

Middle Persian Inscriptions on Sasanian Silverware¹

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SASANIAN SILVER OBJECTS challenge the art historian to explain and relate questions of materials, techniques, styles, and motifs within an often illusive historical frame. To the social historian, these vessels provide an expression of the culture of the Iranian feudal aristocracy with its dynastic ideology. The epigrapher and philologist, in his turn, is challenged by the inscriptions sometimes found on the silverware. As examples of these have accumulated and been compared, their interpretation has progressed. Y. I. Smirnov gave careful facsimiles of inscriptions on the vessels he published; and E. Herzfeld notably advanced their reading. More recently, V. A. Livshits and V. G. Lukonin have presented revised readings of these; and R. N. Frye has published a further reinterpretation, along with some new examples. W. B. Henning's revisions and his analyses of newly found inscriptions formed a crucial contribution.² The assembling of these and additional examples helps to clarify the entire corpus.

The existing body of inscriptions divides into three chronological groups: A, about 300 A.D.; B, about 500–695; C, about 700 and after. The chronology of the inscriptions may, perhaps, not be identical with that of their vessels. The owner's name and/or the object's weight may occasionally be a later addition to an older vessel. R. N. Frye has suggested that such inscriptions could indicate registration of the vessel for taxation;³ Kawād I's latter reign (499–531) or the

periods of Xusrau I and II (531–579, 591–628) would be likely times for such a registration. Group B inscriptions are in harmony with the orthography of the late sixth-century papyri and of the late Sasanian inscriptions. They are distinguished from Group A by paleography and from Group C by the difference in weight standard. The internal sequence of Group B inscriptions may eventually be better established by a more refined paleographic analysis.

1. This article is an expanded version of the paper delivered by the author at the Sasanian Silver Conference held at The Metropolitan Museum of Art in January, 1973.

2. Smirnov, *Vostochnoe Serebro* (St. Petersburg, 1909). Herzfeld, "Postsasanidische Inschriften," *Archaeologische Mitteilungen aus Iran* 4 (1932) pp. 147–156. Livshits and Lukonin, "Srednepersidskie i sogdyskie nadpisi na serebryanykh sosudakh," *Vestnik Drevnei Istorii* (1964) 3, pp. 155–176. Frye, "Sasanian numbers and silver weights," *Journal of the Royal Asiatic Society* (1973) pp. 2–11. References to the inscriptions in these four works are hereafter given by the abbreviations S., H., L., and F. plus the appropriate designating numbers. See also Lukonin, *Persia II* (Cleveland/New York, 1967); Henning, "Mitteliranisch," *Handbuch der Orientalistik I*, iv *Iranistik*, I (Leiden, 1958) pp. 49–52; "New Pahlavi Inscriptions on Silver Vessels," *Bulletin of the School of Oriental and African Studies* 22 (1959) pp. 132–134; "A Sassanian Silver Bowl from Georgia," *BSOAS* 24 (1961) pp. 353–356; with Guitty Azarpay, "A Hunting Scene on an Inscribed Sassanian Silver Vessel," *Iranica Antiqua* 7 (1967) pp. 145–152.

3. "Sasanian Silver and History," *Iran and Islam . . . V. Minor-sky* (Edinburgh, 1971) pp. 255–262.

GROUP A (ABOUT 300 A.D.)

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[traces] 𐭠𐭡𐭢𐭣𐭤𐭥𐭦𐭧𐭨𐭩𐭪𐭫𐭬𐭭𐭮𐭯𐭰𐭱𐭲𐭳𐭴𐭵𐭶𐭷𐭸𐭹𐭺𐭻𐭼𐭽𐭾𐭿𐮀𐮁𐮂𐮃𐮄𐮅𐮆𐮇𐮈𐮉𐮊𐮋𐮌𐮍𐮎𐮏𐮐𐮑𐮒𐮓𐮔𐮕𐮖𐮗𐮘𐮙𐮚𐮛𐮜𐮝𐮞𐮟𐮠𐮡𐮢𐮣𐮤𐮥𐮦𐮧𐮨𐮩𐮪𐮫𐮬𐮭𐮮𐮯𐮰𐮱𐮲𐮳𐮴𐮵𐮶𐮷𐮸𐮹𐮺𐮻𐮼𐮽𐮾𐮿𐯀𐯁𐯂𐯃𐯄𐯅𐯆𐯇𐯈𐯉𐯊𐯋𐯌𐯍𐯎𐯏𐯐𐯑𐯒𐯓𐯔𐯕𐯖𐯗𐯘𐯙𐯚𐯛𐯜𐯝𐯞𐯟𐯠𐯡𐯢𐯣𐯤𐯥𐯦𐯧𐯨𐯩𐯪𐯫𐯬𐯭𐯮𐯯𐯰𐯱𐯲𐯳𐯴𐯵𐯶𐯷𐯸𐯹𐯺𐯻𐯼𐯽𐯾𐯿𐰀𐰁𐰂𐰃𐰄𐰅𐰆𐰇𐰈𐰉𐰊𐰋𐰌𐰍𐰎𐰏𐰐𐰑𐰒𐰓𐰔𐰕𐰖𐰗𐰘𐰙𐰚𐰛𐰜𐰝𐰞𐰟𐰠𐰡𐰢𐰣𐰤𐰥𐰦𐰧𐰨𐰩𐰪𐰫𐰬𐰭𐰮𐰯𐰰𐰱𐰲𐰳𐰴𐰵𐰶𐰷𐰸𐰹𐰺𐰻𐰼𐰽𐰾𐰿𐱀𐱁𐱂𐱃𐱄𐱅𐱆𐱇𐱈𐱉𐱊𐱋𐱌𐱍𐱎𐱏𐱐𐱑𐱒𐱓𐱔𐱕𐱖𐱗𐱘𐱙𐱚𐱛𐱜𐱝𐱞𐱟𐱠𐱡𐱢𐱣𐱤𐱥𐱦𐱧𐱨𐱩𐱪𐱫𐱬𐱭𐱮𐱯𐱰𐱱𐱲𐱳𐱴𐱵𐱶𐱷𐱸𐱹𐱺𐱻𐱼𐱽𐱾𐱿𐲀𐲁𐲂𐲃𐲄𐲅𐲆𐲇𐲈𐲉𐲊𐲋𐲌𐲍𐲎𐲏𐲐𐲑𐲒𐲓𐲔𐲕𐲖𐲗𐲘𐲙𐲚𐲛𐲜𐲝𐲞𐲟𐲠𐲡𐲢𐲣𐲤𐲥𐲦𐲧𐲨𐲩𐲪𐲫𐲬𐲭𐲮𐲯𐲰𐲱𐲲𐲳𐲴𐲵𐲶𐲷𐲸𐲹𐲺𐲻𐲼𐲽𐲾𐲿𐳀𐳁𐳂𐳃𐳄𐳅𐳆𐳇𐳈𐳉𐳊𐳋𐳌𐳍𐳎𐳏𐳐𐳑𐳒𐳓𐳔𐳕𐳖𐳗𐳘𐳙𐳚𐳛𐳜𐳝𐳞𐳟𐳠𐳡𐳢𐳣𐳤𐳥𐳦𐳧𐳨𐳩𐳪𐳫𐳬𐳭𐳮𐳯𐳰𐳱𐳲𐳳𐳴𐳵𐳶𐳷𐳸𐳹𐳺𐳻𐳼𐳽𐳾𐳿𐴀𐴁𐴂𐴃𐴄𐴅𐴆𐴇𐴈𐴉𐴊𐴋𐴌𐴍𐴎𐴏𐴐𐴑𐴒𐴓𐴔𐴕𐴖𐴗𐴘𐴙𐴚𐴛𐴜𐴝𐴞𐴟𐴠𐴡𐴢𐴣𐴤𐴥𐴦𐴧𐴨𐴩𐴪𐴫𐴬𐴭𐴮𐴯𐴰𐴱𐴲𐴳𐴴𐴵𐴶𐴷𐴸𐴹𐴺𐴻𐴼𐴽𐴾𐴿𐵀𐵁𐵂𐵃𐵄𐵅𐵆𐵇𐵈𐵉𐵊𐵋𐵌𐵍𐵎𐵏𐵐𐵑𐵒𐵓𐵔𐵕𐵖𐵗𐵘𐵙𐵚𐵛𐵜𐵝𐵞𐵟𐵠𐵡𐵢𐵣𐵤𐵥𐵦𐵧𐵨𐵩𐵪𐵫𐵬𐵭𐵮𐵯𐵰𐵱𐵲𐵳𐵴𐵵𐵶𐵷𐵸𐵹𐵺𐵻𐵼𐵽𐵾𐵿𐶀𐶁𐶂𐶃𐶄𐶅𐶆𐶇𐶈𐶉𐶊𐶋𐶌𐶍𐶎𐶏𐶐𐶑𐶒𐶓𐶔𐶕𐶖𐶗𐶘𐶙𐶚𐶛𐶜𐶝𐶞𐶟𐶠𐶡𐶢𐶣𐶤𐶥𐶦𐶧𐶨𐶩𐶪𐶫𐶬𐶭𐶮𐶯𐶰𐶱𐶲𐶳𐶴𐶵𐶶𐶷𐶸𐶹𐶺𐶻𐶼𐶽𐶾𐶿𐷀𐷁𐷂𐷃𐷄𐷅𐷆𐷇𐷈𐷉𐷊𐷋𐷌𐷍𐷎𐷏𐷐𐷑𐷒𐷓𐷔𐷕𐷖𐷗𐷘𐷙𐷚𐷛𐷜𐷝𐷞𐷟𐷠𐷡𐷢𐷣𐷤𐷥𐷦𐷧𐷨𐷩𐷪𐷫𐷬𐷭𐷮𐷯𐷰𐷱𐷲𐷳𐷴𐷵𐷶𐷷𐷸𐷹𐷺𐷻𐷼𐷽𐷾𐷿𐸀𐸁𐸂𐸃𐸄𐸅𐸆𐸇𐸈𐸉𐸊𐸋𐸌𐸍𐸎𐸏𐸐𐸑𐸒𐸓𐸔𐸕𐸖𐸗𐸘𐸙𐸚𐸛𐸜𐸝𐸞𐸟𐸠𐸡𐸢𐸣𐸤𐸥𐸦𐸧𐸨𐸩𐸪𐸫𐸬𐸭𐸮𐸯𐸰𐸱𐸲𐸳𐸴𐸵𐸶𐸷𐸸𐸹𐸺𐸻𐸼𐸽𐸾𐸿𐹀𐹁𐹂𐹃𐹄𐹅𐹆𐹇𐹈𐹉𐹊𐹋𐹌𐹍𐹎𐹏𐹐𐹑𐹒𐹓𐹔𐹕𐹖𐹗𐹘𐹙𐹚𐹛𐹜𐹝𐹞𐹟𐹠𐹡𐹢𐹣𐹤𐹥𐹦𐹧𐹨𐹩𐹪𐹫𐹬𐹭𐹮𐹯𐹰𐹱𐹲𐹳𐹴𐹵𐹶𐹷𐹸𐹹𐹺𐹻𐹼𐹽𐹾𐹿𐺀𐺁𐺂𐺃𐺄𐺅𐺆𐺇𐺈𐺉𐺊𐺋𐺌𐺍𐺎𐺏𐺐𐺑𐺒𐺓𐺔𐺕𐺖𐺗𐺘𐺙𐺚𐺛𐺜𐺝𐺞𐺟𐺠𐺡𐺢𐺣𐺤𐺥𐺦𐺧𐺨𐺩𐺪𐺫𐺬𐺭𐺮𐺯𐺰𐺱𐺲𐺳𐺴𐺵𐺶𐺷𐺸𐺹𐺺𐺻𐺼𐺽𐺾𐺿𐻀𐻁𐻂𐻃𐻄𐻅𐻆𐻇𐻈𐻉𐻊𐻋𐻌𐻍𐻎𐻏𐻐𐻑𐻒𐻓𐻔𐻕𐻖𐻗𐻘𐻙𐻚𐻛𐻜𐻝𐻞𐻟𐻠𐻡𐻢𐻣𐻤𐻥𐻦𐻧𐻨𐻩𐻪𐻫𐻬𐻭𐻮𐻯𐻰𐻱𐻲𐻳𐻴𐻵𐻶𐻷𐻸𐻹𐻺𐻻𐻼𐻽𐻾𐻿𐼀𐼁𐼂𐼃𐼄𐼅𐼆𐼇𐼈𐼉𐼊𐼋𐼌𐼍𐼎𐼏𐼐𐼑𐼒𐼓𐼔𐼕𐼖𐼗𐼘𐼙𐼚𐼛𐼜𐼝𐼞𐼟𐼠𐼡𐼢𐼣𐼤𐼥𐼦𐼧𐼨𐼩𐼪𐼫𐼬𐼭𐼮𐼯𐼰𐼱𐼲𐼳𐼴𐼵𐼶𐼷𐼸𐼹𐼺𐼻𐼼𐼽𐼾𐼿𐽀𐽁𐽂𐽃𐽄𐽅𐽆𐽇𐽋𐽍𐽎𐽏𐽐𐽈𐽉𐽊𐽌𐽑𐽒𐽓𐽔𐽕𐽖𐽗𐽘𐽙𐽚𐽛𐽜𐽝𐽞𐽟𐽠𐽡𐽢𐽣𐽤𐽥𐽦𐽧𐽨𐽩𐽪𐽫𐽬𐽭𐽮𐽯𐽰𐽱𐽲𐽳𐽴𐽵𐽶𐽷𐽸𐽹𐽺𐽻𐽼𐽽𐽾𐽿𐾀𐾁𐾃𐾅𐾂𐾄𐾆𐾇𐾈𐾉𐾊𐾋𐾌𐾍𐾎𐾏𐾐𐾑𐾒𐾓𐾔𐾕𐾖𐾗𐾘𐾙𐾚𐾛𐾜𐾝𐾞𐾟𐾠𐾡𐾢𐾣𐾤𐾥𐾦𐾧𐾨𐾩𐾪𐾫𐾬𐾭𐾮𐾯𐾰𐾱𐾲𐾳𐾴𐾵𐾶𐾷𐾸𐾹𐾺𐾻𐾼𐾽𐾾𐾿𐿀𐿁𐿂𐿃𐿄𐿅𐿆𐿇𐿈𐿉𐿊𐿋𐿌𐿍𐿎𐿏𐿐𐿑𐿒𐿓𐿔𐿕𐿖𐿗𐿘𐿙𐿚𐿛𐿜𐿝𐿞𐿟𐿠𐿡𐿢𐿣𐿤𐿥𐿦𐿧𐿨𐿩𐿪𐿫𐿬𐿭𐿮𐿯𐿰𐿱𐿲𐿳𐿴𐿵𐿶𐿷𐿸𐿹𐿺𐿻𐿼𐿽𐿾𐿿𐀀𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿𐁀𐁁𐁂𐁃𐁄𐁅𐁆𐁇𐁈𐁉𐁊𐁋𐁌𐁍𐁎𐁏𐁐𐁑𐁒𐁓𐁔𐁕𐁖𐁗𐁘𐁙𐁚𐁛𐁜𐁝𐁞𐁟𐁠𐁡𐁢𐁣𐁤𐁥𐁦𐁧𐁨𐁩𐁪𐁫𐁬𐁭𐁮𐁯𐁰𐁱𐁲𐁳𐁴𐁵𐁶𐁷𐁸𐁹𐁺𐁻𐁼𐁽𐁾𐁿𐂀𐂁𐂂𐂃𐂄𐂅𐂆𐂇𐂈𐂉𐂊𐂋𐂌𐂍𐂎𐂏𐂐𐂑𐂒𐂓𐂔𐂕𐂖𐂗𐂘𐂙𐂚𐂛𐂜𐂝𐂞𐂟𐂠𐂡𐂢𐂣𐂤𐂥𐂦𐂧𐂨𐂩𐂪𐂫𐂬𐂭𐂮𐂯𐂰𐂱𐂲𐂳𐂴𐂵𐂶𐂷𐂸𐂹𐂺𐂻𐂼𐂽𐂾𐂿𐃀𐃁𐃂𐃃𐃄𐃅𐃆𐃇𐃈𐃉𐃊𐃋𐃌𐃍𐃎𐃏𐃐𐃑𐃒𐃓𐃔𐃕𐃖𐃗𐃘𐃙𐃚𐃛𐃜𐃝𐃞𐃟𐃠𐃡𐃢𐃣𐃤𐃥𐃦𐃧𐃨𐃩𐃪𐃫𐃬𐃭𐃮𐃯𐃰𐃱𐃲𐃳𐃴𐃵𐃶𐃷𐃸𐃹𐃺𐃻𐃼𐃽𐃾𐃿𐄀𐄁𐄂𐄃𐄄𐄅𐄆𐄇𐄈𐄉𐄊𐄋𐄌𐄍𐄎𐄏𐄐𐄑𐄒𐄓𐄔𐄕𐄖𐄗𐄘𐄙𐄚𐄛𐄜𐄝𐄞𐄟𐄠𐄡𐄢𐄣𐄤𐄥𐄦𐄧𐄨𐄩𐄪𐄫𐄬𐄭𐄮𐄯𐄰𐄱𐄲𐄳𐄴𐄵𐄶𐄷𐄸𐄹𐄺𐄻𐄼𐄽𐄾𐄿𐅀𐅁𐅂𐅃𐅄𐅅𐅆𐅇𐅈𐅉𐅊𐅋𐅌𐅍𐅎𐅏𐅐𐅑𐅒𐅓𐅔𐅕𐅖𐅗𐅘𐅙𐅚𐅛𐅜𐅝𐅞𐅟𐅠𐅡𐅢𐅣𐅤𐅥𐅦𐅧𐅨𐅩𐅪𐅫𐅬𐅭𐅮𐅯𐅰𐅱𐅲𐅳𐅴𐅵𐅶𐅷𐅸𐅹𐅺𐅻𐅼𐅽𐅾𐅿𐆀𐆁𐆂𐆃𐆄𐆅𐆆𐆇𐆈𐆉𐆊𐆋𐆌𐆍𐆎𐆏𐆐𐆑𐆒𐆓𐆔𐆕𐆖𐆗𐆘𐆙𐆚𐆛𐆜𐆝𐆞𐆟𐆠𐆡𐆢𐆣𐆤𐆥𐆦𐆧𐆨𐆩𐆪𐆫𐆬𐆭𐆮𐆯𐆰𐆱𐆲𐆳𐆴𐆵𐆶𐆷𐆸𐆹𐆺𐆻𐆼𐆽𐆾𐆿𐇀𐇁𐇂𐇃𐇄𐇅𐇆𐇇𐇈𐇉𐇊𐇋𐇌𐇍𐇎𐇏𐇐𐇑𐇒𐇓𐇔𐇕𐇖𐇗𐇘𐇙𐇚𐇛𐇜𐇝𐇞𐇟𐇠𐇡𐇢𐇣𐇤𐇥𐇦𐇧𐇨𐇩𐇪𐇫𐇬𐇭𐇮𐇯𐇰𐇱𐇲𐇳𐇴𐇵𐇶𐇷𐇸𐇹𐇺𐇻𐇼𐇽𐇾𐇿𐈀𐈁𐈂𐈃𐈄𐈅𐈆𐈇𐈈𐈉𐈊𐈋𐈌𐈍𐈎𐈏𐈐𐈑𐈒𐈓𐈔𐈕𐈖𐈗𐈘𐈙𐈚𐈛𐈜𐈝𐈞𐈟𐈠𐈡𐈢𐈣𐈤𐈥𐈦𐈧𐈨𐈩𐈪𐈫𐈬𐈭𐈮𐈯𐈰𐈱𐈲𐈳𐈴𐈵𐈶𐈷𐈸𐈹𐈺𐈻𐈼𐈽𐈾𐈿𐉀𐉁𐉂𐉃𐉄𐉅𐉆𐉇𐉈𐉉𐉊𐉋𐉌𐉍𐉎𐉏𐉐𐉑𐉒𐉓𐉔𐉕𐉖𐉗𐉘𐉙𐉚𐉛𐉜𐉝𐉞𐉟𐉠𐉡𐉢𐉣𐉤𐉥𐉦𐉧𐉨𐉩𐉪𐉫𐉬𐉭𐉮𐉯𐉰𐉱𐉲𐉳𐉴𐉵𐉶𐉷𐉸𐉹𐉺𐉻𐉼𐉽𐉾𐉿𐊀𐊁𐊂𐊃𐊄𐊅𐊆𐊇𐊈𐊉𐊊𐊋𐊌𐊍𐊎𐊏𐊐𐊑𐊒𐊓𐊔𐊕𐊖𐊗𐊘𐊙𐊚𐊛𐊜𐊝𐊞𐊟𐊠𐊡𐊢𐊣𐊤𐊥𐊦𐊧𐊨𐊩𐊪𐊫𐊬𐊭𐊮𐊯𐊰𐊱𐊲𐊳𐊴𐊵𐊶𐊷𐊸𐊹𐊺𐊻𐊼𐊽𐊾𐊿𐋀𐋁𐋂𐋃𐋄𐋅𐋆𐋇𐋈𐋉𐋊𐋋𐋌𐋍𐋎𐋏𐋐𐋑𐋒𐋓𐋔𐋕𐋖𐋗𐋘𐋙𐋚𐋛𐋜𐋝𐋞𐋟𐋠𐋡𐋢𐋣𐋤𐋥𐋦𐋧𐋨𐋩𐋪𐋫𐋬𐋭𐋮𐋯𐋰𐋱𐋲𐋳𐋴𐋵𐋶𐋷𐋸𐋹𐋺𐋻𐋼𐋽𐋾𐋿𐌀𐌁𐌂𐌃𐌄𐌅𐌆𐌇𐌈𐌉𐌊𐌋𐌌𐌍𐌎𐌏𐌐𐌑𐌒𐌓𐌔𐌕𐌖𐌗𐌘𐌙𐌚𐌛𐌜𐌝𐌞𐌟𐌠𐌡𐌢𐌣𐌤𐌥𐌦𐌧𐌨𐌩𐌪𐌫𐌬𐌭𐌮𐌯𐌰𐌱𐌲𐌳𐌴𐌵𐌶𐌷𐌸𐌹𐌺𐌻𐌼𐌽𐌾𐌿𐍀𐍁𐍂𐍃𐍄𐍅𐍆𐍇𐍈𐍉𐍊𐍋𐍌𐍍𐍎𐍏𐍐𐍑𐍒𐍓𐍔𐍕𐍖𐍗𐍘𐍙𐍚𐍛𐍜𐍝𐍞𐍟𐍠𐍡𐍢𐍣𐍤𐍥𐍦𐍧𐍨𐍩𐍪𐍫𐍬𐍭𐍮𐍯𐍰𐍱𐍲𐍳𐍴𐍵𐍶𐍷𐍸𐍹𐍺𐍻𐍼𐍽𐍾𐍿𐎀𐎁𐎂𐎃𐎄𐎅𐎆𐎇𐎈𐎉𐎊𐎋𐎌𐎍𐎎𐎏𐎐𐎑𐎒𐎓𐎔𐎕𐎖𐎗𐎘𐎙𐎚𐎛𐎜𐎝𐎞𐎟𐎠𐎡𐎢𐎣𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿𐏀𐏁𐏂𐏃𐏄𐏅𐏆𐏇𐏈𐏉𐏊𐏋𐏌𐏍𐏎𐏏𐏐𐏑𐏒𐏓𐏔𐏕𐏖𐏗𐏘𐏙𐏚𐏛𐏜𐏝𐏞𐏟𐏠𐏡𐏢𐏣𐏤𐏥𐏦𐏧𐏨𐏩𐏪𐏫𐏬𐏭𐏮𐏯𐏰𐏱𐏲𐏳𐏴𐏵𐏶𐏷𐏸𐏹𐏺𐏻𐏼𐏽𐏾𐏿𐐀𐐁𐐂𐐃𐐄𐐅𐐆𐐇𐐈𐐉𐐊𐐋𐐌𐐍𐐎𐐏𐐐𐐑𐐒𐐓𐐔𐐕𐐖𐐗𐐘𐐙𐐚𐐛𐐜𐐝𐐞𐐟𐐠𐐡𐐢𐐣𐐤𐐥𐐦𐐧𐐨𐐩𐐪𐐫𐐬𐐭𐐮𐐯𐐰𐐱𐐲𐐳𐐴𐐵𐐶𐐷𐐸𐐹𐐺𐐻𐐼𐐽𐐾𐐿𐑀𐑁𐑂𐑃𐑄𐑅𐑆𐑇𐑈𐑉𐑊𐑋𐑌𐑍𐑎𐑏𐑐𐑑𐑒𐑓𐑔𐑕𐑖𐑗𐑘𐑙𐑚𐑛𐑜𐑝𐑞𐑟𐑠𐑡𐑢𐑣𐑤𐑥𐑦𐑧𐑨𐑩𐑪𐑫𐑬𐑭𐑮𐑯𐑰𐑱𐑲𐑳𐑴𐑵𐑶𐑷𐑸𐑹𐑺𐑻𐑼𐑽𐑾𐑿𐒀𐒁𐒂𐒃𐒄𐒅𐒆𐒇𐒈𐒉𐒊𐒋𐒌𐒍𐒎𐒏𐒐𐒑𐒒𐒓𐒔𐒕𐒖𐒗𐒘𐒙𐒚𐒛𐒜𐒝𐒞𐒟𐒠𐒡𐒢𐒣𐒤𐒥𐒦𐒧𐒨𐒩𐒪𐒫𐒬𐒭𐒮𐒯𐒰𐒱𐒲𐒳𐒴𐒵𐒶𐒷𐒸𐒹𐒺𐒻𐒼𐒽𐒾𐒿𐓀𐓁𐓂𐓃𐓄𐓅𐓆𐓇𐓈𐓉𐓊𐓋𐓌𐓍𐓎𐓏𐓐𐓑𐓒𐓓𐓔𐓕𐓖𐓗𐓘𐓙𐓚𐓛𐓜𐓝𐓞𐓟𐓠𐓡𐓢𐓣𐓤𐓥𐓦𐓧𐓨𐓩𐓪𐓫𐓬𐓭𐓮𐓯𐓰𐓱𐓲𐓳𐓴𐓵𐓶𐓷𐓸𐓹𐓺𐓻𐓼𐓽𐓾𐓿𐔀𐔁𐔂𐔃𐔄𐔅𐔆𐔇𐔈𐔉𐔊𐔋𐔌𐔍𐔎𐔏𐔐𐔑𐔒𐔓𐔔𐔕𐔖𐔗𐔘𐔙𐔚𐔛𐔜𐔝𐔞𐔟𐔠𐔡𐔢𐔣𐔤𐔥𐔦𐔧𐔨𐔩𐔪𐔫𐔬𐔭𐔮𐔯𐔰𐔱𐔲𐔳𐔴𐔵𐔶𐔷𐔸𐔹𐔺𐔻𐔼𐔽𐔾𐔿𐕀𐕁𐕂𐕃𐕄𐕅𐕆𐕇𐕈𐕉𐕊𐕋𐕌𐕍𐕎𐕏𐕐𐕑𐕒𐕓𐕔𐕕𐕖𐕗𐕘𐕙𐕚𐕛𐕜𐕝𐕞𐕟𐕠𐕡𐕢𐕣𐕤𐕥𐕦𐕧𐕨𐕩𐕪𐕫𐕬𐕭𐕮𐕯𐕰𐕱𐕲𐕳𐕴𐕵𐕶𐕷𐕸𐕹𐕺𐕻𐕼𐕽𐕾𐕿𐖀𐖁𐖂𐖃𐖄𐖅𐖆𐖇𐖈𐖉𐖊𐖋𐖌𐖍𐖎𐖏𐖐𐖑𐖒𐖓𐖔𐖕𐖖𐖗𐖘𐖙𐖚𐖛𐖜𐖝𐖞𐖟𐖠𐖡𐖢𐖣𐖤𐖥𐖦𐖧𐖨𐖩𐖪𐖫𐖬𐖭𐖮𐖯𐖰𐖱𐖲𐖳𐖴𐖵𐖶𐖷𐖸𐖹𐖺𐖻𐖼𐖽𐖾𐖿𐗀𐗁𐗂𐗃𐗄𐗅𐗆𐗇𐗈𐗉𐗊𐗋𐗌𐗍𐗎𐗏𐗐𐗑𐗒𐗓𐗔𐗕𐗖𐗗𐗘𐗙𐗚𐗛𐗜𐗝𐗞𐗟𐗠𐗡𐗢𐗣𐗤𐗥𐗦𐗧𐗨𐗩𐗪𐗫𐗬𐗭𐗮𐗯𐗰𐗱𐗲𐗳𐗴𐗵𐗶𐗷𐗸𐗹𐗺𐗻𐗼𐗽𐗾𐗿𐘀𐘁𐘂𐘃𐘄𐘅𐘆𐘇𐘈𐘉𐘊𐘋𐘌𐘍𐘎𐘏𐘐𐘑𐘒𐘓𐘔𐘕𐘖𐘗𐘘𐘙𐘚𐘛𐘜𐘝𐘞𐘟𐘠𐘡𐘢𐘣𐘤𐘥𐘦𐘧𐘨𐘩𐘪𐘫𐘬𐘭𐘮𐘯𐘰𐘱𐘲𐘳𐘴𐘵𐘶𐘷𐘸𐘹𐘺𐘻𐘼𐘽𐘾𐘿𐙀𐙁𐙂𐙃𐙄𐙅𐙆𐙇𐙈𐙉𐙊𐙋𐙌𐙍𐙎𐙏𐙐𐙑𐙒𐙓𐙔𐙕𐙖𐙗𐙘𐙙𐙚𐙛𐙜𐙝𐙞𐙟𐙠𐙡𐙢𐙣𐙤𐙥𐙦𐙧𐙨𐙩𐙪𐙫𐙬𐙭𐙮𐙯𐙰𐙱𐙲𐙳𐙴𐙵𐙶𐙷𐙸𐙹𐙺𐙻𐙼𐙽𐙾𐙿𐚀𐚁𐚂𐚃𐚄𐚅𐚆𐚇𐚈𐚉𐚊𐚋𐚌𐚍𐚎𐚏𐚐𐚑𐚒𐚓𐚔𐚕𐚖𐚗𐚘𐚙𐚚𐚛𐚜𐚝𐚞𐚟𐚠𐚡𐚢𐚣𐚤𐚥𐚦𐚧𐚨𐚩𐚪𐚫𐚬𐚭𐚮𐚯𐚰𐚱𐚲𐚳𐚴𐚵𐚶𐚷𐚸𐚹𐚺𐚻𐚼𐚽𐚾𐚿𐛀𐛁𐛂𐛃𐛄𐛅𐛆𐛇𐛈𐛉𐛊𐛋𐛌𐛍𐛎𐛏𐛐𐛑𐛒𐛓𐛔𐛕𐛖𐛗𐛘𐛙𐛚𐛛𐛜𐛝𐛞𐛟𐛠𐛡𐛢𐛣𐛤𐛥𐛦𐛧𐛨𐛩𐛪𐛫𐛬𐛭𐛮𐛯𐛰𐛱𐛲𐛳𐛴𐛵𐛶𐛷𐛸𐛹𐛺𐛻𐛼𐛽𐛾𐛿𐜀𐜁𐜂𐜃𐜄𐜅𐜆𐜇𐜈𐜉𐜊𐜋𐜌𐜍𐜎𐜏𐜐𐜑𐜒𐜓𐜔𐜕𐜖𐜗𐜘𐜙𐜚𐜛𐜜𐜝𐜞𐜟𐜠𐜡𐜢𐜣𐜤𐜥𐜦𐜧𐜨𐜩𐜪𐜫𐜬𐜭𐜮𐜯𐜰𐜱𐜲𐜳𐜴𐜵𐜶𐜷𐜸𐜹𐜺𐜻𐜼𐜽𐜾𐜿𐝀𐝁𐝂𐝃𐝄𐝅𐝆𐝇𐝈𐝉𐝊𐝋𐝌𐝍𐝎𐝏𐝐𐝑𐝒𐝓𐝔𐝕𐝖𐝗𐝘

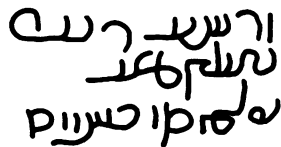
5.



s-xx-x [i] (i) ii ZWZN ii [i ḥw]lm'bh̄t NPŠH
34 s[tēr], 3 *drahm*. Property of Xorrambaxt
(s. 87, H. 9, L. 6, F. 6)

This inscription occurs on a vase adorned with medallions, each containing a bird. The looping sign is in its least cursive form. The Livshits-Lukonin reading is *ii-c-x iii ZWZN'n*, "213 *drahms*." It requires, besides a quite ungrammatical use of the plural, two unlikely ligatures (top of *ii + c*, *c + x*) and a surprising reduction of the "100" sign. The natural reading, rather, is *...-x . ii ZWZN ii*, assuming that the inscription originally continued across the obliterated area. The pattern is clearly unit + numeral; hence the first numeral must designate *stēr*. Frye so regards it; but his reading, *xx-x-x iii ZWZN ii*, is unsatisfactory. The notation *x-x* is too extraordinary to be accepted; it is not comprehensible even as an error. The initial, looping sign cannot be "20," since in the Iqlid inscription it precedes the numeral "100." Both readings would require violation of clear norms of Middle Persian notation.

The problem of the beginning of No. 5 is that (a) no unit seems specified, and (b) the sole plausible reading of it as simply numerals, *xx-xx-xl-x*, is far too large. The solution to both problems is reading the looping sign just as it appears, as "s" for *stēr*. An abbreviation in ligature with a numeral is attested by the Dura-Europos pay-lists, the papyri, and other silver vessels (Nos. 14, 36). The Iqlid inscription becomes clarified together with No. 5:



NKSY' KSP s-ii-c mzd plmw̄t' YHBWNt
Property worth 200 s[tēr] was ordered to be given
as payment.¹³

13. Lines 19-21; see Frye, "Funerary Inscriptions in Pahlavi from Fars," *W. B. Henning Memorial Volume* (London, 1970) pp. 155-156 and pl. v.



FIGURE 2
Silver rhyton, mercury gilded. Collection of Mrs. Dorothy B. Moore III

This reading not only satisfies the orthography, it also obtains an appropriate value for the Sasanian *drahm*-standard. (See table of weights, below, page 120.)

6. ۲ ۳ ۴

s-xl-x iii ii

55 s[tēr]

(F. 9) (FIGURE 2)

One of three further examples of "s" in noncursive form is seen on a rhyton in the shape of an antelope's head, in the collection of Mrs. Dorothy B. Moore III. The inscription is brief but clear.

7. 

s-xl-iiiii

46 s[tēr]

The elongated bowl in the Schimmel collection¹⁴ carries an inscription underneath. It follows the owner's *tamga* or device, which occurs in place of his name.

8. 

sng s-xx-xl-x iii ZWZN ii pylwc'n

By weight, 73 s[tēr], 2 *drahm*. Belonging to Pērōz (S. 56, H. 7, L. 1, F. 3)

This inscription occurs on a Hermitage plate depicting a royal antelope hunt from camel-back. Livshits and Lukonin estimate that damage to the plate amounts to a loss of one-tenth the original weight. Thus the plate is still of use in evaluating the Sasanian *drahm*. The abbreviation "s" here seems to be developing toward its more cursive shape, and the next two examples also illustrate this trend.

9.

mlt s-xx iii ii iii sng

Mard. 29 s[tēr] by weight

(F. 10)

The bowl, adorned with animals, in the Musée d'Art et d'Histoire in Geneva, presents a difficulty. If the numerals are assumed to be correct as they stand, then the words W ZWZN, *ud drahm*, must have been omitted between "25" and "4." But a reading "25 *stēr* and 4 *drahm*" would give an unusually high value for the *drahm*: 4.36 g. It seems simpler and also more realistic (see table of weights) to assume that the latter numeral signs are miswritten for iii iii iii.

14. *Sasanian Silver* (Ann Arbor, 1967) no. 28.

15. In the papyri, clusters of the type s-n and d-y-n, basically — in form, may become —: *Papyri* 3, 7; 12, 8; and p. 80; A. Perikhanian, "Pekhelevyskie papirusy sobraniya GMII imeni A. S. Pushkina," *VDI* (1961) 3, pp. 78–93: no. 3, 7. Compare also the stylization of h-n and š-n: *Papyri* 12, 5; 28, 3.

10.

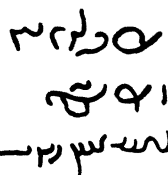
kpcyn ZK ZY s-xx-x iii ZWZN iii

Kabzēn. This [vessel] of 33 s[tēr] and 3 *drahm*

(F. 11)

A plate in a private collection in New York, which displays a prince lassoing onagers, carries this inscription on its base.

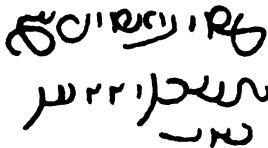
The remaining examples of "s" + numeral are more cursive; but the presence of "s" seems assured. The resulting readings preserve a consistent relationship to the vessel weights. Moreover, the reading is supported by the common occurrence of this cursive ligature in the papyri.¹⁵ The contrast between the more angular and the more cursive "s" as an abbreviation may prove a genuine paleographic feature, useful for sorting out the silverware inscriptions. But it could equally be a mere stylistic difference. In any case, the remaining inscriptions may be clarified.

11. 

pylwc'n NPŠH s-xx-xl iii sng

Property of Pērōz. 64 s[tēr] by weight

(S. 60, H. 6, L. 2, F. 4)

12. 

mtrbwcyt NPŠH s-xx-xl-x i W ZWZN iii sng

Property of Mihrbōzēd. 71 s[tēr] and 3 *drahm* by weight

(H. 8, L. 8)

Inscriptions 11 and 12 are found on bowls in the Hermitage, each bowl decorated with a royal hunt scene.

13.

١٥٠٠

b'k PN s-*xl-iii* *iii* ZWZN *i* M *iii*

Bāg. At 46 *s[tēr]*, 1 *drahm*, 3 *dāng*

(s. 80, H. 10, L. 5, F. 9)

The Hermitage vase bearing this inscription has a motif of maidens framed by arches. Since its base is broken, it provides no usable value for the *drachm*. The inscription reproduces a rapid cursive script. One stroke of the preposition PWN is skipped, as so often in the papyri. Apparently, one tooth of the “40” sign is also omitted, perhaps compensated for by the lengthening of the stroke. A reading of “20” would not yield a realistic *drachm*. The vessel presently weighs 611.9 g., and the suggested reading gives a *drachm* of 3.30 + g. If loss through breakage is about 15 per cent, this value would be satisfactory.¹⁶

14. (a) $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{1}{2} m v \frac{dv}{dt}$

(b)

שם שגור מרמזי, משה

wnd'tyn'n pty *xx-xx-xl-x* iii ii MCY M-iiii

s-xx-xx-*xl-x* *iiii* *iiii* W ZWZN *i* W M-*iii*

Property of Windādēn. At 95 *stēr*, 4 *dāng*

98 s[*tēr*] and 1 *drahm* and 3 *dāng*

The unfigured, beveled ewer in the Cleveland Museum of Art is unusual in carrying two inscriptions, which are separated by a short space.¹⁷ The first begins after the owner's *tamga*; as in No. 2, the ideogram for *stēr* is used. The second inscription perhaps corrects the first or is a later weighing.

16. Nos. 8, 11-13 = *Persia II*, nos. 141, 140, 142, 183. No. 13 also bears the proper name mṛk' in Sogdian (S. 80/L. 22).

17. No. 66.21, illustrated in Frye, "Sasanian Silver and History," pl. 1-3. F. 13 = 14. (b).

15.

(Handwritten signature)

M mltbwt¹ P s-xx-ii W ZWZN iii

Of Mardbūd. At 22 *s[tēr]* and 3 *drahm*

(F. 8)

The Cleveland Museum's ewer (no. 61.200) with the theme of the man-lion contest presents an interesting grammatical variation. MN, "from," is only seldom used to express attribution and hence, here, ownership.¹⁸

16. *הדרש של ר' לוי לוי*

. bynhwš s-xx-x iiii iii ZWZN iii

... xwaš. 33 s[tēr], 3 drahm

(F. 12)

The Freer Gallery's gilded bottle, depicting four nude female dancer-musicians, carries an uncertain proper name, but the weight is clear.¹⁹

17.

s-x W ZWZN iii

10 s[tēr] and 3 *drahm*

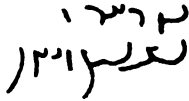
(F. 14)

A rather simplified form of the abbreviation may perhaps be read on the undecorated bowl in the Staatliche Museen, Museum für Islamische Kunst, in Berlin.

18. Nos. 15 and 18 are studied in Dorothy G. Shepherd, "Sasanian Art in Cleveland," *Bulletin of the Cleveland Museum of Art* 51 (1964) pp. 66–92 with an addendum by Frye, pp. 92–93. This use of MN may be due to a syntactic analogy with the particle of attribution, ZY. Or it may reflect eastern Iranian influence. In Sogdian silverware inscriptions, the preposition *cn* seems common, e.g., S. 71, L. 19: ZNHZY pty'δ *cn* prδ'rc γypδ, "This vessel [is] the property of Fraδārč."


19. Esin Atıl, *Exhibition of 2500 Years of Persian Art* (Washington, D.C., 1971) no. 49.

Apart from this ambiguous case, there are twelve reasonably clear examples of the *stēr* being cited as a weight measure (Nos. 1–2, 5–16). On five, and possibly six, other silver vessels, weights are recorded in *stēr* without specifying that unit. It was evidently clear from context that the *stēr* was intended.

18. 

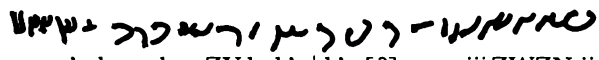
gwk'k' *xx-x ii W ZZN i*
Gugāy. 32 [*stēr*] and 1 *drahm*
(F. 7)

In the Cleveland Museum (no. 62.150), the plate shows a royal lion hunt.

19. 

lmyk *xx x ii ZWZN ii*
Ramīg. 32 [*stēr*], 2 *drahm*
(S. 58, L. 10)

The Hermitage bowl with this inscription illustrates a royal lion hunt.


20. 
gy'n ḥwswlw'y ZY kpk'n' k'y [?] sng x *iii ZWZN ii*
Gyān Xusrau, son of Kabag, kay. By weight, 13
[*stēr*], 2 *drahm*
(F. 16)

The drinking bowl in the C. L. David collection is exuberantly adorned with vines wreathing various animals and a cheerful drinker at center bottom. Its script is rather abrupt and difficult.²⁰

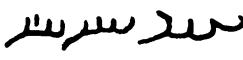
20. *David's fond og samling IV* (Copenhagen, 1970) no. 1. The sign here read as "10" resembles the initial sign of the Sissian bowl inscription.



FIGURE 3
Silver plate. King killing zebu. Collection of Mrs. Leopold Blumka

21. 
xx-x
30 [*stēr*]
(FIGURE 3)

By contrast with the C. L. David bowl, the clear inscription on a plate in the Blumka collection, showing a king in combat with a bull zebu, indicates a rather light *drahm*.²¹

22. 
*s-xl-x *iiii iii**
58 [*stēr*]
(S. 35, L. 9)

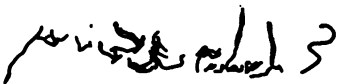
21. K. Erdmann, "Eine unbekannte sasanidische Jagdschale," *Jahrbuch der Preuss. Kunstsammlungen* (1938) p. 209 ff.

22. Also *Persia II* no. 137.



FIGURE 5
Silver plate, mercury gilded. King hunting mountain sheep. The Metropolitan Museum of Art, Bequest of Cora Timken Burnett, 57.51.19

Another plate in the Metropolitan Museum, extensively reworked and repaired, with a motif of a king hunting sheep. The interpretation of the latter part of its inscription remains problematical.

27. 

zyl . . l . 'n i-c . . ii iii

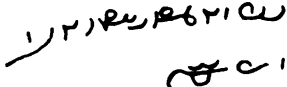
Property of Z. [or Z., son of . . .] . one hundred . . . -five [*drahm*]

This, the most crudely incised of the inscriptions, occurs on a silver figure of a kneeling goat.²³ Unlike Nos. 24–26, it omits the term *sang*, “by weight.”

The weight inscriptions of Group B can be distin-

23. *Sasanian Silver* no. 28.

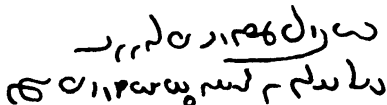
guished from those of Group C by the fact that the latter use as their standard the reformed Muslim *dirham* of about 2.9 g. It is less easy to classify inscriptions that carry only a name formula. For convenience, they are here placed together in Group B.

28. 

spndrmt y'tkgwb¹ NPŠH

Property of Spandarmad the advocate

(s. 52, H. 3, L. 12)

29. 

d'tbwlcmtr¹ ZY plḥw'n'n ZY gylsl'n ḥwl's'n
sp'hpt¹ NPŠH

Property of Dādburzmihr, commander of the East, son of Farroxān, the son of Gēlsar [?]

(s. 48, H. 4, L. 11)

At least these two inscriptions on Hermitage bowls can reasonably be assigned to Group B, since they contain Sasanian titles. The second patronymic of No. 29 could be read in several different ways, but not as Livshits and Lukonin's *ḥwslwbn*. One need only compare Nos. 30 and 37.

30. 

ḥwslwb

Xusrau

(s. 90, H. 2, L. 14)

31. 

'nwšz'd

Anōšzād

(s. 66, H. 1, L. 13)

Both of these examples could easily be either Sasanian or post-Sasanian in date.



FIGURE 6

Silver ewer, mercury gilded. The Metropolitan Museum of Art, Mr. & Mrs. C. Douglas Dillon Gift and Rogers Fund, 67.10a, b



FIGURE 7

Silver wine bowl, mercury gilded. The Metropolitan Museum of Art, Gift of Mrs. Constantine Sidamon-Eristoff, Purchase 1970.7

32. 

wstlcyn' ZY 'lt'knp'n

Wastarcin, son of Ardānaf

(FIGURE 6)

33. 

brsyn'n

Belonging to Barsēn

(FIGURE 7)

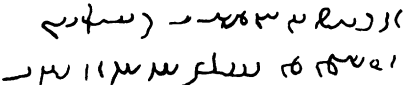
The final examples are found on objects in the Metropolitan Museum. Inscription No. 32 occurs on a ewer and is similar in style to No. 26.²⁴ Most probably, it belongs to Group B. No. 33, placed on the bottom of a drinking bowl, seems to have been executed hastily, somewhat distorting the orthography.²⁵

GROUP C (700 AND AFTER)

At least four Middle Persian silverware inscriptions postdate Caliph 'Abd al-Malik's reform of the weight standard (694–696).

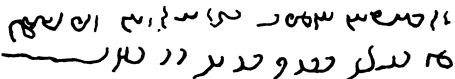
24. *The Metropolitan Museum of Art Bulletin* 26 (1967–68) p. 52.

25. *The Metropolitan Museum of Art Bulletin* 29 (1970–71) p. 63.

34. 

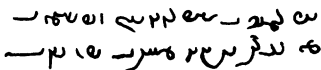
wnd't 'wḥrmzd ZY k'ln'n NPŠH MN iii-c iii iii
ZWZN sng

Property of Windād Ohrmazd of the Karēns. Of
306 *drahm* by weight

35. 

wnd't 'wḥrmzd ZY-k'ln' 'n NPŠH MN ii-c xx-xl
x ii ii ZWZN sng

Property of Windād Ohrmazd of the Karēns. Of
274 *drahm* by weight

36. 

'clmyk ZY štlwyn'n NPŠH ZY MN ii-c ii-ZWZN
M iii-ZY PN sng

Property of Āzarmīg, son of Šahrwēn, which [is]
of 202 *drahm*, 3 *dāng* by weight

The inscriptions on the three bowls found in Māzan-
derān, now in the Tehran Museum, were analyzed by
W. B. Henning.²⁶ Like Nos. 24, 25, and probably 26,
they indicate their weight in *drahm* only.

37. 

bwlcywlc ZY ḥwslwbn NPŠH MN xl-x iii iii iii
sng

Property of Burzēnwarz, son of Xusrau. From 59
[*sitēr*] by weight

(s. 88, L. 7,²⁷ F. I)

26. "New Pahlavi Inscriptions"; the bowls were published in
Roman Ghirshman, "Argenterie d'un seigneur sassanide," *Ars
Orientalis* 2 (1957) pp. 77-82.

27. Also *Persia II* no. 194.

This final example is inscribed on a Hermitage vase
depicting an eagle attacking a gazelle. No unit is men-
tioned, but the number "by weight" is clearly written.
It is far too low to represent either the reformed *dirham*
or the Sasanian *drahm*. It is definitely too high to be in
Sasanian *stēr*, but it would well suit a value in *sitēr* based
on the reformed *dirham*. Hence it seems unlikely that
the multiple unit immediately went out of use after the
reform.²⁸ Nos. 21-22 provide the most comparable type
of weight formula from the Sasanian period. As one
would expect, the *sitēr* here represented is somewhat
light:

vessel	weight in g.	weight in <i>sitēr</i>	<i>dirham</i> =	<i>dirham</i>	g. per <i>dirham</i>
35.	795		274	274	2.90
34.	880		306	306	2.88
36.	544+		202.5	202.5	2.69+
37.	634	59		236	2.69

The total evidence of the silverware shows that it was
convenient to indicate large numbers of *drahm* by use
of the multiple unit, the *stēr*. The Iqlid inscription im-
plies that this held true for expressing monetary value
as well as weight. But a remaining problem is the value
of the Sasanian *drahm* standard, as it functioned as a
unit of weight and of coinage. On the basis of coin evi-
dence, the *drahm* is customarily cited as averaging
about 4 g. The *drahm* coin does tend to fall below this
amount. A. Mordtmann's mean value, from a sample
of 2,000 coins over the entire Sasanian period, was
3.91 g.²⁹ A selection of 298 *drahm* coins in the collection
of the American Numismatic Society in New York pro-
vides, for the period from Ardašīr I to Yazdagird II
(224-457 A.D.), a mean of 3.88 g.; the averages per
reign vary from 4.12 (Šāpūr I) to 3.72 (in a very small
sample of Ardašīr II). In the sixth and seventh cen-
turies, the coin is often still lighter. The 92 whole coins
of Xusrau I in the Iraq Museum have a mean of 3.48.³⁰
But the Arab-Sasanian coinage of the Umayyad cali-

28. See Frye's suggestion that it did, "Sasanian numbers," p. 6.

29. Cited in John Walker, *A Catalogue of the Muhammadan Coins
in the British Museum*, I *Arab-Sassanian Coins* (Oxford, 1941) p. cxlvii.
It is, of course, necessary to allow slightly more to the average
drahm to compensate for average wear on the coins.

30. S. N. Nakshabandi and F. Rashid, "Sassanian Dirhams in
the Iraq Museum," *Sumer* 11 (1955) pp. 154-176 provides the
catalog on which this average is based.

phate is heavier; J. Walker's 292 whole coins of this period average 3.95 g. This last evidence suggests that an attempt was made to remedy the inflation indicated by the progressive lightening of Sasanian coinage. By implication, the coinage was brought back into harmony with a stable, enduring *drahm* weight standard, although, of necessity, the coin weight remained a little below the standard.

The silverware inscriptions should exemplify this stable weight standard, free from the deviations and tendency toward depreciation inherent in the coinage. Of course, the problems of wear and the addition or loss of metal still render the results an approximation. Six reliable examples specify that the measure is "by weight" (*sang*):

vessel	weight in g.	weight in <i>stēr</i>	<i>drahm</i> = <i>drahm</i>	g. per <i>drahm</i>
24.	1265.5+		302	4.19+
8.	1070.7+	73	2	+4.10
11.	1039.2	64		4.06
12.	1155.6	71	3	4.02
9.	454	29		3.91
26.	770.3		202	3.81

The mean value for the weight-*drahm* thus obtained is 4.02+ g. The larger sample of inscriptions without the term *sang* shows a comparable range, particularly if the two extreme examples are omitted. Hence the absence of that term need not imply that a different standard *drahm* is being used:

vessel	weight in g.	weight in <i>stēr</i>	<i>drahm</i> = <i>drahm</i>	g. per <i>drahm</i>
20.	235	13	2	4.35
18.	546	32	1	4.23
4.	1225.7		296	4.14
19.	532.8	32	2	4.10
2.	650	39	1	4.08
14.(b)	1589	98	1.5	4.04
16.	610	37	3	4.04
1.	850	53	1	3.99
15.	363.5	22	3	3.99
5.	551.7+	34	3	3.97+
3.	350		87	3.97
6.	860.7	55		3.94
7.	725.5	46		3.94

vessel	weight in g.	weight in <i>stēr</i>	<i>drahm</i> = <i>drahm</i>	g. per <i>drahm</i>
17.	170	10	3	3.94
22.	907+	58		3.91+
10.	514	33	3	3.81
21.	432	30		3.60

The mean of this group is 4.00+ g. This seems significantly above the coin-*drahm* average, although the range of values for the *drahm* in the silverware is somewhat similar to the range in the coinage. If the twenty-three examples tabulated above are considered together, as seems appropriate, the mean value of the *drahm* weight is 4.01+ g, the median 3.99 g.

Sogdian silverware inscriptions provide important comparative evidence. Their patterns agree closely with those of the Middle Persian inscriptions; even the abbreviation "s" is used for *stēr/stērak*. One is thus encouraged to look for a parallel weight standard of 4+ g. Five fairly clear inscriptions³¹ provide only a small sample, and their range of values for the *δraxme* is considerable. Nevertheless, their mean value of 4.21 g. per *δraxme* supports the idea of a stable Sasanian *drahm* weight that remained higher than the trend of coin weights. The Sogdian weights are:

- a. (S. 71, L. 19) *xx xx xx δrym'k* "60 *δraxme*"
b. (L. 23, *Persia* 147) *xx x iii iii styk* "37 *stēr*"
c. (L. 18, *Persia* 148) *iii iii iii xx x styk* "39 *stērak*"
d. (L. 25) *'yw knpy 'YKZY* "one
xx s n'krtk [*δraxme*]
less than
20 s[*tēr*]
of silver"
e. (L. 24, *Persia* 37) *iii xl x* "53 [*stēr*]"

vessel	weight in g.	weight in <i>stēr</i>	<i>δraxme</i> = <i>δraxme</i>	g. per <i>δraxme</i>
a.	282		60	4.70
b.	644.5	37		4.33
c.	636+	39		+4.28
d.	313.5	19	3	3.97
e.	800.9	53		3.77

31. The interpretation of the two inscriptions that contain *sang* (L. 16, *Persia* 184; L. 17) remains to be re-evaluated.

An important complement to these five is the inscription on a drinking bowl in the collection of Mohsen Foroughi in Tehran, which shows a king hunting an onager.³² Judged by its script, it was meant to be read in Sogdian or perhaps Parthian:

ZNH mtwrwn MN ZWZYN i c iii ii

This drinking-vessel [is] of 105 *drahm*

The bowl's weight is 430 g. Thus the value for the *drahm* is here 4.09 g., which is closer to the Sasanian average but, significantly, still above it.

ADDITIONAL NOTE

A weight-*dēnār* for the measurement of gold would have been somewhat under 4.5 g., in close accord with the later *dēnār* coin. (On the latter, see R. Göbl, *Sasani-dische Numismatik* [Braunschweig, 1968] pp. 28–29.) It would have represented the late Roman *solidus* unit, theoretically 4.55 g., and influenced the Arabs' pre-reform weight-*mithqāl*. (See W. Hinz, *Islamische Masse und Gewichte* [Leiden, 1955] pp. 3–4; G. C. Miles, "Dīnār," *Encyclopaedia of Islam*, new edition II [Leiden, 1965] pp. 297–299.) Such a weight-*dēnār* may be represented on the golden bowl from the time of Xusrau I in the Bibliothèque Nationale (E. Babélon, *Catalogue des Camées antiques et modernes de la Bibliothèque Nationale* [Paris, 1897] pp. 213–219; R. Ghirshman, *Iran, Parthians and Sassanians* [London, 1972] p. 205). The brief inscription may be read:

iii-c iiiii iii PN s

307 (*dēnār*) by weight.

Since the vessel is adorned with glass and crystal medallions, the value of the metallic unit is not determined. The entire bowl weighs 2,110 g. I am grateful to Dr. Raoul Curiel for supplying the actual weight of this vessel.

32. Henning and Azarpay, "A Hunting Scene." See note 2.