and were dedicated to departed lords, this might explain the fact that the *hand-grasping-fish* glyph occurs on lintels and not on stelae in the Petén. After having directed us to the historical approach, Proskouriakoff is now showing us how the same methodology—studying glyphs in conjunction with scenes—can provide information on ritual.

D. H. Kelley and K. A. Kerr in "Mayan astronomy and astronomical glyphs" return to the relationships among history, cosmology, and astronomy. After much recent emphasis on the historical approach, this attention to astronomy is welcome. While the dates the Maya recorded have historical importance, showing for example the accession to the throne, it remains for us to determine whether the same dates might have been "beneficent" with special attributes in Maya cosmology.

G. Kubler in "The clauses of Classic Maya inscriptions" makes three statements that are likely to create some controversy: (i) that the historical texts of various sites are abbreviated memory aids; (ii) that the compact notational system appears to be more ideographic than phonetic; and (iii) that the original purpose of the Maya scholars who wrote the inscriptions was to "make the meaning clear to the farmer from the fields regardless of dialect, all the while loading the statement with esoteric meaning for the learned few" (p. 162). It seems very unlikely to me that the average farmer could "read" the inscriptions. It is perhaps because he could not that the information provided in the texts is usually replicated in the scene, and if the farmer ever saw these inscriptions (or was allowed in the main plaza of the site at all) he would probably comprehend only the scene.

Clearly the extent of phoneticism in pre-Columbian writing still represents a frontier for research.

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A Shift in the Archeology of Britain

British Prehistory. A New Outline. COLIN RENFREW, Ed. Noyes, Park Ridge, N.J., 1975. xiv, 348 pp., illus. $20.

This book has a simple and straightforward aim: to take stock of the changes in our view of British prehistory that have occurred in the 30 years since the last attempt to survey the subject (V. G. Childe's *Prehistoric Communities of the British Isles*, Chambers, London, ed. 2, 1947) was made (p. xi) and "to examine and summarise the existing evidence" (p. xiii). Renfrew opens with a chapter that skillfully outlines the changes, and there follows a chronological succession of chapters, from the Paleolithic to the Iron Age, all by researchers of prominence and repute in their fields. Bearing in mind that this book will have a readership ranging from practicing professionals to interested amateurs, it is remarkable how well the authors have blended introductory survey information with some quite detailed argument. Of course, there are issues that any reviewer could debate, but none so badly handled as to detract seriously from the general success that the book deserves.

There is one major interpretative theme that does deserve discussion, however, for it appears in nearly every chapter. This is the shift away from diffusion toward internal development as an explanatory mechanism for cultural changes. The dramatic lengthening of the Neolithic is due to the establishment of an increasingly coherent radiocarbon chronology, and this alone has been responsible for most of the reevaluation in this period. But for later periods the changes brought by radiocarbon age determination have been much less, and reconsideration of the material evidence, together with reexamination of classificatory schemes, has been more influential. The earlier stages of this general trend were summarized (and taken further) by Grahame Clark ("The invasion hypothesis in British archaeology," *Antiquity* **40**, No. 159, p. 172) in 1966, and the movement has been sustained since. However, despite accumulating evidence pointing toward a greater degree of insular continuity, two things emerge from this book: that substantial intrusive elements are still recognized, however reluctantly, and that these postulated intrusive elements, immigrations and invasions, seem to become more frequent the later in time we get.

Many of the formerly postulated intrusions of the Neolithic are dispensed with now and, particularly for the multiplicity of megalithic tombs and cairns, well-substantiated sequences of internal development now replace the successive waves of migrants and invaders each with their own tomb preferences. But still, for example, Smith (p. 126) and Henshall (p. 152) cannot escape the Continental paral-