Pp. 198ff. SNSAT 409 is also treated by Sallaberger, Der kultische Kalender, Tabelle 88; the transliterations do not always agree. W. Heimpel, "83:ne-sag," NABU 1994: 72, signals disagreement with both authors while discussing the word nesag which he takes to be an "architectural unit."

P. 239, n. 2. Here Šubat-Enlil is identified with Chagar Bazar, but the correct identification with T. Leilan is found on p. 255.

P. 244, nn. 5-6. The book on Old Assyrian religion by H. Hirsch is Untersuchungen zur altassyrischen Religion (AfO Beiheft 13-14), which appeared in 1961 (second ed., 1972).

P. 239, n. 3. The son of Šamši-Adad who was succeeded by Zimri-Lim was Yasmah-Adad, not Išme-Dagan.

P. 328. A slightly different translation of ABL 42 is given by Parpola, Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal, vol. 2 (Kevelaer: Butzon & Bercker, 1971), 324 and now Letters from Assyrian and Babylonian Scholars (Helsinki: Helsinki Univ. Press, 1993), no. 98.

P. 331. It seems to me difficult to derive a month name of the "Standard Babylonian Calendar" which was introduced before 1500 B.C. (p. 302) from Old Persian, which reached Mesopotamia only in the first millennium.

P. 333. A ritual for days three and four of Kislimu in Esagil was recently published by G. Çağırgan and W. G. Lambert, "The Late Babylonian Kislimu Ritual for Esagil," JCS 43-45 (1991-93): 89ff.

Pp. 346ff. For the festivals at Emar, see now D. E. Fleming, The Installation of Baal's High Priestess at Emar (Atlanta: Scholars Press, 1992).

P. 401. I am not convinced of the existence of the "equinoxyear," for which MU.AN.NA is suggested as a possible term. As far as I can see, MU.AN.NA means "year" in the usual sense. The idea of the moon and the sun vying for time in the sky should have found expression in some cultic or mythological text, if it were such a dominant concept in the cultic calendars. I know of no such competition between Sin and Šamaš.

If the akītu-festival was celebrated at Nippur and Adab in the fourth and twelfth month, it was not a semi-annual event there.

P. 421. A. George, "Exit the 'House of Which Binds Death'," N.A.B.U. (no. 43) 1993: 34-35, has cast doubts on the reading of the temple name, "House-That-Fetters-Death," occurring in an inscription of Sennacherib, and although the matter is disputed (cf. A. Livingstone, "Reintrat 'House Which Binds Death'," N.A.B.U. [no. 76] 1993: 60), a connection with Bēl's release in the Marduk ordeal text seems unlikely.

M. Cohen has chosen a rather large and complicated topic for his book. He had to survey $\boldsymbol{\epsilon}$ vast amount of cuneiform material, most of which is not easily accessible (i.e., not translated). Naturally, certain points are given more attention than others (the discussion of the calendars of the third millennium takes up more space than all others combined, because the author was more familiar with them. This does not mean that other areas are neglected, however, and we have here a mine of information both on calendars and on many aspects of the cult. The book shows the wide-ranging knowledge of the author, and we have much reason to thank him for his work.

HERMANN HUNGER

University of Vienna

The Hittite Dictionary of the Oriental Institute of the University of Chicago, Volume P, fasc. 1. Edited by HANS G. GÜTER-BOCK and HARRY A. HOFFNER. Chicago: THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO, 1994. Pp. xv + 112 (paper).

The present fascicle of this ongoing work contains, besides the usual assortment of rarities and hapax legomena, the lemmata for two of the most fundamental and widely attested verbs in the language: $p\bar{a}(i)$ -, "go" and $p\bar{a}i$ -/ $p\bar{e}$ -/pi-, "give," as well as several important nominal stems.

The overall content and the longer articles, in particular, show the outstanding strengths justly praised by previous reviewers: thoroughness and accuracy of documentation, with careful attention to detail; judicious interpretations and analyses, with explicit argumentation and due attention to differing views; and a remarkable lucidity of presentation which makes the wealth of information offered truly accessible.

The current state of Hittite studies precludes "definitive" solutions to many problems. Solutions-that include syntactic conditioning, such as the use of local particles and preverbs, are in any case not amenable to a purely lexicographical approach. Nevertheless, the CHD is not only an indispensable reference work offering a reliable and up-to-date repertoire of the Hittite lexicon. It is also a rich source of data and ideas regarding a host of textual, grammatical, and socio-historical problems. In those cases where it cannot offer a complete answer, the CHD with its excellent arrangement frames the question and points the way to a solution.

Some improvements over earlier fascicles are noticeable: cross-references to alternate spellings and non-obvious allomorphs are more plentiful, as are explicit rejections of ghost words and misreadings. The editors have also wisely chosen to sacrifice perfect consistency in the interest of incorporating new insights of recent scholarship.

Inevitably, I cannot agree with every single analysis or interpretation, but I leave the few such individual cases to other occasions where I can present the requisite counterarguments. I will focus here on a more general issue with consequences for future fascicles.

The CHD has consistently failed to recognize the phenomenon by which Hittite (at least Old Hittite) distinguishes both a

collective and an individual or count plural for a single noun stem.¹ In the present fascicle, for example, ^(DUG)palhi- (a vessel) is said to be common gender with "neuter forms apparently restricted to the plural." This is errant nonsense and a serious distortion of Hittite grammar. We are dealing not with a peculiar gender alternation, but merely with a common-gender noun which has both a count plural (nom. pl. palhiēš, acc. pl. palhiūš) and a collective plural palha.

Similarly, I.DUG.GA-it papparšanta KASKAL-ša "(a set of) paths sprinkled with fine oil" is merely a collective plural of the common-gender noun palša- "way, path." The phrase is correctly translated on page 73 under 1.g, but KASKAL-ša is erroneously listed as allative on page 70, while on page 98 papparšanta is given as "pl. nom.-acc. nt." (sic), but the phrase is translated as singular (under a.1'). All of this confusion can be avoided by recognizing the contrast of collective versus count plural for common-gender nouns.

This contrast is quite widespread, attested for at least thirty nouns. A particularly clear example of the functional distinction is shown by ^(GIŠ) lahhurnuzzi- "leafy branch" (common gender only!). Contrast the example cited by the *CHD*, volume *L-M*, p. 16 (under c.), where lahhurnuzzieš/iuš refers to the individual boughs of the trees "catching" the sun, with the frequent use of the collective lahhurnuzzi "foliage," cut boughs used as a bed for offerings.

Less common is the opposite case, where a neuter noun with concrete sense receives a secondary count plural (necessarily "common/animate" in form) beside the inherited collective: neuter-gender luttāi- "window" < *"open space." Once again, the plural luttāuš does not reflect alternating gender (pace CHD, volume L-M, p. 88), but merely a count plural in those cases where a speaker wishes to focus on windows as individual units. It is to be hoped that the CHD in the future will take cognizance of this important fact of Hittite grammar.

The preface of this fascicle promises that the rest of volume P should appear over the next year. I wish the editors every success in this effort and look forward eagerly to the results.

H. CRAIG MELCHERT

University of North Carolina

Essays on Anatolian Archaeology. Edited by H. I. H. PRINCE TAKAHITO MIKASA. Bulletin of the Middle Eastern Culture Center in Japan, vol. 7. Wiesbaden: HARRASSOWITZ VERLAG, 1993. Pp. vii + 168. DM 78, ÖS 608, FS 78.

In recent years, Anatolian archaeologists have increasingly emphasized understanding the role of environment and natural resources in the development of civilization. *Essays on Anatolian Archaeology* follows this general trend and provides valuable new insights into the development of culture on the Anatolian plateau.

Resource management is one of the recurring themes found in Essays. Kutlu Emre begins this emphasis by examining the construction of Hittite water storage systems, in general, and the Karakuyu Dam, in particular (pp. 1-42). The importance of water to the Hittites has been noted previously in many articles and books and the relationship of Hittite monuments to these sources of water is well documented. This investigation of Hittite period dams and water systems appears to confirm the notions expressed by earlier observers that there was, indeed, an important link between Hittite monuments and springs. Although various theories have been proposed to explain this relationship (see for instance, H. J. Deighton, The "Weather-God" in Hittite Anatolia [Oxford: British Archaeological Reports, 1982]), Emre's contribution presents a new look at the association, linking Hittite edifices of this sort with changes in the climatic conditions that affected Anatolia in the late second millennium. While information about climatic shifts of this sort has been gleaned in the past from the literary materials, archaeological evidence connecting climatic variation with the conduct of life in Anatolia has been scarce. This study represents one of the first attempts to show a direct link between the archaeological record, literary texts, and environmental studies. One hopes that further investigations along these lines will provide more definitive data about this shift in climate and its effects on the inhabitants of ancient Anatolia.

The subject of water is also treated by Ahmet Unal (pp. 119-40), who links this critical resource not only to the agricultural community but to the intricate urban superstructure of secondmillennium Anatolia. The basis of this philological study lies in the numerous references to public health and sanitation found in the cuneiform texts discovered throughout the Hittite capital of Boğazköy-Hattuša. Conservation of this critical commodity became important as cities increasingly polluted it with the refuse of human settlement. Unal also points to an interesting link between a safe water supply and esoteric religious beliefs centered on the well-documented Hittite concept of ritual purity, a notion possibly rooted in environment and resource management. Finally, this interesting overview of public sanitation in the Hittite capital is of value not only because of what it says about sanitation but because of the potential for linking Hittite vocabulary with the abundant physical remains found in

¹ This feature, noted independently by several scholars, has been most fully elucidated by Heiner Eichner, "Das Problem des Ansatzes eines urindogermanischen Numerus 'Kollektiv' ('Komprehensiv')," in *Grammatische Kategorien*, ed. Bernfried Schlerath (Wiesbaden: Dr. Ludwig Reichert, 1985), 134–69.