RECONSTRUCTING EARLY ISLAMIC MAGHRIBI METALLURGY

by

Martha Ethel Morgan

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This work is dedicated to Dr. Kermit Atlee Cottman, my grandfather who has, in all ways, believed in me and encouraged me.

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# TABLE OF CONTENTS

LIST OF FIGURES ................................................................. 11

LIST OF TABLES ............................................................... 12

NOTE ON TRANSLITERATION ................................................. 13

ABSTRACT ................................................................................. 15

CHAPTER 1: Introduction ....................................................... 17

1.1 Theoretical Framework .................................................. 18
   Knowledge Cultures ......................................................... 18
   Social/Cultural Construction of Technology (SCOT) ............... 25

1.2 Previous Research .......................................................... 30
   Metallurgical Technology ................................................. 30
   Islamic Archaeology in North Africa .................................. 31
   Metallurgical, Scientific and Technological Treatises .............. 33

1.3 Historical Overview ........................................................ 36
   Islamic Cultures ............................................................. 36
   Qur’ān and Hadīth ............................................................. 38
   Trade and Currency ......................................................... 40

1.4 Sources of Data ............................................................... 43
   Travelogues ...................................................................... 43
   The Intricate Tree ............................................................. 47
   Archaeology .................................................................... 48
   Ethnography of Traditional Metal Artisans ........................... 49

1.5 Structure of This Dissertation .......................................... 50

CHAPTER 2: Qur’ān and aHādīth ............................................. 52

2.1 Introduction ..................................................................... 52

2.2 Islamic Law ..................................................................... 53

2.3 Mentions of Metals ........................................................ 56
   The Categories of ‘ayāt Identified ...................................... 57
   Sūra al-Hadīd – The Iron ................................................... 59
### TABLE OF CONTENTS - Continued

#### 2.4 The *aHādīth* Relating to Metal
- Prescribed Uses ........................................... 61
- Proscribed Uses .......................................... 62
- Forms of Payment ......................................... 65
- Implements of Punishment and Torture ..................... 70
- Tools and Other Objects .................................. 73

#### CHAPTER 3: Cultural Context of Coins, A Case Study of Metals in Islam .......................... 76

3.1 Introduction ............................................... 76

3.2 Money Defined ........................................... 78

3.3 Multiple Currencies ...................................... 80
- Gold Consistency of Restamped Coins ...................... 80
- Bimetallism ................................................. 82

3.4 Islamic Exchange Rates .................................. 84

3.5 Coinage .................................................. 85
- Reformation ................................................ 85
- Iconography .............................................. 86
- Inscriptions .............................................. 87

3.6 Early Western Periphery ................................ 88
- dinār Variability by Legend ................................. 88
- Silver Variability and Regional Destabilization .......... 90

3.7 The Idrisid Dynasty ...................................... 92
- The Idrisid Minting Houses ................................. 94
- Fragmentation of the Idrisid Dynasty ....................... 96

3.8 Coins and Change ......................................... 101

#### CHAPTER 4: Transcendent Experiences .................. 103

4.1 Introduction .............................................. 103

4.2 Islamic Knowledge Culture .............................. 104
- ‘ilm and the ‘ulamā’ ...................................... 104
- Sufism and Experiential Knowledge ......................... 106
- The Haj. .................................................. 109
# TABLE OF CONTENTS - Continued

4.3 The Travelogue — Increasing Knowledge, Increasing Faith .......................... 110
  Al-Bakri ................................................................................................. 112
  Al-Idrisi ................................................................................................. 116
  Ibn Battūta ............................................................................................. 118
  Leo Africanus ......................................................................................... 122

4.4 Alchemy .............................................................................................. 126
  Science as a Perfection of Faith ............................................................. 127
  Ibn Khaldun ............................................................................................ 130

CHAPTER 5: The Intricate Tree .................................................................... 133

5.1 Notes on the English Translation of *al-dawHa al-mushtabika fi DawābiT dār al-sika* ................................................................. 133

5.2 *The Intricate Tree in the Realm of the House of Minting* ....................... 138
  Chapter One ......................................................................................... 139
  Chapter Two ....................................................................................... 146
  Chapter Three .................................................................................... 151
  Chapter Four ....................................................................................... 173
  Chapter Five ....................................................................................... 178
    Chapter Five, Part One ................................................................. 178
    Chapter Five, Part Two ................................................................. 185
    Chapter Five, Part Three ............................................................... 186
    Chapter Five, Part Four ................................................................. 187
    Chapter Five, Part Five ................................................................. 189
    Chapter Five, Part Six ................................................................. 192
    Chapter Five, Part Seven ............................................................... 196
    Chapter Five, Part Eight ............................................................... 199
    Chapter Five, Part Nine ................................................................. 202
    Chapter Five, Part Ten ................................................................. 205
    Chapter Five, Part Eleven ............................................................. 211
    Chapter Five, Part Twelve ............................................................ 215
  Chapter Six ......................................................................................... 217
  Chapter Seven .................................................................................... 229
  Chapter Eight ..................................................................................... 252
  Chapter Nine ..................................................................................... 259
  Chapter Ten ....................................................................................... 262

CHAPTER 6: Early Islamic Metal Production in al-Basra, Morocco ............... 283

6.1 Introduction ......................................................................................... 283
## TABLE OF CONTENTS - Continued

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2 Islamic Craft Production</td>
<td>284</td>
</tr>
<tr>
<td>The Cairo Geniza Papers</td>
<td>284</td>
</tr>
<tr>
<td>Labor Organization</td>
<td>285</td>
</tr>
<tr>
<td>6.3 The Metals Industry at al-Basra, Morocco</td>
<td>288</td>
</tr>
<tr>
<td>Historical Site of al-Basra, Morocco</td>
<td>288</td>
</tr>
<tr>
<td>Excavations at al-Basra</td>
<td>291</td>
</tr>
<tr>
<td>6.4 The Metallurgical Facilities</td>
<td>295</td>
</tr>
<tr>
<td>6.5 The Metal Evidence</td>
<td>298</td>
</tr>
<tr>
<td>Copper and Copper Alloy Artifacts, and Silver Artifacts</td>
<td>300</td>
</tr>
<tr>
<td>Lead Artifacts</td>
<td>305</td>
</tr>
<tr>
<td>Gold Beads</td>
<td>305</td>
</tr>
<tr>
<td>Iron Artifacts</td>
<td>306</td>
</tr>
<tr>
<td>6.6 Associated Metal Evidence</td>
<td>307</td>
</tr>
<tr>
<td>Unprocessed Minerals</td>
<td>307</td>
</tr>
<tr>
<td>Worked Bone Tools</td>
<td>308</td>
</tr>
<tr>
<td>Slag</td>
<td>309</td>
</tr>
<tr>
<td>6.7 Conclusions Drawn from the al-Basra Excavated Evidence</td>
<td>311</td>
</tr>
<tr>
<td>Copper and Iron Production at al-Basra</td>
<td>311</td>
</tr>
<tr>
<td>The Larger View of al-Basra</td>
<td>312</td>
</tr>
<tr>
<td>CHAPTER 7: The Loss of Tradition</td>
<td>315</td>
</tr>
<tr>
<td>7.1 Introduction</td>
<td>315</td>
</tr>
<tr>
<td>7.2 Structure of a Souk</td>
<td>317</td>
</tr>
<tr>
<td>The Souk</td>
<td>317</td>
</tr>
<tr>
<td>The Guild</td>
<td>318</td>
</tr>
<tr>
<td>7.3 The Past and Present Fès</td>
<td>320</td>
</tr>
<tr>
<td>The mallaH, The Gold and Silver Area</td>
<td>323</td>
</tr>
<tr>
<td>al-Seffarene, The Copper Areas</td>
<td>324</td>
</tr>
<tr>
<td>al-Hadidene, The Iron Areas</td>
<td>327</td>
</tr>
<tr>
<td>7.4 Ethnographic Research</td>
<td>328</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS - Continued

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5 The Stories</td>
<td>332</td>
</tr>
<tr>
<td>“Haruun al-Rashid”</td>
<td>332</td>
</tr>
<tr>
<td>“The Jew and the Donkey”</td>
<td>334</td>
</tr>
<tr>
<td>“The Brit”</td>
<td>335</td>
</tr>
<tr>
<td>“The Father and The Son”</td>
<td>336</td>
</tr>
<tr>
<td>7.6 Modern Sociotechnical Change</td>
<td>338</td>
</tr>
<tr>
<td>CHAPTER 8: Conclusion</td>
<td>339</td>
</tr>
<tr>
<td>8.1 Final Remarks</td>
<td>339</td>
</tr>
<tr>
<td>8.2 Social/Cultural Construction of Technology (SCOT) Revisited</td>
<td>344</td>
</tr>
<tr>
<td>8.3 Future Research</td>
<td>351</td>
</tr>
<tr>
<td>APPENDIX A, Glossary of Arabic Terms Used</td>
<td>353</td>
</tr>
<tr>
<td>APPENDIX B, Mentions of Metals in the <em>qur’ān</em></td>
<td>358</td>
</tr>
<tr>
<td>APPENDIX C, Mentions of Metals and Alloy in <em>Hadīth, SaHīH al-bukhāri</em></td>
<td>359</td>
</tr>
<tr>
<td>APPENDIX D, Transcribed Arabic Text of <em>al-dawHa al-mushtabika fī DawābiT dār al-sika</em></td>
<td>421</td>
</tr>
<tr>
<td>APPENDIX E, 2003 Questionnaire for the Metal Artisans of Medina Fès, Morocco</td>
<td>567</td>
</tr>
<tr>
<td>APPENDIX F, Human Subjects Approval</td>
<td>569</td>
</tr>
<tr>
<td>APPENDIX G, Kingdom of Morocco, Ministry of Culture, Research Authorization</td>
<td>570</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>571</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

FIGURE 1.1, Region of the Maghrib ......................................................... 19
FIGURE 1.2, Map of Northern Morocco and Major Sites ......................... 41
FIGURE 3, Map of the Idrisid Minting Sites ........................................ 97
FIGURE 6.1: Map of the Ancient and Modern Mines Surrounding Fès, Their Exploited Substances, and Trade Routes ......................... 289
FIGURE 6.2: al-Basra and Its Surroundings ......................................... 292
FIGURE 6.3: Plan View of the al-Basra, Morocco, Excavation Site ............ 294
FIGURE 6.4: Plan View of al-Basra Excavation Units F12-F16 ................... 297
FIGURE 7.1: Medina Fès and Its Major Features .................................. 322
FIGURE 7.2: Metal Areas in Relationship to al-Qarawiyyin ..................... 325
FIGURE 7.3: Guildsmen at Work in al-Hadidene Jadid in bin Souda at La Ferraille ................................................................. 337
LIST OF TABLES

TABLE 1, Ruling Chronologies in Morocco .................................................. 38
TABLE 2.1, Mentions of Metals and Alloy in the Qur'ān and Hadīth ............... 56
TABLE 2.2, Prescribed Uses of Metals in the Hadīth, Sahīh al-bukhārī ............ 63
TABLE 2.3, Proscribed Uses of Metals in the Hadīth, Sahīh al-bukhārī ............ 66
TABLE 2.4, Forms of Payment Using Metals in the Hadīth, Sahīh al-bukhārī .... 68
TABLE 2.5, Metals as Implements of Punishment and Torture in the Hadīth, Sahīh al-bukhārī ................................................................. 71
TABLE 2.6, Metals Tools and Other Metal Objects in the Hadīth, Sahīh al-bukhārī ................................................................. 74
TABLE 6.1, Distribution of Metal Artifacts by Major Functional Category, Excluding Nails ................................................................. 300
TABLE 6.2, Counts of the Metal “Special Artifacts” by Type and Composition Recorded for All al-Basra Excavations ................................. 301
TABLE 6.3, Density of Copper Objects by Area from al-Basra Excavations 1990-1999 ................................................................. 305
TABLE 6.4, Number, Percentages, and Densities of Iron Nails by Area from al-Basra Excavations 1990-1999 ........................................... 307
TABLE 6.5, Number, Weights, Percentages and Densities of Slag by Area from al-Basra Excavations 1990-1999 ........................................... 310
NOTE ON TRANSLITERATION

This dissertation uses words from English, French, and Arabic vocabularies. The main body of the text is written in English while Appendix D, the reproduced text of *al-dawHa al-mushtabika fī DawābiT dār al-sika*, is written in Arabic. The few exceptions are the occasional place names of regions in Morocco, which are often written by Moroccans in their French forms, such as Fès. Another exception is the use of Arabic in transliteration.

In order to represent Arabic words in the characters of the English alphabet, this dissertation has adopted the standard used in the *Historical Dictionary of Morocco* (Park 1996), and uses the transcription system that follows:

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The following standards should be noted:

No Arabic words in transliteration are capitalized, as Arabic does not contain upper and lower cases. The English conventions of capitalization that are commonly adhered to -- in representing, for example, proper nouns, the first letter of a sentence, and names -- are not forced upon the Arabic in transliteration.

While the use of diacritic marks in Arabic is optional and mostly used to distinguish among words of the same spelling but different meaning, this text, whenever possible and known, transliterates orthographically. The representations of the sounds of vowels in the Arabic language, typically represented by َ, َِ, and َّ, are written with the English language characters of a, i, and u, respectively. Long vowel sounds are written as ä, ï, and ü, accordingly.

In order to distinguish between double consonants in transliteration that are occasionally ambiguous, a colon is inserted between two consecutive, individual letters. For example, in the case of the two consecutive, individual letters of س and ه, in order to distinguish between the s and h versus the sh of ش, a colon is inserted between them (e.g., آسْهَب is:hab [to elaborate upon; to develop in great detail]).
In the transliterated text, the use of the initial definite article (al-), with the exception of its use in names fixed in their Romanized forms (such as place names and some proper names) and in the fixed names of texts, has been omitted. For example, al-qur‘ān will be written as the qur‘ān.

Finally, each Arabic word in transliteration is, in each chapter, italicized in its first use and defined. All subsequent uses of the transliterated word within the chapter are typed without italics. The exception to this is found in Chapter 5, the translation of the Arabic text *al-dawHa al-mushtabika fī DawābiT dār al-sika*. In this chapter, the text’s chapter subheadings are italicized and all words in transliteration, except common place names, are italicized.
ABSTRACT

Interactions in culture, science, and technology in early Islamic North Africa are studied through an examination of Maghribi metallurgy. My dissertation, based on the Social/Cultural Construction of Technology (SCOT) model (Bijker 1997), explores the impact of the Islamic religion and culture on scientific and technological change in the spheres of gold and silver minting, copper working, and iron smelting towards reconstructing the role and impact of metals in Islamic society. The purpose of my reconstruction is to define and contextualize early Islamic Maghribi metallurgy for a region and time period poorly defined in the history of metallurgical technology. The development of this history of technology involves the investigation of technical design within a religious framework, presenting explanations for the motivations of the use of certain metals from both their intrinsic and instrumental properties. This specialized history is important in that it provides information of significance on the larger scope of the history of technology and science and on the structure of Islamic society.

This study uses multiple lines of evidence, including historical documents, numismatic evidence, and archaeological data in an effort to situate the role of early Islamic Maghribi metallurgy into the framework of the history of African metallurgy. The religious and cultural meanings of metals are outlined through the compilation of their mention in the qur’ân, the Hadîth, and the chronicles of travelers. Coinage survey positions the political and economic role of the Islamic state, and addresses the stability of western-periphery polities within the state and the concerns of a dogmatically-
motivated bimetal system. The site of al-Basra, Morocco, a state mint under the Idrisid rule (A.D. 788-959), is the source for the excavated metal materials; the metal artifacts, unprocessed minerals, slag, non-metal tools associated with the metal production, and metallurgical facilities are described in their historical context.

This dissertation presents, for the first time ever, an English translation of *al-dawHa al-mushtabika fī DawābiT dār al-sika* (*The Intricate Tree in the Realm of the House of Minting*). This fourteenth century Arabic text details the meaning, production, and uses of metals in medieval Islamic society, and serves as a unit of study within Maghribi metallurgical technology. An ethnographic study of the metal artisans of Fès, Morocco provides a modern-day reflection to this reconstruction.

This study supports the SCOT methodology by identifying the relationships between scientific and technological practices and systems of belief. The Islamic culture and its practices -- which were part codified religion, part belief system -- were subject to change based on the contextual situations of the society. This study demonstrates that the society’s metallurgical practices were subject to the same conditions. The metallurgical know-how within Islamic Maghribi society was, and is, a direct reflection of the unifying themes embedded in the culture.
CHAPTER 1: Introduction

The history of metallurgical technology in North Africa is poorly defined, particularly in the transition period from late Roman to early Islamic rule, and in the region between the Western Sahara and Spain known as the Maghrib. Few early documents, if any, exist to today that were written with the intent to describe the role of metallurgy within the formation of Islam. Examinations of Maghribi metallurgy reveal the interactions of culture, science, and technology for this region. The role of metals in the society is a function of the chemical, material, and technological know-how of the people who produced them. The manner in which metals gained their cultural meaning directly reflects the human ingenuity involved in their construction and use.

This dissertation explores the impact of the Islamic religion and culture on scientific and technological change in the spheres of gold and silver minting, copper working, and iron smelting by exploring the meanings of metals within Islamic society using Bijker’s (1997) Social/Cultural Construction of Technology model. My study reviews the use of metals within the western Islamic empire using multiple lines of evidence -- including historical documents, numismatic evidence, archaeometric data, and ethnographic analogy -- in an effort to situate the role of early Maghribi metallurgy into the framework of the history of metallurgy in the Islamic world. This specialized history of metallurgy, focusing on the period from the advent of Islam in A.D. 610 to A.D. 1500, provides information of significance to the larger scope of the history of technology and science, and on the structure of the early Islamic Maghribi society.
Figure 1.1 depicts the region of the Maghrib and identifies Morocco, the particular area of interest for this study.

1.1 Theoretical Framework

Knowledge Cultures

The Social/Cultural Construction of Technology model is based upon the widespread agreement that scientific and technological knowledge are socially constructed (Buchanan 1991; Knorr-Cetina and Mulkay 1983; Pinch and Bijker 1984). Treating scientific and technological knowledge as social constructions implies that there is nothing different about the nature of these ways of knowing and ways of knowing other things; they are merely encompassed within the entire series of knowledge cultures (Watson-Verran and Turnbull 1995).

No technological culture can be adequately evaluated from a structural point of view without taking into account the social relationships which surround the technology. The culture of early Islamic Maghribi metallurgy is no different in that in order to say something meaningful about it, we must be able to adequately define the social relationships that affect the metallurgical culture. The communities involved within early Islamic Maghribi metallurgy encompass the spheres of religious, economic, and political influence. As artifact and technology, the metals and the processes through which they have been manipulated are the most basic of indicators of these human influences. Only through the combined studies of socio-cultural history, archaeology, and history of technology can we attempt to reconstruct the intra- and inter-community relations that
Figure 1.1: Region of the Maghrib
(after Martin and O’Meara 1995:103)
served as motivations within this past knowledge culture of metallurgy.

Reconstructing early Islamic Maghribi metallurgy is a way of reconstructing a knowledge culture that can inform on other knowledge cultures within Islam. By reconstructing the lifeway of early Islamic Maghribi metallurgy, we can obtain information about other areas of Islamic ideological, financial, and political life and reveal aspects of the power of the Islamic religion and culture.

The foundation of Islam created and enabled the growth of mental templates that unified the organization of large numbers of people toward a social order. These mental templates, or “assemblages” as dubbed by Watson-Verran and Turnbull (1995:117) “constitute connections and contrive equivalences between locales and knowledge systems” and are viewed as “power practices.” Watson-Verran and Turnbull (1995:117) argue that understanding assemblages in this way reflects on the “notions of power as strategic and involved with meaning making” to the end that “relations of power and knowledge are understood as invested in the material, social, and literary practices of discourse and representation, discipline and resistance.”

This begs the question, “What is the basis of a knowledge culture?” Interest in exact and systematic knowledge is grounded “not from a pragmatic interest in the measurement of volume or distance but from an interest in ‘abstract and moral concepts such as “sin,” “secret,” “health,” “obligation,” and “order” ’” (Watson-Verran and Turnbull 1995:123 quoting Zuidema 1982). Within Islam, the concepts of usury, obligatory taxation, and the Afterlife produced a dogmatically-motivated social order through which the knowledge of metals and their uses was filtered.
In his introduction to *Knowledge Triumphant: The Concept of Knowledge in Medieval Islam*, Franz Rosenthal (1970:1) states that “civilizations tend to revolve around meaningful concepts of an abstract nature which more than anything else give them their distinctive character”. He argues that “such concepts are to be found at the very beginning of a rising civilization” and that while these concepts may serve “to strengthen the hold exercised by the concepts before”, they may also “provide the old concepts with new meanings” (Rosenthal 1970:1). The very foundation of Islam served, at least in part, to reemphasize the essence of familial and tribal obligation and curtail the increasingly avaricious mercantile-based society. This was accomplished by changing the ways in which the public thought about money, benevolence, and social cohesion by reintroducing to their existing knowledge cultures the concepts of charity and communion in a new way.

One Arabic concept of knowledge -- *‘ilm* -- expresses the factual ideas surrounding the ways of knowing. Medieval Muslim scholars believed that religious knowledge and its transmission were the linchpins that held Muslim society together, so much so that the ‘ulamā’, the high Islamic religious scholars, were reluctant to innovate (Berkey 1995:51). The ‘ulamā’ derived their knowledge culture from the *qur’ān*, the revelation from God, and the *sunna*, the recorded actions and sayings of the prophet Muhammed, and used their focus as “right guidance” for the pious Muslim. This body of knowledge represents *‘ilm*, the power to transform the world.

Other Arabic concepts of knowledge exist as well. Rosenthal defines knowledge in a multitude of ways, according to Arabic and Islamic literature and poetry. Knowledge
includes: “the process of knowing and identical with knower and known,” “cognition,” “the process of ‘obtaining’ or ‘finding’ through mental perception ... a process of comprehending,” “perception” and “apperception,” and “belief” (Rosenthal 1970:52-63). Through defining the ways in which metals can be “rightly” used in society, the individual incorporates the idea and associations of metal into his or her belief system. Though while understanding the ways of knowing is useful, in order for a knowledge culture to exist, the knowledge itself must be exchanged.

For the development and the exchange of knowledge, it must be embedded, at least partly, in an oral culture. This requires an autonomous community with a cultural link. Family, enterprise, and economy provide such links. Chapter Three presents this through the connections between the Idrisid dynasty and the Islamic empire. The religious structure of bimetallism and exchange rates in Islamic society were part of this link. Money minted in one polity of the Maghrib was useful there, but was also connected to the empire through religious affiliation, in the use of slogan and iconography, and political affiliation, in its use as commodity money and through fiat.

The development and exchange of knowledge also includes “the ability to bring the knowledge back and enable two-way communication[, a] fundamental prerequisite for a knowledge system to transcend the merely local” (Watson-Verran and Turnbull 1995:124). Chapter Four presents the concept and practice of transcendent experiences within Islam which enabled the spread of ideas over long distances, and the system of analogical reasoning by the ‘ulamā’ which enabled the “right guidance” of Islam to be broad and disparate, though not diffuse.
These knowledge cultures are “like a map with patterns that connect, so that no one area is isolated, but is part of an intimate network that has social, economic and often political ties” (Watson-Verran and Turnbull 1995:124). The networks link trade with agriculture, travel, and commercial and social networks; taxation with charity, religious obligation, and the Afterlife; money with mining, minting and coinage; political affiliation with financial stability, rule and identity.

Once a knowledge culture exists, it must have fixity and flexibility in order to endure over time. A certain flexibility is imparted through the oral transmission of the knowledge culture; the fixity of the knowledge culture is how much of the written and oral transmission endures over time. The ‘ulamā’, through explicitly cognized and thought-out decisions, allowed for the metaphorical extensions of concepts not addressed in the qur’ān or sunna, but made evident in regions far removed from the Arabian Peninsula. These complex bodies of knowledge grew to what is known as shari‘a, the body of Islamic law. However, complex bodies of oral knowledge cultures face three major problems involved in their learning and use (Watson-Verran and Turnbull 1995:126).

The first problem is defined as the difficulty of “develop[ing] techniques to ensure that the vast body of detailed data is accurately retained and passed on over generations” (Watson-Verran and Turnbull 1995:126). This problem is solved by codifying the detailed data. The qur’ān, the irrefutable word of God delivered to the Arabic-speaking peoples via the angel Gabriel to Muhammed, serves this purpose.
The second problem is ensuring that this body of data can be made “instantly accessible” to the user (Watson-Verran and Turnbull 1995:126). This problem is solved by repeated transmission of the data. The Qur’ān, which literally means “recitation”, was in its earliest days distributed to each community as a text, accompanied by a reciter, and even to the present day is memorized more often than read (Nelson 1993:213), serving as a mode of transmission of the oral body of knowledge. Even more pervasive is the transmission of the sunna, especially the Hadīth, the supposed sayings of Muhammed. As everyday accounts of the life of the Muslim Prophet Muhammed, the sunna serve to inform Muslims on the etiquette of every aspect of daily life within the religious and cultural experience of Islam.

The third problem encountered is that the knowledge system “must of necessity be local in nature, but it must also be capable of moving beyond the local into the unknown” lest it become obsolete (Watson-Verran and Turnbull 1995:126). This third problem is addressed by allowing the knowledge system to adopt and adapt to the various contexts of situations. That Islam was able to spread so rapidly and on a multitude of levels, from the Arabian Peninsula to the Far East and to the western periphery of the Mediterranean, attests to its fixity and flexibility as a knowledge system.

Islam was able to unify large groups of people from disparate environments and cultures from the Maghrib to Southeast Asia through assemblages of knowledge cultures. The origins and endurance of the religion over centuries has, as its strength, Islam’s existence as a sum of things. The Qur’ān, which many hold as the origin of Islam, was but one aspect of its unity. Its coherence can be attributed to a variety of factors,
including laws, traditions, political governance, and tax systems. By incorporating preexisting cultures -- through conquest, trade, etc. -- Islam formed, in a sense, using Watson-Verran and Turnbull’s terminology “a system of coordinates by which information of very different orders was organized (as is done in our maps)” (Watson-Verran and Turnbull 1995:122). These coordinates enabled the creation of vectors (my terminology), branching from the source in ordered fashion. The orderly provisions of knowledge serve as foundations for the growth of new ideas to enable and make capable new connections. The power of the Islamic knowledge culture, as in any knowledge culture, lay in its capacity to “provide connection for a diverse set of knowledges and to establish equivalencies between disparate practices and contexts over a very large area.” (Watson-Verran and Turnbull 1995:123).

Social/Cultural Construction of Technology (SCOT)

Technology exists as a knowledge culture. Layton, in his 1974 article “Technology as Knowledge,” explores the meanings of technology, starting from the traditional definition of technology as the “systematic knowledge of the industrial arts” (1974:31), which implies technology is “subordinate to other types of social and intellectual activity” (1974:32). Layton points out that the “technologist’s thinking is intimately associated with the needs and values of the community” and that by “confining the history of technology to technique and things, we also deny to [the] discipline a rich dimension to social history” (1974:33). Layton argues that technology is art and art is knowledge in the sense that, quoting Aristotle, “all art is concerned with coming in to being, i.e., with contriving and
considering how something may come into being which is capable of either being or not being, and whose origin is in the maker and not in the thing made” (Layton 1974:36 quoting McKeon 1947:427-428). The Islamic Maghrib’s metallurgical technology, as evidenced through the archaeological interpretation, literature, and ethnography presented here, reveals the social concerns, constraints, and practices of the individuals within the Moroccan cities of al-Basra and Fès.

The technological ideas of these individuals of al-Basra and Fès were translated into designs, and these designs for the end products of technology did not and do not exist in isolation. These designs, of iron smelting furnaces, minting house regulations, and commercial and apprenticeship practices in the souks, and the end products of iron and slag, state-minted coinage, and tourist goods are innovations which, by their existence in Maghribi society, involve a number of separate discoveries or insights developed into a complex whole that can function as a working system. And while the knowledge culture of a technology is similar to other ways of knowing, it is important to note that scientific knowledge and technology are more constrained than most other things by the laws of physics and chemistry. The difference lies in that “the laws of science refer to nature and the rules of technology refer to human artifice” (Layton 1974:40). The rules of technology are not simply a negotiation of ideas, but also of values, reflected in the “knowing” and the “doing” (Layton 1974:40). Islamic values are evident in these stages of technology; it is simply a matter of asking appropriate questions at each site in the “map” to discover which vectors lead to and from the religion and culture.
Approaches to the SCOT model question whether cases of “seemingly unique individual ingenuity and creativity” are linked to wider social interactions and cultural processes, and whether “artifacts are not only shaped by the power strategies of social groups but also form part of the micropolitics of power” thereby “constituting power strategies and solidifying power relations” (Bijker 1997:2). Bijker’s discussion of technological change argues that technology is “shaped not only by societal structures and power relations, but also by the ingenuity and emotional commitment of individuals” whose character and moral values, it is important to note, are the product of social influences (1997:4).

Bijker’s development of the SCOT model addresses these issues surrounding technology. Particularly crucial to the SCOT model is the issue of a “technological frame”, a useful analytical concept in particular because it reveals the missing pieces we need to find in order to reconstruct a technology. In order to develop a history of technology, we must examine the development of technical designs, seeking explanations through both the intrinsic and instrumental properties of artifacts. By examining these properties, we can determine the “relevant social groups” that both effect and affect the design, thereby understanding the “interpretive flexibility” – the differences in meaning attributed to an artifact by the various relevant social groups – of the artifacts. The artifacts are gradually constructed in the social interactions between and within the relevant social groups until their interpretive flexibility decreases, forming ever higher degrees of “stabilization” – larger, often societally-agreed upon meanings attributed to the artifacts. The result is “closure” – less ambiguity in the meaning of the artifacts. Through this process, we can see
how the freedom of choice in the artifacts’ meaning is narrowed by contextual constraints and alliances (Bijker 1997:269-271).

My reconstruction of early Islamic Maghribi metallurgy examines the use of metals in North African society between A.D. 800-1500 by exploring the role of metals in the formation of Islamic law, in economics and public policy, in the transcendent experiences of travel, in literature, in the excavated material record, as well as in modern Islamic society. This North African example not only provides a case study of the SCOT model, but also allows us to examine the application of the SCOT methodology to a technology situated within and, I argue, an integral part of a highly dogmatically-motivated system. Through applying the framework, we can examine the variety of contexts through which metallurgy is viewed.

All histories must be contextualized in order to have meaning. The history of technology is a multidisciplinary field that articulates, corroborates, and integrates material culture and history through the study of processes and interrelationships by which human organizations developed and evolve. It is concerned with the related issues of the genesis of invention, the development of innovation and its transmission, and the impact of these processes on societies and cultures. Studies within the SCOT framework are from a perspective which incorporates a sphere-of-influence larger than the immediate physical bounds of the unit under study (Bijker 1997). The contextualization of a history of technology is entirely dependent upon what aspects of history are documented or are recoverable from material culture and human memory so that we are able to interpret them in the present.
The religious and cultural meanings of various metals are outlined through the compilation of primary and secondary Islamic sources: the Qur’ān, and the aHādīth. Numismatic evidence allows us to position the political role of the Islamic state in creating demand for certain metals and the resulting depreciation of others. It also helps to explain affiliation within newly opened regions and the stability of each governing empire. The riHalāt, or chronicles of travelers, provides a third source of information on the incorporation of Islam within the empire. The Arabic text al-dawHa al-mushtabika fi DawābiT dār al-sīkā, or The Intricate Tree in the Realm of the House of Minting, written in Fès in the fourteenth century, presents a history of technology. This text is presented, in English translation for the first time, here. It is contextualized by the earlier presented sources of data. A case study of an early state minting site, al-Basra, in the western periphery in present day Morocco yields data collected through excavations of the residential and industrial areas. My ethnographic survey of metal artisans from Fès, one of the metalworking capitals of the Middle East, provides the postscript to the study. In the broad picture, my research provides a case study for the SCOT model and presents, through the vectors of interest, ways of knowing other things. More specifically, this dissertation adds valuable information -- through the new presentation of metallurgical technology, Islamic archaeology, and a technological treatise -- to our current understanding of the social/cultural construction of technology during the Islamic empire’s early years along its western periphery.
1.2 Previous Research

Metallurgical Technology

Information on metallurgical technology in North Africa is limited and is typically noted as an aside to studies of metallurgy for East Africa, West Africa, or Sub-Saharan Africa. Little is known about first uses of iron in North Africa; the theories that have been produced appear not to be based on scientific inference, but on assumptions about the natural progression of things (Killick 2001:479). The existing information concerning the advent of iron use in Africa is well outlined by van der Merwe (1980), and his discussions on early iron use in East Africa are well grounded in archaeological evidence. Discussions in the literature on the early iron use in West and Southern Africa are either based solely on linguistic evidence (van der Merwe 1980:478-484) or on ethnographic extrapolation of recent iron technology (Tylecote 1976:47). Only recently have new approaches to understanding the history of metallurgy utilized an alternative historical construct of scientific testing of archaeological remains viewed in the context of cultural beliefs. The applications of such an approach have been successful in stepping backwards in time in East and Central Africa (Schmidt 1997), and Sub-Saharan Africa (Miller and van der Merwe 1994), while ethnographic research has been useful in ethnoarchaeological approaches to iron smelting reconstructions in West Africa (Herbert 1993). The uses of nonferrous metals in Africa have also been researched: gold (Garrard 1982), gold and silver (Gondonneau and Guerra 1999, 2002), copper (Herbert 2003), copper and iron (Killick et al. 1988).
Islamic Archaeology in North Africa

The early archaeology of North Africa was strongly influenced by French objectives, and one of the first English reviews of North African archaeology is by Sheppard (1990). Many of these archaeological investigations sought pre-Islamic sites, and the Islamic levels encountered were disregarded and discarded.

Islamic archaeology was an outgrowth of the mid-nineteenth century Auguste Comte-an “progressive-evolution-applied-to-history” view. This view held that the historical role of Islam was seen as the medieval phase in the development of human kind (Vernoit 1997:1). The earliest views of Islamic archaeology emphasized the significance of Middle Eastern “fine” art and Orientalist studies towards a Comte-an view. But towards the latter part of the nineteenth and well into the twentieth century, a new goal of Middle Eastern archaeology was on finding exemplars of Islamic art to fill national and private collections (Vernoit 1997:2). The outgrowth was that numerous Islamic sites were identified.

However, it was not until the era of European colonialism that North Africa became a place of interest to archaeologists. The publications of Babelon, Cagnat, and Reinach’s *Atlas archéologique de la Tunisie* (1893) and Gsell’s *Atlas archéologique de l’Algérie* (1911), produced by French colonial archaeologists were key contributions for founding the Maghrib as the birthplace of survey archaeology in the Mediterranean (Dyson 1987:93). The expansion of ground-based site-recording and topographical investigation by aerial photography occurred shortly after World War II. The motivations of identifying and examining Roman frontier ruins can be found in the focus
on the military defense systems implemented in the Roman organization of the regions surrounding major settlements in North Africa (Baradez 1949). More recently, Insoll’s (1999; 2003) research in Islamic archaeology provides one of the first examinations of the variety of evidence that can be found in Islamic-context sites across Africa, due to the diversity of the Islamic culture through integration with pre-existing practices.

Boone and Benco (1999) present a survey of “Islamic settlement on North Africa and the Iberian Peninsula”, and address that while much research has taken place in the Iberian peninsula and in the East, within the region of the Maghrib, archaeological research on the Islamic period is still at an early stage of development (p.53). Surface ruins at sites have sparked interest in archaeological interpretation of North African fallen cities, during all phases of occupations. Studies of regional Islamic settlement patterns are more advanced in Morocco, while studies of urban architectural and spatial organization are addressed for both Algeria and Morocco (p.53-59). Boone and Benco (1999:55) state that Cressier’s (1992, 1995) work begun in the 1970s is the most comprehensive settlement work conducted of the Islamic Maghrib. Within Morocco, other studies have produced information on the historic sites of Sijilmasa (Lightfoot and Miller 1996), Qsar el-Seghir in both its Islamic and Portuguese phases (Redman 1986; Redman et. al. 1979), al-Basra (Benco 1987, 2004; Redman 1983), and Fès (Le Tourneau 1961).
Metallurgical, Scientific and Technological Treatises

The metallurgical texts available to us prior to A.D. 1500 are few. The earliest known treatise on European metalwork is from Theophilus (1979 [1121]). His Latin manuscript, *De diversibus artibus*, or *On Divers Arts*, is handed down to us from second or third generation copies done in the twelfth century by German scribes. The text, written in three books, devotes the first two to painting and glassmaking. The third book, entitled “The Art of the Metalworker,” is dedicated to King David, whom Theophilus considered “the greatest of the Prophets” and who “entrusted to his son Solomon almost all the materials -- gold, silver, brass, and iron -- for the Lord’s house” (Theophilus 1979:77). The author, through diagrams and notations, describes the equipment, workshops, and techniques necessary for the production of various metal objects.

It was not until the sixteenth century a considerable body of literature dealing with chemistry, metals and allied compounds began to accrue (Lange 1966:92). Long (1991) divides the mining and metallurgical literature into three categories: 1) recipe books, 2) alchemical writings, and 3) exoteric mining and metallurgical treatises. The recipe books, or books of “secrets” contained procedures for separating and assaying metals, as well as for preparing medicinal remedies. The alchemical writings were born from the recording of crafts traditions, particularly that of goldsmithing, whose laboratory techniques were closely tied to religious and philosophical ideas. The exoteric treatises, which first appeared at this time, had foundations in the former two categories, and “represent[ed] a flowering of technical authorship that demand[ed] inquiry beyond the ‘explanation’ that they were written for artisans” (Long 1991:323).
J. R. Partington’s *History of Chemistry* (1961), Chapter II, entitled “Technological Treatises”, presents a detailed survey of these scientific and technological treatises dealing with metallurgy. These metallurgical texts available to us include the works of Biringuccio, Agricola, and Ercker, which date to the mid-sixteenth century. Their texts are considered among the most important scientific classics of all time. Biringuccio’s *De La Pirotechnia* (1946 [1540]) is essentially a practical text with little discussion of theory. It is said to be the first printed work to cover the whole field of metallurgy (Parington 1961:33), with details of the equipment and processes of mining, smelting, and metalworking in the fifteenth and sixteenth centuries, and illustrations of the practices through 94 its woodcuts. Agricola’s *De Re Metallica* (1950 [1556]) is the first work of its kind based on field research, observation, and the methods of modern science and includes more than 280 woodcuts to supplement its depiction of mining technology. Ercker’s 1574 *Beschreibung Allerfürnemisten Mineralischen Ertzt vnnd Berckwercks arten ... Durch Lazarus Erckern*, which was finally handed down to us in the English by the name *Lazarus Ercker’s Treatise on Ores and Assaying* (1951), is considered to be an “important forerunner of books dealing with chemical quantitative analysis” (Lange 1966:95). The text, which makes use of Agricola’s *De Re Metallica*, omits much of the discussion of mining and smelting, in preference of a clearer and more practical discussion on assaying techniques of gold, silver, copper, and other metals and descriptions of the procedures for making the assay instruments and equipment. These products of the Renaissance provide descriptions not only into the realm of metallurgical technology, but also provide glimpses into the customs and practices in Europe.
As scientific and technological treatises from the Arabic-speaking world, al-Hassan and Hill (1992) provide one of the first surveys of the innovations and modifications of technologies in the ancient Islamic world as a whole. Translations of Arabic texts by al-Hassan -- in the manner of Smith and Gnudi (Biringuccio 1946 [1540]), Hoover and Hoover (Agricola 1950[1556]), and Hawthorne and Smith (Theophilus 1979 [1121]) for the European world -- into English, further the discussions on the history of metallurgy in the Arab world (al-Hassan 1978, 1980).

Franz Rosenthal’s translation (1967) of the fourteenth century Ibn Khaldun’s The Muqaddimah, provides insight into, at that time, a freshly critical examination of world history and the social organization of mankind. Examinations into the medieval-period Arab worldview have sparked an interest in numerous studies of Islamic science, technology and knowledge (Berkey 1995; Gutas 2002a; 2003; Rosenthal 1970, 1990; Sabra 1996). The bulk of these studies are area-nonspecific, but the understanding is that they apply to the popular view of Islam, which corresponds with the Islam practiced in the Middle and Far East. However, the surveys on the epistemological foundations of medieval Arabic science inquiry do address the cultural climate conducive to the motivations of individual scientists. Gutas provides a unique insight into the temporal and local specificity of scientific activity, engaging the “(mis)perception” of Arabic and Islamic studies as fringe studies to what are considered Western outgrowths of Greek and Latin philosophies, and the presentation of research which will “make manifest the relevance of Arabic philosophy to Islamic intellectual life” (2002b:6).
The translations from Europe have yielded data about the metallurgical knowledge cultures of the region and have been useful in developing historiographic accounts of the area, as al-Hassan’s provides information for the Middle East in general, but nothing has been done to interpret the technologies in use in the Maghribi region until now. \( \textit{al-dawHa al-mushtabika fī DawābiT dār al-sika} \) presents a unique view of the interactions of metallurgy, science, and technology, which is part recipe book, part alchemical writing, and part exoteric mining and metallurgical treatise.

1.3 Historical Overview

\textit{Islamic Cultures}

Islam was an empire based on both a religion and a culture. By examining the flows of values, information, labor, currency, and goods, one can reconstruct activities practiced in Islamic cultures. The success of Islam as a culture reflects its ability to adapt to with the changing situations of time and space while still retaining its values as a religion. It is the Islam in flux that is the focus of this work. The term “Islamic cultures” is used to emphasize that the practices within Islam over approximately the last 1500 years were variable.

The advent of Islam in A.D. 610 in the Arabian Peninsula started a change in ideology that would spread from the Middle East to the reaches of China in the east and across North Africa to its westernmost periphery by the end of the seventh century. The codification of revelations of the precise word of God, transmitted through the Angel Gabriel to Muhammed from A.D. 610 until his death in A.D. 632, was compiled into the
Followers of Islam first entered Morocco in A.D. 681 during the rapid expansion of the religion less than 50 years after the death of the prophet Muhammed. By A.D. 699, Islam had reached the northern most parts of Morocco. By 711, Islam’s followers had crossed over the Straits of Gibraltar into Spain to establish a northwestern frontier of Islamic culture in Andalusia.

Because of the rapid spread, the differences between the Islam of practice in the West versus the East were numerous. The presence of the religion in Morocco was not synonymous with a fixed Arab and Muslim presence in the area. The traditions of the Berbers in the area were still being practiced, and Berber tribal divisions also meant a fragmented acceptance of Islam dependent upon familial and political affiliations. It was not until the end of the eighth century that Islam gained a foothold in the area, and not until A.D. 789 that the Arab Saudi exile who held Shi’i beliefs and a direct lineage to prophet Muhammed -- idrīṣ ibn ‘abd allāh -- solidified an Islamic presence in Morocco through marriage into a Berber tribe. The mere fact that idrīṣ ibn ‘abd allāh was thrown out of the Arabian peninsula, home to the two holiest places in Islam, and hunted by spies of the Islamic empire because his Islamic beliefs deviated from the majority at that time, is only one testament to the diversity of Islam in practice at the time. But idrīṣ ibn ‘abd allāh’s union with one of the most highly regarded and well connected Berber tribes in the area, and the child that resulted from it, were the foundations necessary to establish an Idrisid dynasty. The various periods of Morocco’s political history are outlined in Table 1 below.
Table 1: Ruling Chronologies in Morocco (Cleveland 1994:15-19; Park 1996:207-214)

<table>
<thead>
<tr>
<th>Ruling Polities</th>
<th>Period of Rule</th>
<th>Capital</th>
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<tbody>
<tr>
<td>Phoenicians</td>
<td></td>
<td></td>
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<tr>
<td>Romans</td>
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<tr>
<td>The Islamic Era</td>
<td></td>
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<tr>
<td>Umayyad Caliphate</td>
<td>661-750</td>
<td>Damascus</td>
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<tr>
<td>Abbasid Caliphate</td>
<td>750-788</td>
<td>Baghdad</td>
</tr>
<tr>
<td>Idrisid Dynasty</td>
<td>788-959</td>
<td>Fès</td>
</tr>
<tr>
<td><em>midrārid</em> Dynasty</td>
<td>823-977</td>
<td>Sijilmasa</td>
</tr>
<tr>
<td>Fatimid Caliphate</td>
<td>907-1171</td>
<td>Tunis</td>
</tr>
<tr>
<td><em>maghrāwa</em> Dynasty</td>
<td>987-1069</td>
<td>Fès</td>
</tr>
<tr>
<td>Almoravid Dynasty</td>
<td>1073-1147</td>
<td>Marrakech</td>
</tr>
<tr>
<td>Almohad Dynasty</td>
<td>1130-1269</td>
<td>Marrakech (and Sevillle)</td>
</tr>
<tr>
<td>Marinid Dynasty</td>
<td>1258-1420</td>
<td>Fès</td>
</tr>
<tr>
<td>Wattasids Dynasty</td>
<td>1420-1550</td>
<td>Fès</td>
</tr>
</tbody>
</table>

qur‘ān and Hadīth

The Idrisid Empire lasted for approximately 200 years and was replaced by the Fatimid dynasty at the end of the tenth century. During its height, the rest of the Islamic Empire was undergoing great changes as the expansionist state was formulating its ideology. Various versions of the qur‘ān were in circulation immediately following prophet Muhammed’s death (Lester 1999). The eventual solidification of the qur‘ān in its final form occurred under the rule of Uthman (A.D. 644-656), the third successor to Muhammed as head of the Islamic state, under the *rashīdun*, or rightly-guided caliphate, expansion. The multiplicity of qur‘āns reveals that while there may have been one version as the true recitation, there were many means of reaching people seeking to follow the word of God. This variety was perhaps available as a means to reach a diverse following (Lester 1999).
Some 200 years after the death of the prophet Muhammad, the encoding of the Hadīth, the actual sayings of the prophet Muhammad, began. This literature of the tradition of the Islamic community compiled from thousands of individual narratives, “consisting of supposed eye-witness accounts of Muhammad’s every act, his orders, prohibitions, recommendations, approval and disapproval” (Burton 1994:19) is controversial.

Because of the controversy surrounding Hadīth, some followers are selective in their adherence. These forms of ideology based upon the actions and sayings of the prophet -- who again was the one person within Islamic society who was to hear, indeed been chosen to hear, the word of God passed down through the Angel Gabriel - while not the supreme code are, to this day, more widely known than the Qur’ān and are thus upheld as the supreme “ideal” for how Muslims should live their lives.

Connections between metallurgy and Islam are well documented. The Qur’ān and Hadīth record numerous references to metals. Within the Qur’ān, there are 30 ayat, or verses, which specifically mention metals; in al-bukhāri’s compilation of Hadīth (Schmidt 2004), there are over 230 mentions of gold, silver, copper, and iron. Because people are encoding their lifestyles based upon Hadīth, the boundary between what is religious or ideological belief and secular belief becomes blurred. Various aHādīth (plural of Hadīth) concerning metallurgy, for example, are debatable because in different areas of the Islamic empire there are different interpretations among each polity on how it decides it should incorporate the “ideal” customs within its religious belief systems. zakāt, or almsgiving, is well addressed in the literature of the Islamic tradition, and greed,
ostentation, and hoarding of gold and silver, for example, are criticized in both the Qur’an and the Hadith, with much consensus-making occurring in the first several centuries.

Trade and Currency

During this early period of Islamization in the area of present Morocco, contact between the indigenous Berber tribes and the Arab conquerors was characterized by great conflict. The Arabs stationed themselves in towns and rabat or fortresses, and it was from this vantage point that Islam was to diffuse into the countryside. While Arabic became the language of culture and exchange within and between the rabat, it still did not permeate into the countryside. The divisions between urban and rural were synonymous with the divisions between Islamic and Berber. The interdependence of economy between the towns and the agrarian economy of the countryside was one of the few conduits through which exchange of ideas could occur.

Trade in early Islamic Morocco was catalyzed by an ecological diversity not matched by any of its Maghribi neighbors. Figure 1.2 is a map of northern Morocco and its major sites. Located at the northwest edge of Africa, Morocco has access to the Atlantic and Mediterranean Oceans and all of their biodiversity for the production of goods such as garrum, a type of fish paste, the variety of which was famed in the Roman empire’s trade. The arable land to the north of the Sahara was the source of goods to the desert oases and trading posts. The variability in geography meant that a series of affiliations between tribes was established for the circulation of goods, both within Morocco and from the south. Contacts existed with traders from sub-Saharan West Africa.
Figure 1.2: Map of Northern Morocco and Major Sites
(after Saadi 1975)
Africa for exchanges of salt for gold. Although the local supply of salt was sufficient in sub-Saharan Africa, the consumption of Saharan salt was promoted for trade purposes, and the consumption of gold, in part, was for the manufacture of coins. These trade routes had been long ago established and with the influx of Arab merchants operating in southern Moroccan towns such as Sijilmasa more gold was bought from the Berbers and financed more caravans. As Arabic was the language of transaction and the language of Islam, Muslims were favored in trade. These commercial transactions encouraged further conversion of the Berbers to Islam.

In A.D. 808, *idrīys ibn ‘abd allāh*, the son of the Saudi exile and the Berber elite established his capital in Fès. Satellite cities surrounding Fès were funded which would produce for him, and the Idrisid Empire, quantities of various goods to be sold through the markets in northern Morocco. These goods also found their way to the coasts and eventually back to the east of the Islamic Empire. Because the desire from the east of the empire was to incorporate their brand of Islam in the west, various tactics were used to incorporate the west into their “ideal” brand of Islam.

A century prior, after the rule of the rashīdun, the capitol of the Islamic empire shifted from Damascus in Syria, to Baghdad in Iraq. This shift eastward also shifted the core of what some people would call “absolute” Islam or “ideal” Islam to the east. This shift east left the people who were practicing in the western periphery to interpret and integrate the religion into their daily practices. The Berber converts, while yielding to Islam, still maintained their past beliefs. The rapid expansion of the empire westward produced an unstable political and religious body, necessitating the minting of coinage
with relatively restrained religious phrasing (Walker 1956:lvii).

Coinage played a role in uniting the Islamic Empire. Coins that were minted in the Maghrib and Andalusia carry a variety of formal signatures -- both internal (the chemical composition of the materials used) and external (the size and shape of the coin and the markings upon it) -- that vary from those minted in the east. These western periphery coins served a dual purpose: establishing a uniform politic by putting into circulation a tangible symbol of the state, and supplanting the region’s numerous and diverse religions. By establishing mints in recently conquered regions, like Tanger, for the purpose of paying troops, the Islamic empire was able to immediately, both literally and figuratively, strike its mark. Copper coins made for payment to the troops, for example, traveled with them as a circulatable calling card to newly opened regions. But within cohesive regions of communication and access, such as Fès, new leadership required a different tactic. By minting gold issue, the wealth of the state was distributed to the people of power. By putting economic symbols of authority into the hands of the people who have influence, jurisdiction over the region was established. The Idrisid dynasty was established in northern Morocco on such financial maneuvering, and in turn eventually firmly established Islam in the region.

1.4 Sources of Data

Travelogues

The only written documents for these periods of western periphery incorporation into Islam are from accounts by explorers. These accounts of foreign lands and customs
whet the appetites of those seeking knowledge of the empire outside their domain.

“Travel the world and seek knowledge” was, and is, one of the most widely known of Muhammed’s sayings. However, not every person could travel abroad. Travelogues of first- and second-hand accounts and observations provided the only means of introduction to foreign regions other than direct interaction with foreigners of that time. Travelogues were compiled to inform on the travel, the places and destinations, and the feel of the experience. The chronicles satisfied curiosity and a sense of adventure, and confirmed biases of beliefs and values.

Al-Bakri (A.D. 1014-1094), for example, never left his native environs of *al-Andalus* (southern Spain). But he was able to produce the *Book of Routes and of Realms* (A.D. 1068), which was entirely based on literature and the reports of merchants and travelers. In it, among other things, he details the roles of Sijilmasa and Ghana in the north/south trade across the Sahara.

But for those who could travel, the concerns of the traveler were varied depending upon the state of his society; the quest for trade, empire, or religious conversion, all induce a need to acquaint oneself with people and the markets of other regions. The information gleaned from travelogues in turn yielded encouragement for more exploration and contact. Whether fueled by an interest in exploration, dissemination of religion, mercantilism, diplomacy and military conquest, readers of the scholarly exchanges either had the desire to influence or to be influenced by others. Indeed, the literate influence change.
The records of al-Bakri and later travellers, such as Al-Idris (~A.D. 1100s), Ibn Battuta (A.D. 1304-1368) and Leo Africanus (A.D. 1485-1554), chronicle their journeys throughout parts of Europe, Africa, and Southwest Asia by outlining the geography, environment, architecture, government, travel routes, trade goods, customs and relationships, between groups of Muslims and between Muslims and non-Muslims. By studying their collective works, we can reconstruct life in certain regions of the Islamic empire. Because the travelogue is grounded in specific times and spaces, we have an introduction to the variability of religious adherence as seen through manners and mores. Through this window, we see the variability of the technologies in use and the variety in the treatment of objects, including metals.

The words on travel can be understood in another way: In experiencing the unknown, we learn new ways of understanding ourselves. The *Haj*, a pilgrimage to Mecca, Saudi Arabia, is for most Muslims, the ultimate travel experience, being at once both a physical and a symbolic journey. It is a form of transcendental journey through which seekers exchange experiences and ideas in order to reconnect with the life of the prophet Muhammed.

This communion with others on the same journey expands the worldviews of the individuals undertaking the Haj. Here, the recordings of the travelers, the riHalāt, the travelers, have additional importance. Their records of the length and conditions of the journey, their encounters with the unknown and the familiar, and their interpretations on variations of the theme of Islam, all served to educate their contemporaries and to record history.
Exchange of ideas was essential so that the empire could formulate a cohesive sense of unity for the entire domain. This exchange of ideas encouraged the introduction and dissemination of various sciences and technologies. These sciences and technologies incorporated Islamic understanding into their practices. In fact, the impetus for some of the practices came about to answer specific questions concerning Islam that dealt with mathematics and architecture, and certain aspects of chemistry.

Alchemy was one such science that underwent innovations in order to answer various questions within Islam. Not just a science that sought the means of transforming base metals into gold, alchemy also was also a philosophy which strove to unearth the mysteries of life and to understand and control the formation of inanimate substances (Albertus 1974; Waite 2002). At its most noble endeavors, it sought perfection of the human soul -- transcendence of self in an effort to achieve union and communion with God. Its lesser endeavors sought the methods of transmuting lead into gold and discerning the formula for physical immortality. To the true alchemist, the religious mysticism had to be understood before the methods of the physical transformation could be revealed. Through alchemy, the gradual ordering processes of earth that occur over long stretches of time could be achieved on smaller scales in shorter amounts of time. These small-scale orderings or “perfectings” could be achieved by individuals pure of heart and noble of spirit. Thus, alchemy was both a metallurgical science and a Divine art, growing with the cultures in which it was practiced, and subsuming and altering the intellectual (Read 1997).
The Intricate Tree

The fourteenth century text *al-dawHa al-mushtabika fi DawābiT dār al-sika* (*The Intricate Tree in the Realm of the House of Minting*) presents a history of technology. This Arabic text, passed down to us in its final form by A.D. 1346, details the meaning, production, and uses of metals in medieval Islamic society, and serves as the framework of this dissertation. Within *The Intricate Tree*’s are references to the social-cultural uses of metals, the technologies necessary to prepare them for appropriate use and trade within the Islamic state, the means by which they should be secured and maintained within the state, and the Muslim-Jew relations at the time. *The Intricate Tree* details important connections and branches of the world of metallurgy within the Islamic state.

*The Intricate Tree* provides insight not only into the production, extraction, and purification of metals, but also information on the role of metals within Islamic society. Originally produced in Fès, Morocco, in A.D. 1253, this text, divided into ten chapters, is a compilation of a range of authors and references collected over at least some two centuries. The collective work addresses issues such as God’s bestowing gold and silver on mankind and the uses of the two metals among His attributes; the values of gold, silver, copper, lead, and iron and their position of use in the process of reduction and refinement; the history of striking of the *dīnār* and *dirham* and the locations for stamping them and the limits of their manufacturing and uses; the chain of organization of the mint; and the good of zakāt in the role of the devout Muslim.

This fourteenth century Arabic text provides a unique unit of study into the history of metallurgical technology in the Maghrib. This text has never before been
translated into English. My transcribed copy of the text and my English translation are appended to this dissertation. A commentary is provided to assess the technology and the socio-cultural relationships addressed in this work about the minting houses in the western periphery of Islam.

*Archaeology*

Al-Basra, Morocco, contained one of these minting houses and, historical documents indicate, was one of the production centers for Fès under the reign of the Idrisid dynasty and is the source for the archaeological evidence used in the dissertation. The site of al-Basra, Morocco, today a small farming village, was once a thriving city known for its industries. “Al-Basra of the Red, al-Basra of the Flax and al-Basra of the Flies”, as noted by Ibn Battūta in his journals, refers to al-Basra’s prominence in the marketplace for its production of iron, linen and flaxseed, and dairy.


The excavated metal evidence includes metal artifacts, unprocessed minerals, slag, non-metal tools associated with the metal production, and metallurgical facilities. The discernable functional categories of metals include agricultural equipment, coinage,
construction hardware, craft materials, fine work implements, and personal adornments, and are described here in their historical context. A discussion of the layout of the urban site’s pyrotechnology industry is also included.

**Ethnography of Traditional Metal Artisans**

Medinas, or old cities, are the activity centers of the modern cities that have grown up around them. The medinas contain the souks, open air marketplaces, where anything and everything is sold. The souks of Morocco in both the past and present are an interesting amalgam of familial organizations, traditional technologies, and consumer goods. Within the families, technologies, and marketing strategies is an interplay of values that have origins in Islamic religion and culture. These values are evident in the metalworking industry, and are expressed in the organizational structure and production of metal artisan guilds. Today, globalization has begun to affect the balance of these values in interesting ways.

I carried out an examination of metal artisan guilds during the summer of 2003. This examination was an ethnographic study consisting of interviews with metal workers and metal vendors within the Old Medina of Fès, Morocco. In the format of questionnaires and direct observations, my interviews sought to elucidate a connection between beliefs of the past and the present. My survey of Fèsi metal workers and metal vendors revealed that few of the early metallurgical practices remain. However, the metal artisans conveyed -- through stories dealing with the topics of traditional
technology, religion and ethics, foreign policy, and apprenticeship -- the meaning of metallurgy and Islamic religion and culture in their lives.

1.5 Structure of This Dissertation

The work here presents a reconstruction of early Islamic Maghribi metallurgy. The reconstruction based on the SCOT model adds to our knowledge of culture. By treating scientific and technological knowledge as social constructions, the information compiled here in the form of analyses of Islamic textual sources, travelogues, and translated text, and the analyses of coinage and archaeological data, increases our understanding of ways of knowing. This work is divided as follows. Chapter Two deals with the compilations of mentions of metallurgy in the Qur’an and the Hadīth and contributes to our knowledge of how metallurgy, in all its forms, is dealt with in these primary sources of Islam. Chapter Three examines the importance of trade and currency in unifying the Islamic empire by presenting the use of coins as a material culture and written document of the times. Chapter Four presents four travelogues recorded at various moments in the first centuries of the Islamic empire, and examines the role of physical and mystical journeys as forms of information dissemination. Alchemy is used as the main example. Chapter Five introduces to the West a translation and commentary of the fourteenth century text *al-dawHa al-mushtabika fi DawābiT dār al-sika*, or The Intricate Tree in the Realm of the House of Minting. Chapter Six presents archaeological data and analyses from the site of al-Basra, Morocco, one of the Idrisid dynasty’s production and minting sites. Chapter Seven, the epilogue, provides an ethnography of
the modern day metal artisans in Fès, Morocco, and presents the beliefs and concerns of both the Medina’s artisans and the present government, in light of globalization.

A glossary of Arabic terms used in this dissertation is presented in Appendix A. Appendix B presents the mentions of metals in the Qur’ān, noting the type of metal mentioned and the context in which it was used. Appendix C presents the complete Mentions of Metals and Alloy in the Hadīth, Sahīḥ al-bukhārī (Schmidt 2004). This listing provides the volume, book, and number, of each metal Hadīth, and notes the type of metal mentioned, the narrator of the Hadīth, and presents the Hadīth, in its entirety, for referencing within the dissertation. Appendix D presents the Arabic text of al-dawḥa al-mushtabika fī Dawābiṭ dār al-sika. For easy referencing, the Arabic text is line numbered to match my English translation, which is found in Chapter Five. Appendix E contains the catalog data for metal artifacts, excluding iron nails, and Appendix F contains the catalog data for slag and iron nails excavated at the site of al-Basra, Morocco.
As you sow, so shall you reap.
(Though the rewards are not to be had in this life, but in the next.)

2.1 Introduction

Islamic religion and law shaped ideas about metals and metallurgy in Islamic culture. Prior to Islam, the focus in the Arabian Peninsula was on the accumulation of wealth, through trade and interest on exchanges. The codification of Islamic law, specifically the *qur’ān*, and later the recorded sayings of the prophet Muhammed, were effective in altering the view of metals, from material commodities to acquire and amass to consecrated assets to be kept in circulation for the good of society.

The foundations of the new religion were a consequence of the Arabian people engaging in a pastoralist lifestyle. As a natural outgrowth of the desert environment, their nomadic existence involved trade as a part of a subsistence economy -- acquisitions of resources from further afield were obtained through exchange with other nomadic tribes. Towards the end of the sixth century, conditions in the oasis area of Mecca made a settled life possible. The imports of rare and luxury goods from the Far East and Africa and their export to lucrative markets in the north, enabled some Meccans to amass profits (Cleveland 1994:7). The accumulation of resources by a few transformed the existing “egalitarian” tribal society into a dichotomy of “haves” and “have nots”. This increasingly polarized society built on commerce saw the growth of a disenfranchised
class. The elderly, widowed, women, and orphaned children -- previously maintained by the charity of relatives and tribal leaders -- were being marginalized. Their neglect, at the expense of aggrandizers, became an increasing problem. The focus was on material goods and the growth of capital, including the amassing of precious metals. The codification of the Qur’ān started a new system of laws that changed the meaning and use of metals in society.

2.2 Islamic Law

Islamic law is relevant to metallurgy because references to metals in the Qur’ān change the focus on precious metals from accumulating wealth to encouraging the distribution of assets throughout the society. The Qur’ān, revealed over the last 23 years of Muhammed’s life, was a call for social reform of the tribal laws which previously existed, but had been modified under the new system of mercantilism. Muhammed, through sharing these revelations, gained an audience for the warning and the promise of the Hereafter. The warning was of the impending doom for those who did not follow the prescribed changes and avoid proscribed behaviors in order to achieve the promise of the Afterlife in the Gardens of Eternity. The message of the Qur’ān was embraced by very few in its beginning. Only after years of struggle, the relocation of the believers to Medina in A.D. 622, and their subsequent conquest to regain Mecca in A.D. 632, did the Qur’ān become the code of law in the Arabian Peninsula and the standard in trade and transactions between Muslims and others (Cleveland 1994:8-12). For Muslims, this transmitted word of God became their first source of codified knowledge, whether by
memorization or transcription, and brought them out of the Age of Ignorance, or jāhiliya, into Islam.

Over the years, however, the qur’ān was supplemented with the sunna, which became the second source of Islamic law. While the qur’ān itself is a universally standard text with only miniscule variant readings and has ultimate precedence (Benthall 1999:28), the sunna encompasses the way in which the prophet Muhammed, the messenger who delivered the qur’ān to the people of Mecca, lived his life. As the only one in Mecca society given the privilege of receiving the recitation and the responsibility of ensuring its accurate transmission, Muhammed was held in the highest esteem among the Muslim believers of his time. As the ideal to receive the revelations, Muhammed’s actions and words were the closest many came to having a personal translation of the qur’ān-ic teachings for their daily lives. The sunna illuminates the qur’ān.

The sunna includes the Hadīth -- the narration of the life of the prophet Muhammed and what he approved. According to scholars of aHādīth (plural of Hadīth), they include “what was transmitted on the authority of the Prophet, his deeds, sayings, tacit approval or description of his sifaat (features) meaning his physical appearance” (Azami 2002), though many do not include Muhammed’s physical appearance in their definition. The aHādīth are the literature of the tradition of the Islamic community compiled from thousands of individual narratives, “consisting of supposed eye-witness accounts of Muhammed’s every act, his orders, prohibitions, recommendations, approval and disapproval” (Burton 1994:19). Because the aHādīth were recorded both during and up to two centuries after the death of Muhammed, there is, among some scholars, doubt
and to whether some of the sayings recorded as aHādīth are necessarily his exact words.

Each Hadīth is composed of two parts: the matn, or text, and the isnād, or chain of reporters. The matn is the narrative of what the prophet Muhammed said, while the isnād is the accounting of the chain of reporters, “literally the ‘support’ on which the document rests” (Burton 1994.ix). aHādīth are ranked according to the degree of directness of the chain and the degree of veracity and character of each of the reporters within the chain. Weight is also placed on the proximity of the reporter to Muhammed; those transmitting the narration of the prophet Muhammed who were in his inner circle, for example, would be given more credibility than those who were simply in his presence for a brief period of time.

The compilation of Hadīth narrative supposedly covers “every conceivable aspect of personal, private, domestic, public, political, commercial, military, fiscal and administrative as well a strictly religious, activity undertaken” on an hourly, daily, weekly, and yearly basis during the years of Muhammed’s calling (Burton 1994:19). These recordings are classified as into the categories of SaHiH (true or sound), Hasan (fair or acceptable), and Da’īyf (weak), depending upon their chain (Burton 1994:111). While those considered SaHiH are agreed upon by most Islamic scholars, some independent researchers have raised questions about the motives of the reporters. Compelling arguments exist to question the veracity of even those aHādīth considered sound and which are widely accepted in our day based upon the motives of individual reporters close to the prophet (Mernissi 1991). While controversial, the fact the many of these traditions have survived over these past fourteen centuries gives weight to their
meaning in Islamic society. The fact that the aHādīth were record up to two centuries after the death of Muhammed indicates that they serve not as “a document for the history of the infancy of Islam, but rather as a reflection of the tendencies which appeared in the community during the maturer stages of its development” (Burton 1994:35). An examination of them, in addition to the qurʾān, gives insight into the foundation of the Islamic culture and the role of metallurgy in its formulation.

2.3 Mentions of Metals

Connections between metallurgy and Islam are well-documented. The qurʾān, believed to be the recorded word of God, contains mentions of gold, silver, iron, copper, and brass, and lead in 30 ayāt, or verses. Even one sūra, or chapter -- sūra 57 -- is named “al-Hadīd”, or “the Iron”. The aHādīth record numerous mentions of specific metals. al-bukhāri’s compilations, which have been argued by Islamic scholars to be the most complete, accurate, and rigorously checked, include over 230 mentions of gold, silver, iron, and copper. Table 2.1 shows the breakdown of the mentions of eight metals and one alloy in the qurʾān and the Hadīth, SaHīH al-bukhāri (Schmidt 2004).

Table 2.1: Mentions of Metals and Alloy in the qurʾān and aHādīth

<table>
<thead>
<tr>
<th></th>
<th>gold</th>
<th>silver</th>
<th>iron</th>
<th>copper/brass</th>
<th>lead</th>
<th>tin</th>
</tr>
</thead>
<tbody>
<tr>
<td>qurʾān</td>
<td>14</td>
<td>10</td>
<td>5</td>
<td>3/6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>aHādīth</td>
<td>112</td>
<td>60</td>
<td>58</td>
<td>2/2</td>
<td>1</td>
<td>1?</td>
</tr>
</tbody>
</table>

The mentions of metals found in the qurʾān reflect the concerns Muhammed had about the society of Mecca into which his was born and lived. The various metals
mentioned in the Qur’ān can be grouped into five distinct categories: 1) gifts from God, 2) things not to be hoarded in this lifetime, 3) forms of payment, 4) implements of punishment for the Nonbeliever in Islam, and 5) a determining factor in a person’s destination in the Hereafter. Appendix B contains a list of the mentions of metals in the Qur’ān and brief notes on each metal’s contextual use. Examples of these categories are given below.

The Categories of ayāt Identified

Within the Qur’ān, metals are distinctly gifts from God. Iron was made malleable for David (Qur’ān 34:10) and molten brass was furnished to Solomon (Qur’ān 34:12). Gold and silver, in the Qur’ān, are explicitly put in the category of desired objects, but placed beneath one’s relationship to God and are to be accorded their due place in the belief-system; gold and silver are the rewards of a life dedicated to Islam (Qur’ān 18:31; 22:23; 35:33; and 76:15, 16, 21) Gold and silver are among the things assigned in this world’s life only to the Nonbelievers (Qur’ān 43:33-35) and requested by them as a sign of God’s authority (Qur’ān 17:93). Qur’ān 3:13, in describing the position metals should have in the greater value scheme of life, states:

Fair in the eyes of men is the love of things they covet: Women and sons, heaped-up hoards of gold and silver; horses branded (for blood and excellence); and (wealth of) cattle and well-tilled land. Such are the possessions of this world’s life; but in nearness to Allah is the best of the goals (to return to).

To hoard gold and silver would distance oneself from God and is admonished in the Qur’ān. Qur’ān 3:75 tells how the readiness of the People of the Book (Jews and Christians) or their reluctance to relinquish an amount, as great as hoards of gold or as
little as one silver coin, put in their trust could be the determining factor between their rank among Believers and the Nonbelievers. That money should be kept in circulation for fear of a “grievous penalty” (qur’ān 9:34) is well described. The separation between God and the Nonbelievers would be everlasting, like the separation described in qur’ān 18:96:

[God said:] “Bring me blocks of iron.” At length, when he had filled up the space between the two steep mountain-sides, He said, “Blow (with your bellows).” Then, when he had made it red as fire, he said: “Bring me, that I may pour over it, molten lead.”

The structure of the divide would be complete and permanent. Not even as much gold as the earth contains would be enough for Nonbelievers to ransom their passage into the Afterlife (qur’ān 3:91).

In contrast, references to gold and silver as prescribed forms of payment are found in the qur’ān. “Heaps of gold” are suggested as payment to one wife for replacing her with another (qur’ān 4:20) and a silver coin is ideal for the purchase of food (qur’ān 18:19). However, the payment should reflect the worth. qur’ān 12:20 describes the sale of Joseph by his brothers for a few silver coins as a “low price”.

Examples of those who questioned the authority of God are given. The Pharaoh of Egypt, for example, is cited in the qur’ān, asking of Moses why gold bracelets were not bestowed upon him. (qur’ān 43:53). The Pharaoh’s fate is well illustrated later. Indeed, for those who disbelieve, there will be maces of iron to punish them (qur’ān 22:21). In denying the favors of the Lord, “heat of fire and flash of brass” will be sent which the Nonbelievers will not escape (qur’ān 55:35).

God, in the qur’ān, is Almighty. Be it stones or iron, God can raise anything up
(qur’ān 17:05). He made iron in order to determine if men conducted themselves with justice (qur’ān 57:25), and on the Day of Judgment, the sky itself will be like molten copper (qur’ān 70:08). The sinful will taste fruit of the Zaqqum tree and, like molten brass, it will boil their insides (qur’ān 44:45); but for those who enter the Garden of Eden (and their wives) dishes and goblets of gold will be passed around (qur’ān 43:71) and for the companions seated of the right of God, there will be thrones encrusted with gold and precious stones (qur’ān 56:15).

sūra al-Hadīd -- The Iron

The sūra entitled “al-Hadīd”, “the Iron”, is unanimously agreed to have been revealed in Medina. Scholars believe that it probably was revealed between the fourth and fifth year of the Hijra -- during the interval between the Battle of Uhud and the Truce of Hudaibiyah -- the time when this “Community of Believers”, or ‘āmma, were surrounded and outnumbered by the disbelievers of Arabia. This revelation is often considered as an appeal for both the willingness to undertake jihād and the willingness to financially assist the cause. qur’ān 57:10 explicitly states so when God addresses the ‘āmma saying, “Those of you who would spend and fight after the victory can never be equal to those who have spent and fought before the victory.” The topic of this sūra is to compel Muslims to spend in the cause of God in the pursuit of the belief of Islam and the military effort and, in particular, to make monetary sacrifices. Financial sacrifice, especially during a time of hardship, was a concrete expression of the spirit and essence of the Believer; many could claim to be members of ‘āmma, but their actions, especially
personal sacrifices in times of hardship, spoke more clearly than words.

Financial sacrifice, in contrast to the greed and ostentation of pre-Islamic times, was one distinctive trait of the ‘āmma. Indeed, greed and ostentation are criticized in the Qurʾān. Qurʾān 9:34 specifically details the concerns surrounding the hoarding of gold and silver. There are no fewer than five ḥadīth dealing with the hoarding of gold and silver. A reported ḥadīth traced back to Um Salama, one the wives of the prophet, relays that Muhammed said, “He who drinks in silver utensils is only filling his abdomen with Hell Fire” (Hadīth 07.69.538). Many Muslims hold this as an abhorrence to any extravagance. Indeed, one of the five main pillars of Islam, zakāt, which identifies charity to others as a duty, would seem to uphold this interpretation. But while some agreed that the proscription was against drinking from silver vessels, they still believed it was permissible to eat off them. Others believed both eating and drinking from either gold or silver vessels was prohibited, but that their manufacture was acceptable (Irwin 1997:83), perhaps believing that dishes and goblets of gold were only meant as rewards to Believers in the Afterlife (Qurʾān 43:71).

Ibn Battūta, while in Persia, attended a banquet hosted by a Persian emir. He observed that some guests of the emir were served on gold and silver, while others more outwardly pious dined on wood and glass (Irwin 1997:83). Ibn Battūta’s observations, made in the fourteenth century, depict a time when the essence or moral of this ḥadīth was known, if not the exact quote. Indeed, the Sahīh al-bukhāri record fifteen ḥadīth dealing with the practices forbidden by the prophet Muhammed concerning gold and/or silver drinking vessels and/or implements.
2.4 The aHādīth Relating to Metals

While many of the mentions of metals in the Hadīth, SahīH al-bukhāri appear to be repetitions of the same Hadīth, they are merely the confirmed records traced back by multiple sources who were witness to what the prophet Muhammed said. Appendix C presents the complete mentions of metals in the Hadīth, SahīH al-bukhāri. These citations were located in and compiled from the complete “Translation of Sahih Bukhari” as found in Schmidt (2004). (The information found in Appendix C is further divided into tables which are presented in the remainder of this chapter.) The number of times an identical or similar Hadīth is recorded not only gives extra weight to the veracity of the Hadīth, but can also be viewed in direct proportion to its fluidity among the ‘āmma’s knowledge in the growing Islamic empire; its presence on the page literally corresponds to its presence in the minds of Muslims.

Not everyone could read or memorize the entire Qur’ān, but most could remember a number of anecdotes that connoted specific lessons. While the mentions of metals in the Qur’ān were useful for the scholars of Islamic law, it is the mentions of gold, silver, and iron in the aHādīth that shaped the relationship Muslims have with metals. Their uses, found in the compilation of aHādīth, present a very different picture than their uses in the jāhilīya. The mentions of metals can be divided into the following five categories: 1) prescribed uses, 2) proscribed uses, 3) forms of payment, 4) implements of punishment, and 5) tools and other objects. Tables 2.2-2.6 present the listing of Hadīth, SahīH al-bukhāri on metals divided into these five categories. The element symbols for gold (Au), silver (Ag), iron (Fe), copper (Cu), and lead (Pb) are used in these tables.
Prescribed Uses

The prescribed uses for metals include metals used for zakāt (charity and almsgiving) and metals given as rewards in the Afterlife for Believers in Islam. The rewards in the Afterlife are personal trappings of utensils, combs, and necklaces; these rewards closely parallel those described in the Qur’ān. The mentions of metals used in zakāt are divided into: the portions of charity to give based upon one’s current possessions, incidents of concerns for charity diverting attention from prayer, incidents of intention or desire to be charitable, comparisons of charitable gifts, and descriptions of a future time when charity is offered but not needed. These prescribed uses of zakāt and rewards only reference gold and silver.

zakāt is the third of the Five Pillars of Islam and derives from the verbs “to purify” and “to be pure in heart” (Cowan 1994:441). It is generally understood that, “by giving up a portion of one’s wealth, one purifies that portion which remains, and also oneself, through a restraint on one’s greed and imperviousness to others’ sufferings” (Benthall 1999:29). Reciprocally, by accepting zakāt, the recipient is purified from jealousy towards those in better economic circumstances. Thus, zakāt is intimately tied to the rewards for Believers. The act of giving and receiving zakāt fulfills both a societal need and a moral one. It transforms the focus from self to other and from now to the Hereafter -- the very reorientation that Islam urges.

zakāt is compulsory charity, a religious duty, and is different from Sadaqa, voluntary almsgiving. The beneficiaries of almsgiving are outlined in the Qur’ān (Qur’ān 9:60), and while the term Sadaqa is explicitly used, the general interpretation is
Table 2.2: Prescribed Uses of Metals in the *Hadīth, SaHīH al-bukhāri*

<table>
<thead>
<tr>
<th>I. Zakat/Charity</th>
<th>Au</th>
<th>Ag</th>
<th>Fe</th>
<th>Cu</th>
<th>Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Portions to Give</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>02.24.487</td>
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<td>02.24.526</td>
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<tr>
<td>02.24.534</td>
<td>■</td>
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<tr>
<td>02.24.538</td>
<td>■</td>
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<tr>
<td>02.24.561</td>
<td>■</td>
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<tr>
<td>04.56.678</td>
<td>■</td>
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<tr>
<td>B. After Prayer</td>
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<td>01.12.810</td>
<td>■</td>
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<td>02.22.312</td>
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that this sura refers to zakāt (Benthall 1999:30). The ways in which zakāt are to be collected, however, are only found in the sunna. One argument for the absence in specificity in the Qur’an, given by Al-Khayyat in his 1993 article (Benthall 1999:32), is that “God foresaw that there would be new forms of money and wanted to ensure that there was flexibility” (Benthall 1999:32). The argument for flexibility also relies on the principle that the less labor exerted and capital invested towards acquiring a sum of wealth, the greater the tax on it should be (Benthall 1999:32). While the proportion of zakat is fixed today, this was based on observance of the economic structure of the forming Islamic society (Datta 1939). The Hadith that jointly mention charity and metals elucidate that sliding scale.

zakāt is associated with prayer in the Qur’an (Qur’an 9:103, 21:73, and 58:13). zakāt itself is a form of financial worship and “without its observance, the efficacy of prayer is negated” (Benthall 1999:29). That zakāt and prayer are tied to the sunna and Hadith of the prophet Muhammed is no mistake. Muhammed is said to have left prayers early, to go to one of his wives’ houses and collect a weight of gold left there, and immediately return to the congregation. When asked about his hasty departure and return, the Hadith relate that he responded, “I remembered a piece of gold lying in my house and I did not like it to divert my attention from Allah’s worship, so I have ordered it to be distributed (in charity)” (Hadith 01.12.810). This Hadith is at once a cautionary tale about preoccupation with material possession and a morality tale about charitable works. The collection of prescribed uses serves to illustrate that individuals are merely trustees on earth for the rewards in the Afterlife.


**Proscribed Uses**

The proscribed uses include usury, things forbidden by the prophet Muhammed, conspicuous consumption, and hoarding. These four subcategories also only refer to gold and silver, except for one Hadīth (04.52.157) that mentions lead and iron as alternatives to the conspicuous consumption of gold and silver on sword decorations. Conspicuous consumption involved any shows of worldly goods. The aHādīth addressing the things forbidden by the prophet Muhammed included prohibitions against using silver (or gold) utensils, for eating and/or drinking, and wearing gold rings. Other things forbidden include the wearing of clothes of silk, because such things were reserved for the Believers of Islam in the Afterlife.

Any amassing of gold or silver, according to the aHādīth, is admonished and includes appropriate penalties. Money was to be kept in circulation. Qur’ān 9:34 relates: “They who hoard up gold and silver and spend them not in the way of Allah; announce to them a painful torment.” While this sūra, in context, would seem to apply only to Jews and Christians, the Hadīth clarify that this Qur’ān is not only for the people of the Scripture, but both for them and for Muslims (Hadīth 06.60.183). Other aHādīth talk of the propensity of each of us to hoard and to thus be distracted. Qur’ān 102:1, which relates “The mutual rivalry for piling up of worldly things diverts you,” is mentioned within Hadīth 08.76.446. This Hadīth and Hadīth 08.76.447 also refer to “the son of Adam”, mentioning that if he had a valley full of gold, he would like to have two valleys or more. One can infer, from the reference to the son of Adam, that the Hadīth has universal application to all Believers in God -- Jews, Christians, and Muslims.
Table 2.3: Proscribed Uses of Metals in the *Hadith, SaHīH al-bukhāri*

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The exchange of gold for gold and silver for silver is proscribed in both the Qur’ān and the aḤādīth unless equal in weight and from hand to hand. The danger of same-same exchanges under any other circumstances is in ribḥ, which at its root means “to increase/doubt/suspicion”, but is loosely translated as interest or usury. A number of aḤādīth condemn people who take interest on exchange, who pay it, who draw contracts involving it, and who act as witnesses to such contracts (Hardie and Rabooy 1991:57). Just as all parties in zakāt eventually benefit, all parties in ribḥ ultimately suffer. “The taker and the giver in riba [ribḥ] are alike [in guilt]” (Hardie and Rabooy 1991:57).

The exchange of gold for silver and silver for gold, however, was allowed. This provision allowed for bimetallism, which was useful to encourage the state’s economy and necessary for the regulation of prices due to supply and demand. Chapter Five includes a discussion of exchange rates.

**Forms of Payment**

Various forms of metals were, obviously, used in exchanges as payment. The aḤādīth clearly identify the use, or lack thereof, of gold, silver, and iron in the negotiations of camel sales, property sales and rentals, and pawning (or mortgaging), and in the payment of claims and booty. Bridewealth is also conferred with a weight of gold equal to a date as payment in marriage to a divorced woman, or with an iron ring which, since beyond the groom’s afford, is substituted by what he has dedicated to memory of the suwar (plural of sūra) in the Qur’ān. The aḤādīth also recount stories of sex being purchased outside of marriage but, without marriage, not procured. A house built of gold
Table 2.4: Forms of Payment Using Metals in the *Hadīth, SahīH al-bukhāri*

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is offered as reparations to the pious man wrongfully accused by his neighbors of
fathering a child with a prostitute; the accused refuses the offer, but accepts a house built
of mud instead. Gold and silver are appropriate forms of payment for contracts of
manumission for those in servitude. Finally, the aHādīth provide lessons of those
Nonbelievers in Islam who attempt to purchase their entry into the Gardens of Paradise:
they will be refused. Slaves to riches in this lifetime, their wealth cannot buy them
intercession in their fate.

 Implements of Punishment and Torture

The fate of those Nonbelievers is punishment and torture, while tests of faith also
include painful persecution. Within the aHādīth, implements of punishment are
exclusively constructed of iron and are in the forms of combs, brands, hammers, and
hooks. The aHādīth present the picture of the Believer, placed in a ditch with a saw at his
head and cut in two; his body is then combed with iron combs to remove the flesh and
nerves from his bones. Yet, this true Believer would not abandon his religion.

If a Believer, after having embraced Islam, committed theft and murder, the
punishment could be equally gory. The aHādīth present a picture of a group of ill
foreigners who, after conversion to the religion, received zakāt of camel’s milk and urine,
the fluids of which are believed to have curative properties. After becoming healthy, the
converts killed the shepherd and drove the camels away. The infidels’ hands and feet
were cut and their eyes were branded with heated pieces of iron. One is said to have
Table 2.5: Metals as Implements of Punishment and Torture in the *Hadīth, SaHiH al-bukhāri*

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licked the earth with his tongue until he died. Such is the punishment of those who desert the religion.

Other aHādīth report that after death, once the human body is laid in its grave and its companions return to it, the body will be visited by angels. These angels will ask questions about what it knew of Muhammed. The Believer will profess the shahāda (the first Pillar of Islam -- the proclamation of the faith) and the angels will present to it both the Hell-fire and the Afterlife, saying that a place has been given to it in Paradise. The Nonbeliever will not know, and the angels will admonish his body, and it will be hit with an iron hammer between its ears until it cries out. That cry will be heard by all except humans and angels.

Those who were given knowledge of the Qur‘ān and put it into memory, but slept all night and did not recite it and did not act upon it by day, will have a miserable, unending fate until the Day of Resurrection. According to the aHādīth, an iron hook will be pushed inside their mouths until it reaches the jawbone. Then it will be torn off one side of the cheek and placed into the other, only to be repeated. Though the flesh will heal again, the operation will continue. Finally, for those who commit suicide by pieces of iron, they will be punished with pieces of iron in the Hell-fire, and Paradise will be forbidden to them.

The original sources for the negative connotations of iron within Islam are unknown, but perhaps stem from another of Muhammed’s Hadīth. Hadīth 3.34.314 relates the analogy that a good companion and a bad companion are like a perfume seller and a blacksmith’s bellows (or furnace), respectively. The former may give you some
perfume, or you may buy some from him or smell its fragrance; the latter might singe your clothes, and at the very least you will breathe in the fumes of the furnace.

**Tools and Other Objects**

A variety of metal tools and other metal objects are presented in the aHādīth. The actions of the prophet Muhammed factor into these aHādīth more so than his words. In one instance, Muhammed has a gold ring that he wears. As he sees others increasingly copying his fashion, he throws the ring away. Others throw theirs away as well. The prophet had a silver ring stamped with “Muhammed, Apostle of God” for use in official correspondence, because he was told that the Byzantines did not read letters unless stamped with a seal. Others were admonished for obtaining rings with the same inscription. Iron and gold in various forms are used in judgment in the Hereafter and dreams of the prophet Muhammed contain a number of objects, whose material is specified, seemingly in order to enhance the imagery of the story. Similarly, all other mentions of metals within the aHādīth appear to be specified in order to relay the accuracy of the report.

Instances of metals in the qur’ān and aHādīth serve to shape practices surrounding social welfare and the economy, and are useful in illustrating the rewards of a life in the faith and practice of Islam and the consequences of those who deny the faith or are led astray by the present world. The warnings and promises of the Hereafter, as relayed by Muhammed to the early Islamic society, from the revelations of the qur’ān and from his life as testimony, incorporate metals to emphasize that they are gifts from God.
Table 2.6: Metals Tools and Other Metal Objects in the *Hadīth, SaHīH al-bukhāri*

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The qur’ān and aHādīth, in their mentions of metals, present examples for the forming Islamic society to follow in order to obtain the Afterlife. The punishment of unjust economic dealings and hoarding resulted in the painful separation between God and person, and punishment and torture of unbelievable agony. The ‘āmma, in their collective thought, socially constructed an understanding that metals were to be kept in circulation for the good of not just their lives but also the lives of those less fortunate. This transformation of thought would later enable the growth and spread of Islam to the east of the Arabian Peninsula and to the west, to the Maghrib and beyond.
CHAPTER 3: Cultural Context of Coins, A Case Study of Metals in Islam

طاحونةُ اللهِ تطحنُ وَ لكِنِّ بِسبًا. God’s mill grinds slowly, but surely. (And the message on every grain is spread wide.)

3.1 Introduction

The warning and the promise of the Qur’ān gave direction to the people of the Arabian Peninsula in their use of metals and money: usury was admonished, trade was permitted, and zakāt would be rewarded. The Qur’ān clearly defined the modes of exchange in Qur’ān 2:275-276:

Those who devour usury will not stand except stand as one whom the Evil one by his touch hath driven to madness. That is because they say: “Trade is like usury,” but Allah hath permitted trade and forbidden usury. Those who, after receiving direction from their Lord, desist, shall be pardoned for the past; their case is for Allah (to judge); but those who repeat (The offence) are companions of the Fire: They will abide therein (forever). Allah will deprive usury of all blessing, but will give increase for deeds of charity [zakāt]: For He loveth not creatures ungrateful and wicked.

The power of this revelation was unambiguous. The Qur’ān, with the sunna, the oral history of the prophet Muhammed, and its aHādīth, the narrations of his life and what he approved, outlined the prescribed and proscribed behaviors involving metals. Hoarding and ribH, excessive interest or usury, resulted in the ultimate punishment -- the separation between God and person. Charitable acts resulted in rewards in the Afterlife. Money in constant circulation simultaneously encouraged the habits of charity while it discouraged unjust economic practices.

Even within its first 200 years, Islam the religion was influential in transforming
the structure of trade. The power of the religion in transforming trade encouraged the
growth of Islamic culture. Islam quickly spread by and through the state’s organization
and control of currency. The changes that started in the Arabian Peninsula progressed
into a revolution of thought and action that would spread from the Middle East to the Far
East and to the west to the Maghrib at its western periphery. This revolution in thought
and action is clearly expressed in the coinage in circulation at that time. Coins were, at
once, political, economic, and ideological markers of the changes that enabled the
formation of a unified Islamic state. This chapter presents previous research on metals in
Islam through a case study of its early coinage.

By tracing the evolution of coinage in Morocco over the course of roughly two
centuries, a number of analyses can be undertaken. Emphases on mint locations, coin
weights and material compositions and the consistencies of these characteristics, and coin
iconography and inscriptions reveal affiliations of mints to certain political and religious
followings. The following discussion on coinage in northern Morocco begins with
background information on the evolution of coinage within the Arab societies prior to
Islam, and proceeds through the time period in which Morocco is opened to Islam at the
end of the seventh century A.D., until the first invasion of the Idrisid dynasty by the
Fatimids in A.D. 917. (All dates hereafter are given in A.D. unless otherwise noted.)
While the quantities of coins produced in Morocco for this time span are unknown,
examination and comparison of individual coins from various collections is informative.
3.2 Money Defined

Money is considered any commodity or token that is recognized by society as a medium of exchange, which has a store of value, and can be used as a unit of account. In the *jāhilīya*, the time before Islam, barley grain and mustard seed essentially served this purpose (Eustache 1969:97). As forms of commodity money, they became more convenient for use than barter, though proved an inconvenience for transport and storage over long distances and lengths of time. To be a durable form of currency -- more desirable for trade -- the medium of exchange should be easily portable, have liquidity, not be perishable and maintain a stable, intrinsic value, be divisible into small units without destroying its value, be verifiably countable, and be fungible (Munn et al. 1991:668-669).

In early Islam, coins of gold and silver, and at times iron, brass and copper (and to a lesser extent camel skins), were considered more durable forms of currency (Eustache 1969). Metal coins are more easily transportable than bushels of mustard seeds and barley, are non-perishable and able to maintain an intrinsic value, are easily melted down into smaller quantities, and are verifiably countable. Metal coins also have a high liquidity, being able to be exchanged for other forms of money or another commodity. Further, metal coins are highly fungible -- easily exchanged or substituted for another example of the same good rated at equal value. Problems may arise, however, when multiple forms of durable currency, such as different metal coinage, are circulating within the same system.
The monetary principle of Gresham’s Law explains this problem. Gresham’s Law derives from the idea that when two or more forms of currency are in use as legal forms of tender, having the same rated value in the marketplace, the “bad” money will drive the “good” money out of circulation (Munn et al. 1991:479). “Good” money is money with little difference between its exchange value and its commodity value. Metal coins, for example, are closely if not equal to the value of the metal by weight. “Bad” money is money with a significant difference between its commodity value and its market value, which results in the market value being less than its exchange value. Any coin that had been debased -- through corrupting its purity or cutting or scraping its edge -- was considered “bad” money. Two kinds of money of equal power and seemingly equal value, but in reality unequal value, become increasingly difficult to keep in concurrent circulation. The cheaper money becomes the standard because that is what is used as payment, while the dearer money is hoarded (Munn et al. 1991:479).

Prior to the revelation of Islam, the money which circulated in the Arab houses was exclusively of gold and silver (Eustache 1969:98). The Arabs themselves were not mining, but simply utilizing money from neighboring dynasties. From the Byzantine empire, weights of gold depicting the heads of state were used, and from the Romans, weights of silver (Eustache 1969:99). Whether or not the values were stable and standardized would have constantly been in question.

The currencies of a unit of gold (dīnār) and a unit of silver (dirham) remained the same into the Islamic period. Islam did not change the system of weights and measures; instead it made official prior agreed upon standards (Eustache 1969:99-101). The
monetary system was agriculturally-based, using the *mithqal* as a unit of measure (Eustache 1969:101). It was decided that one mithqal was the equivalent of 60 grains of medium-sized barley whose husks were intact, and each grain of barley was equivalent to 100 grains of mustard (Eustache 1969:101). Barley’s growth is fairly predictable in the Middle East; it is more tolerant of soil salinity than wheat, and it can thrive in temperatures too cold for other grain crops, such as rye. Mustard is a peculiar spice in that its seeds are widely employed in preserving other foods, and can also be readily stored for years and retain their potency until crushed and mixed with water (Swahn 1991:28-29). Due to the durability of the grains and their widespread use, barley and mustard served as ideal bases for the early Islamic monetary system.

### 3.3 Multiple Currencies

*Gold Consistency of Restamped Coins*

In the Maghrib, prior to Islam, precious metal and copper coinage were minted first by the Phoenicians and then by the Romans on the commodity basis of livestock, specifically the ass (Williams 1997:39-61). However in the East, Islam had established the commodity basis of money on the barley grain. The Roman coins, which were most widespread and intensely used during the late period of the Roman Empire (Williams 1997:61), were still in use in North Africa when Islam entered the region (Williams 1997:86-96). Due to the rapid expansion of the Islamic empire and problems of transport, storage, and perishability, the shift to an imperial metal standard proved more stable and durable. The minting and circulation of gold dīnār and silver dirham, and to a
lesser extent copper *fils*, as the bases of a currency standard allowed the continuation of prior systems while introducing new rates of exchange. That Islamic empire minted the coinage from blanks or restamped existing coinage with Islamic slogans and placed it into circulation in a region, was one sign that that region was under Islamic rule.

The answer to the question of whether the new Islamic coins were restamped from previously existing coins or from new ore supplies can reveal information about the strength of the empire’s presence in the region. Eustache’s (1969) translations of historical documents presents that the practice was of restamping prior existing coinage. However, it is difficult to confirm this practice of restamping as the previous surface characteristics, such as the identity of the earlier mint, are lost when the coin is restruck. Gondonneau and Guerra (2002) have studied this question of the Islamic empire’s restamping of prior existing regional currency through metals characterization. While it would be ideal to trace the sources of gold and silver back to the mines where they were extracted to see if the ore supplies had the same chemical composition, many of these ancient sources are completely exhausted, few documents make reference to the mines, and so little geochemical information is available. By studying the relationship of the trace elements of platinum and palladium found in Byzantine gold coins struck in Carthage (as identified through their legends and iconography) before the Arab conquest, to dīnār issued by the Umayyad dynasties in North African and other mints to coins minted after Islam, there is a clear correlation to suggest that the latter coins were restamps of the regions prior currency (Gondonneau and Guerra 2002).
If previously struck coins were being restamped, it would seem to also imply that perhaps the same sources of gold were being exploited, at least in the first years after the region was opened to Islam. The results of this study also seem to support the hypotheses proposed by Bates (2992, 1995) that the mint personnel were retained after the Arab conquest of the region, suggesting that while the Islamic expansion was rapid, the “arabization” of the region was slow (Gondonneau and Guerra 2002:582).

**Bimetallism**

The newly stamped currency, declared by the Islamic government issuing it, simultaneously became commodity currency and fiat currency -- its usefulness and purchasing power derived from the government. But with both old and new money in circulation in some places, the hazard that “bad” money (that money not minted by the government) within the system could drive the “good” money out of circulation, could have resulted in hoarding. The mandates of the Qur’ān and the aHadīth sought to maintain money and precious metals in circulation, but the extent to which Islamic law facilitated this is unknown.

One process, practiced in Europe “for hundreds of years”, was that of maintaining money and precious metals in circulation by a “curious mechanism” that stemmed from the voluntary decisions of owners of old coins and bullion to exchange them at mints for new coins (Sargent and Smith 1997:197). Private mints typically produced lists of coins whose design and fineness (rare metal content) were specified by the sovereign, and
citizens were free to take their metals to the mint to purchase newly minted coins, though these new coins often bore less rare metals than was surrendered for them; the private mints, in turn, covered their costs with a per coinage “seigniorage” tax (Sargent and Smith 1997:197). Under this model, rates of coinage, and also seigniorage revenues, fluctuated over time, “with low rates of minting often being accompanied by complaints about shortages of small denomination coins, as well as physical depreciation of the currency” (Sargent and Smith 1997:197). Debasement of the currency could occur with a respecification of the list of coins from the government that reduced the fineness of coins of each nominal value produced. These acts of debasement generated revenues for the government only when they prompted voluntary increases in demand for newly minted coins; as this government debasement strategy often worked and was followed by increases in minting, this acted as a revenue raising device for the state. What makes this scenario a “curious mechanism” is that government debasement provoked voluntary decisions of owners to pay seigniorage taxes by surrendering more substantial coins for less, but this is only puzzling if the coins circulated by weight (Sargent and Smith 1997:197).

By continuing an economy on a system of bimetallism (one with both gold and silver in use), and in some areas trimetallism with the use of the fals, the Islamic government could establish a system in part on commodity, in part on fiat, and in part on weight. In a bimetallic system, with one metal linked to the purchasing power prescribed by the government and the other linked to its weight, a system of commodity money in which coins circulate by their “tale”, or their face value within circulation, can occupy
intermediate ground. With this system in play, the government can use multiple devices that support the value of a fiat currency to also push the value of commodity money above that of the metals that compose it (Sargent and Smith 1991:198). Among the considerations of such systems are: how monetizing an object with some intrinsic value affects its market value, issues concerning depreciation, token coinages, and whether coins circulate according to weight or tale, and the relationship between mint ratios and the intrinsic (market) values of various metals. Considering that the monetary standards of commodity were established in the East, the western periphery Islamic polities could prescribe purchasing power standards and, in effect, increase coin tale while increasing the presence of locally minted coinage within the hands of its citizens.

3.4 Islamic Exchange Rates

Through the early years of Islam, the value of the mithqāl was set at 60 mathīqīyl (plural of mithqāl) to 1 dirham and this exchange rate did not change (Eustache 1969:103). However, during the rashīdun caliphate under the reign of ‘amar (634-644), new projects were undertaken to discover mineral deposits in the Middle East. Gold reserves were weak and the dirham was devalued. After minting a few series of coins made from the skins of camels, ‘amar resolved this problem by diminishing the weight of the dirham while increasing its diameter, thus putting more coinage into circulation (Eustache 1969:103-105). The masses took advantage of the increase in coinage, but ultimately, by 695/6, it took 70 mithqal to equal 1 dirham (Eustache 1969:106). The exchange rate of the dīnār for this time period is not known.
It was at this time that the region now known as Morocco was first opened to Islam. The Arab army of the Umayyad Caliph ‘abd al-malik overtook Tanger in 699 (Cribb et al. 1990:228). By 711, Tarik b. Ziyad, a military officer of Berber descent exercising the role of governor on behalf of the governor of Ifrikiya (Tunisia) Musa b. Nusayr, and his troops crossed the Mediterranean from Tanger into the Iberian Peninsula and opened southern al-Andalus (Spain) to Islam. This expansion of the Islamic empire appears not to have been initiated by Musa b. Nusayr or the caliph, but instead undertaken on the authority of Tarik b. Ziyad and the neighboring governor of Ceuta (EI Tarik b. Ziyad:242).

3.5 Coinage

Reformation

It was also during this same time of great and rapid expansion that a reform of Umayyad coinage was taking place (Walker 1956:1ii). The reform is largely attributed to the anti-Muslim policies of the Byzantine emperor and the possibly equally anti-Christian policies of the caliph. Disputes over the language -- Greek or Arabic -- and the inclusion of the shahāda -- the oath by which all Muslims declare their faith -- on official correspondence, led to a breach of diplomatic and trade relations, resulting in Caliph Abd al-Malik minting coinage with orthodox Islamic legends (Walker 1956:liv). The earliest gold dīnār of the reform coinage appeared around 696/7, and the earliest silver dirham reform coinage appeared two years later (Walker 1956:1iii). Unit weights of copper fulūs (plural of fils) produced by Arabs also first appeared during this reform.
At the time of the al-Andalus expansion, Tanger became the site of an Islamic administrative mint. The route westward from Ifrikiya to Tanger passes through mining areas with deposits of silver and copper; no gold deposits are indicated in this region (Eustache 1970:103). These first Islamic coins out of Tanger were copper-based, as were the last coins issued by the city during the turn of the millennium under the administration of the Roman Empire (Cribb et al. 1990:228). The new coins had designs stylistically linked to the region of Tunisia, earlier occupied by the Vandals after the capture of Carthage in 439, and then later conquered by the Byzantine forces in 534 (Cribb et al. 1990:224). These stylistic links were undoubtedly due to the presence in the Moroccan region of coins minted in Tunisia under these empires.

**Iconography**

One early eighth century Tanger fils had, on the obverse, a Vandal-style head, surrounded by an Islamic religious statement in Latin, “Lord God, who is your equal”; the reverse was inscribed in Arabic, “Struck at Tanga in the name of God” (Cribb et al. 1990:228). Subsequent issues omitted the head and Latin text, and bore only an Arabic religious inscription and the mint name. After 717, coinage was also inscribed with the date in the year of the Hijra, and plant and star iconography was sometimes included in the design (Cribb et al. 1990:228). Within this time period, coins were also minted in Tlemcen, located between Ifrikiya and Tanger, though little is known about their production (Eustache 1970:97).
It is interesting to note that later Islamic coinage would omit virtually all images, pictures, and shapes of living or animate things. While the Qur’an nowhere expressly prohibits the depiction of such iconography, the Hadith literature, which accumulated in the centuries after the death of the prophet Muhammad, had definite expressions against such practices (Hadith 03.34.318, 03.34.428, 03.34.440, 04.54.447, 07.62.110, 07.72.835, 07.72.840, 07.72.842, 07.72.844, 08.73.130, 09.93.646, and 09.93.647). The Hadith relate that painters of pictures will be punished on the Day of Resurrection and they will be told to “give life” to what they have created. Muhammad is reported to have said, “Whoever makes a picture will be punished by God till he puts life in it, and he will never be able to put life in it” (Hadith 03.34.428). Further, the Hadith relate that “angels do not enter a house in which there are pictures” (Hadith 07.72.844). This transformation against depicting animate creatures appears directly related to the adherence to certain Hadith and to the individual’s fear of separation from God -- the warning of which is clearly described in the Qur’an. Today, however, the Moroccan coinage depicts the head of state, the king.

Inscriptions

Another style of copper coins at the time of the al-Andalus expansion contained, as part of their inscriptions, words translating to “for the alms of Allah” and “payment in the way of Allah” (Walker 1956:lviili). The grouping of these coins was developed based on their general inscriptions -- a classification method that is described in detail below -- and one coin falling within this grouping was inscribed as minted in Tanger (Walker
According to Walker (1956:lxviii), it has an inscription that utilizes the Arabic language root “n-f-q” in a phrase that translates to “good payment on behalf of Allah”\textsuperscript{a}; \textit{nifāq} was the payment given to warriors who fought in the name of God.

Financing the expansion to al-Andalus was a costly endeavor, and the administrative rule of Tanger was unstable. Payment needed to be rapidly distributed and copper was readily available. Furthermore, unlike silver and gold minted to the standards of the caliph’s direct command, consistency in size was not a concern in the minting of copper coins (Walker 1956:xxix). Whereas dīnār and dirham were unit forms of currency regardless of size or weight, the value of fils was typically weight-based. Though known that the fals was “struck”, it is not known whether flans (new blank discs) were struck, or whether coins were overstrikes (struck over old coins without melting the originals down). The Roman issue bronze coins from Tingis (Tanger) dating to the first century B.C. were approximately 18 mm in diameter (Cribb et al. 1990:229). A copper-based fils produced in Tanger in 731 is approximately 16 mm in diameter (Cribb et al. 1990:229), virtually the same size as the Tingis coins, given wear.

### 3.6 Early Western Periphery

\textit{dīnār Variability by Legend}

Though dīnār and dirham were produced at this time within the Islamic empire, no evidence to date indicates that mints for gold or silver issue still existed in the region of Morocco for this period. The majority of dirhams produced at this time are of a single denomination and include the mint name; exceptions are believed to have been trial
pieces before the mint name was added (Walker 1956:lxii). The majority of danānīr (plural of dīnār) produced at this time are without mint names and are thought to be the products of the Umayyad caliph’s mint in Damascus (Walker 1956:lv); the similar concentrations of platinum and palladium found in the Byzantine and Umayyad coins suggests that the gold ore used to issue the first Islamic danānīr in the East or in Ifrikiya was the same (Gondonneau and Guerra 2002:582). Examination of the inscriptions stamped onto the danānīr show that three major three exceptions exist: gold issues inscribed from the mints of Ifrikiya, al-Andalus, and the “mine of the Commander of the Faithful in the Hijaz” (Walker 1956:lv). Gold fractions equivalent to halves and thirds of dīnār were also produced at this time and are believed to be the sole products of the Maghribi and/or Andalusian mints (Walker 1956:lv).

Through a process of classification and inference, the origin of these coin fractions can be hypothesized. These gold fractions, though without mint names, contain virtually identical inscriptions to danānīr minted in the West. Whole danānīr without mint names from this period found in the East contain the following inscriptions:

- obverse, “there is no God except the One Allah / (legend) Muhamed is Allah’s prophet, sent with guidance and the true religion, that he may make it victorious over every other religion”
- reverse, “Allah is One, Allah is eternal, He begets not nor is He begotten / (legend) in the name of Allah minted etc.” (Walker 1956:lvii).

In contrast, the three whole gold danānīr mentioned above, two of which are definitively issues from the West, contain the following inscriptions:

- obverse, “there is no God except the One Allah / (legend) Muhamed is Allah’s prophet, sent with guidance and the true religion”
- reverse, “in the name of Allah, gracious and merciful / (legend) minted etc.” (Walker 1956:lvii).
Walker hypothesizes that the inscriptions on the West issues are so different from those of the East due to the independent attitude of the governors of the Maghrib and al-Andalus. Unlike the eastern inscriptions which promote destruction of all other religions, the western inscriptions uphold the belief of Allah as the One God and Muhammed as his prophet, but go no further. Because of the newness of Islam, and the great diversity in the western regions and their distance from the imperial capital, the restraint in coinage inscription appears to have been a well devised political move.

Silver Variability and Regional Destabilization

Indeed, this newly expanded Islamic state encountered new situations and administrative practices not clearly found in the Qur’ān. Within 50 years of the Islamic conquest of North Africa and al-Andalus, the Arab control of the western regions began to diminish. In 750, the Umayyad caliphate was overthrown and the ruling Shiite Abbasids relocated the imperial capital from Damascus to Baghdad (Benco 1987:17). This shifted eastward the Islamic empire’s political and economic core from the Mediterranean to the Persian Gulf and the Indian Ocean, lessening the direct impact of the empire’s authority on the western periphery. Concurrently, the seeming success of the conquest and conversion of the northern Moroccan populations was short-lived. Many of the Berber tribes from the region, originally attracted by the hopes of gain, had adopted Islam and enrolled themselves in the armies that were invading al-Andalus. However, dissatisfied both with the land shares allotted them taken from the Christians of the peninsula, and with the exactions of the governors of Tanger, the Berber tribes took
up arms in 740 (EI al-Maghrib:1189). The rebellion against the imperial authority was both religious and political in character. Turning from Islam, the Berbers adopted Kharidji doctrines from the East, philosophies which appealed to their independent, ascetic, and egalitarian nature.

It appears that little or no gold was struck in the East in Persia before the arrival of the Arabs, but comparisons of silver dirhams issued by the Umayyad and the Abbasid caliphates to those issued during the region’s previous Sassanian empire indicates a change in silver ore supplies at the time of the Umayyad to Abbasid transition in the East (Gondonneau and Guerra 2002:583-584). Changes in the gold-to-silver ratio in the coins at 750 may indicate a change in the type of lead-silver ores exploited; a switch from cerrusite to galena would produce the changes seen for this time period and would also suggest a change in production technique. Roux and Guerra’s 1998 research observes the same phenomenon for the North African coins minted in Ifrikiya; a decrease occurs between the gold-to-silver ratio of dirhams minted during the transition from Umayyad to Abbasid dynasties around 757 (Gondonneau and Guerra 2002).

Gondonneau and Guerra (2002:578) note that for the 234 danānīr examined in their study of Near and Middle Eastern, North African and Sicilian gold coins, most present a gold concentration of higher than 95% while others have reduced purity that may fall as low as 75%. The debasement is observed for 30% of the Abbasid danānīr (39% if Egypt is excluded), and those debased were struck in the Middle Eastern mints (Gondonneau and Guerra 2002:578). The Abbasids controlled this Middle East region, and the decrease in gold concentration with a corresponding increase in silver
concentration in the danānīr could be explained by the non purification of native gold ores, though this would be hard to check. It is also possible that the coins were instead debased by the addition of silver, but no correlations of trace element analyses has been observed to confirm this (Gondonneau and Guerra 2002:580).

The Berber breaks with the Islamic empire and the movement of the capital eastward created a void. Although one issue of Abbasid coins was produced in Tudgha (Cribb et al. 1990:228) near a silver mine site (Eustache 1970:97) in southern Morocco, by the late 750s the western regions of the Islamic empire, encompassing both Morocco and al-Andalus, had made themselves independent of the Abbasid caliphate. Political and religious dissidents escaping from Abbasid persecution filled the void. In 756, the Umayyad prince Abd al-Rahman I established the Marwanid kingdom in al-Andalus with its capital at Cordova (Benco 1987:17). In 757, the Kharidjites followers founded the Maghrawa dynasty at Sijilmasa in southern Morocco, and twenty years later also established the Rustamid kingdom at Tahert in central Algeria (Benco 1987:17). And in 789, the Alids, an Arab family claiming descent directly from prophet Muhammed’s son-in-law Caliph Ali, established the Idrisid dynasty in northern Morocco, eventually centered in Fès.

3.7 The Idrisid Dynasty

The progenitor of the Idrisid dynasty was idrīys ibn ʿabd allāh, who ruled for almost three years. Having escaped massacre by enemy factions, he fled with his companion Rashid to the Maghrib, and settled in Walila (Volubilis) (Park 1996:112). He
was proclaimed the leader of a confederacy of local Berber tribes, possibly based upon his line from the prophet Muhammad and from his charismatic power (Benco 1987:20). Poisoned by an Abbasid agent (al-Bakri 1965:235), *idrīys ibn ʿabd allāh* died, leaving behind his seven month pregnant consort Kinza. Upon his birth, *idrīys bin idrīys ibn ʿabd allāh* was declared the new leader, or *imām* and Rashid ruled as his regent until he, too, was assassinated in 802 (Park 1996:113). The new regent ʿabū khālid yazīyd declared *idrīys bin idrīys imām* the next year, but the younger *idrīys* did not formally rule until 808.

Just prior to the elder *idrīys*’s death, or shortly thereafter, gold danānīr were issued from a mint established near the region later to be named Fès (Cribb et al. 1990:228), perhaps near Sefrou, which is located 30 Km south of Fès and was along the easiest communication routes with the Mediterranean coast and the Straights of Gibraltar (*EI Fas*:818). These gold danānīr reflected the fact that the Idrisids were members of an unorthodox Islamic Shiite sect by including the inscription of the name of the Caliph ʿali (Cribb et al. 1990:228), the fourth of the rashīdun but recognized by Shiites as the true successor to the prophet Muhammad. The coin pictured in Cribb et al. (1990:228) is approximately 24 mm in diameter and dates to between 789-793. Just in case descendency and charisma were overrated, this early minting of gold coins would have been a key act in solidifying the legitimacy of the new Idrisid dynasty. Though sites of silver and copper deposits were in abundance in the regions surrounding Fès, the closest gold deposits indicated by Eustache (1970:103) were between Tudgha and Sijilmasa. It seems unlikely that the new Maghrawa dynasty of Sijilmasa would have allowed mining.
of the gold, so perhaps the Berbers, with their southern trade routes and access, were truly allegiant to the new administration, providing gold by way of a southern corridor link through the Sahara. Indeed, the Arabs knew of these trade routes even before their 734 expedition into the kingdom of Ghana in search of legendary gold (Vaum 997:490).

Silver coins minted at Tudgha around 791 support this hypothesis of a southern corridor link (Nicol et al. 1982:46). Evidence of two Idrisid silver dirhams, dating A.H. 174 and 175, from Tudgha indicates that the mint maintained inconsistent standards, reflecting the tentative hold the Idrisid dynasty had in this region. The coins, the earlier weighing 2.61 g and the later 2.45 g, have diameters of 23 mm and 27 mm, respectively (Nicol et al. 1982:46). Although both coins are inscribed with the phrase “There is no God except the One Allah”, the numbers of annulets and rings that circumscribe the coins differ dramatically. If a pattern can be derived from two coins, the debasement from the A.H. 174 minting to the A.H. 175 minting mimics Caliph ‘amar’s solution of 150 years earlier, during a time of weak gold reserves and dirham devaluing, to put more coinage into circulation. Well accepted then, this solution, if it were the case, was also well accepted now; the Idrisid dynasty was maintained in this region. The technologies used to produce these coins are unknown.

*The Idrisid Minting Houses*

During the regency and reign of Idris the younger, new mints were established. Coin evidence indicates that, during the regency, Walila minted silver dirham. The one example reported by Nicol et al. (1982:46), weighing 2.42 g and 26 mm in diameter,
repeats the wording of the A.H. 174 and 175 silver dirhams reported on above, but differs from both in annulet and ring inscriptions. Also during the regency, al-Basra was founded as an Idrisid mint. Eustache identifies two coins struck at al-Basra, one from 796 and the other from 812 (Benco 1987:20). Though earlier hypothesized that al-Basra was built on the foundations of a Roman city, there is no archaeological evidence to date to support this claim; Chapter 6 will present the archaeological evidence to date.

Eustache believes it more likely that the city of al-Basra was established on an agricultural village site inhabited by Berbers (Benco 1987:20). That a Berber city was so readily established as an Idrisid minting site within five years of Idris the elder’s death, and during such an unstable time as the regency of his bastard child, well reflects the loyalty of the Berbers to this new Islamic administration. For the stability that idrīys ibn ʿabd allāh and Idris b. Idris provided for the region and the loyalty they inspired, Islam was finally introduced in a definitive way to Morocco.

Idris b. Idris’s reign lasted twenty years and upon his death in 828, the dynasty was left to his twelve sons (EI Idrisids:1035). Just prior to his death, Idris b. Idris (Idris II) formally founded the capital city of Fès to the right bank of the Wadi Fas, with a second city, al-Aliya, being later founded on the Wadi Fas’s left bank (EI Fas:818). This area was prime real estate for the dynasty, with its location along the easiest route between the Moroccan Atlantic coast and central Maghrib, and near Sefrou. However, Idris the younger died before being able to develop the capital. The two cities were in rivalry, coexisting but developing with difficulty (EI Fas:818). Muhamed b. Idris, the eldest son, succeeded his father and, upon the advice of Kinza, divided the Idrisid empire among the next seven
oldest sons, taking for himself the region of Fès. Tanger and its regions, including al-
Basra, went to al-Kacem; areas of the Rif mountains occupied by the Sinhadja and
Ghumara went to Umar; the country of the Hawara, east of Taza, went to Dawud; Day
and its dependencies to Yahya; Wazzekur and the northern Tamesna, with Sala, to Isa; al-
Awdiya and the territory of Walila to Hamza; and the south with the country of Lamta
and its dependencies to Ubayd Allah (EI Idrisids:1035). It is believed that during this
decentralization the Idrisid empire established a number of other mints. Figure 3.1
presents a map of the Idrisid mints. In addition to the mints of al-Aliya and Fès, al-Basra,
Tanger, Tlemcen, Tugdha, and Walila; the mints of Baht, Marira, Oujda, Sebu, Tangara,
Wargha, Warziga, and Wazzekur (Cribb et al. 1990:229); and also Asilah, Amaden,
Tagragra, Tahlit, Wawmahna, Watit, and Ikkem (Eustache 1970:96-100) were founded.

Fragmentation of the Idrisid Dynasty

The purpose of the land partition was to prevent rivalries; instead, it immediately
produced them. Isa, one of the twelve sons, refused to acknowledge the authority of
Muhamed b. Idris. In reaction, Muhamed asked brother al-Kacem to discipline the errant
brother, but al-Kacem refused; brother Umar, when asked, did not (Benco 1987:21).
After defeating Isa, Umar then marched on Tanger, realizing al-Kacem would have no
support from Muhamed. With his territory confiscated, al-Kacem retreated to Asilah in
the north. Umar was given the governorship of Tanger and ruled over it, as well as his
given domain, until his death in 835, after which his son Ali b. Umar, on Muhamed’s
decree, succeeded him (EI Idrisids:1035).
Figure 3: Map of the Idrisid Minting Sites
(after Saadi 1975)
Muhamed’s reign was short-lived as he, too, died within the year. His nine-year-old son Ali b. Muhamed was appointed to succeed him and had the sworn allegiance of the Awraba and Berber coalitions (EI Idrisids:1035). Ali b. Muhamed was succeeded upon his death in 849 by his brother Yahya. During Yahya’s peaceful reign, many immigrants from al-Andalus and Ifrikiya came to settle in Fès and expansion of the city ensued (EI Idrisids:1035). In 859, Yahya founded the two great mosques of Fès -- the al-Karouin and the al-Andalus, and during this time period restored the northern province, including the cities of Asilah and al-Basra, to al-Kacem. The evidence for al-Kacem’s restoration is determined from coins struck at al-Basra. Eustache’s *Corpus des Dirhams Idrisites et Contemporains* published in 1970-1971, presents three Idrisid coins struck at al-Basra (Benco 1987:21). Two of these coins are struck under the name of Ali b. Umar, one dating to 846 and the other of indeterminate date; the third coin, inscribed with the date 859 was minted under the name of al-Kacem b. Idris II (Benco 1987:21).

Yahya died in 863 and was succeed by his son, Yahya b. Yahya, who showed no aptitude for rule and parceled out his territory surrounding Fès (EI Idrisids:1035). There was much internal fighting during this time, and while the Umar house retained its territory, the houses of al-Kacem and Dawud increased, Dawud being granted the territory he occupied while engaged in fighting his great-nephew (EI Idrisids:1035). Because of his immoral lifestyle, Yahya b. Yahya was forced to take refuge from his palace to the Andalusian district and died in 866, his dynasty passing from the house of Muhamed to the house of Umar (EI Idrisids:1036). Over the next forty years, defined by
periods of both internal and external struggles, this dynasty’s territory was ruled by Ali II b. Umar, Yahya III b. al-Kacem, and Yahya IV b. Idris b. Umar (*EI Idrisids*:1036).

During this time, in 863, al-Kacem passed the governorship of al-Basra to his eldest son Ibrahim and after al-Kacem’s death, Ibrahim b. al-Kacem ruled the entire northern province until his own death in 900 (Benco 1987:21). Eustache’s *Corpus* presents the latest Idrisid coin known to have been struck at al-Basra; it is under the name of Ibrahim b. al-Kacem (Benco 1987:21). This is the last evidence of stability in the northern province. After Ibrahim b. al-Kacem’s death, the northern province was ruled by his sons.

At this time in the East, there is a noted debasement of the gold coins in circulation, though no direct link is seen between the purity, date of issue or mint situation.; instead, it is thought that the politics of the caliphs explains the debasement (Gondonneau and Guerra 2002:580). The emergence of large social revolts and separatist movements across the large territory of the Abbasids, especially after 861, resulted in the Baghdad authorities losing control political and administrative control over the mints, resulting in a geographical fragmentation of the empire that led the governors of the various states to establish the dīnār’s purity as a function of their own needs and ideas (Ehrenkreutz 1963; Gondonneau and Guerra 2002:580). This is perhaps one reason why several issues of danānīr were in circulation in the East at this time.

Morocco’s civil wars became increasingly complicated by threats from outside by the latter half of the ninth century, and the fragmentation of the entire Idrisid dynasty left the kingdom vulnerable to attack from the Fatimids of Ifrikiya in 917 (*EI Idrisids*:1036).
To proclaim their legitimacy, the Fatimid rulers began minting Tunisian-style gold coins from Sijilmasa during the 920s (Cribb et al. 1990:229). These attacks, on both territory and coinage were the first external blows to fracture the already fragile Idrisid dynasty, which eventually fell to the Fatimids in 985. The fragmentation of the Idrisid dynasty also gave way to the start of a period of industrial development and urban agglomeration in the Islamic empire that lasted the next two centuries. It was at this time that the growth of an “elaborate system of banking, with headquarters at Baghdad and branches all over the empire, served to keep the state well supplied with coined money and to maintain generally a monetary economy” (Lewis 1937:23) thus ensuring that coinage, and the meanings embedded in it, would continue to change hands.

The Fatimid dynasty had reigned over Ifrikiya since 909, arriving in Egypt in 969. The fall of the Idrisids to the Fatimids allowed the Fatimids to have access to imported gold ores from both east African and west African sources across the Sudan (Ehrenkreutz 1963). At the close of the tenth century there was a key route that ran due north across the western Sahara through Sijilmasa and through the Atlas Mountains to Fès and finally to the finally to the caliphate of Cordoba in southern al-Andalus (Spufford 1994), perhaps the same route established by the Berbers and used by the idrīys the elder and the younger at the end of the eighth century. The trace element analyses from Fatimid danānīr shows differences between those coins minted in Egypt (Mis’r and Alexandria), Sicily and Ifrikiya (Gondonneau and Guerra 1999). The high quality of the gold during the Almoravid dynasty (A.D. 1073-1147) whose capital was in Marrakech came from West Africa, and the Fatimids had access to these West African gold caravan routes until
the middle of the eleventh century. This Almoravid gold was the Sudanese gold referenced by medieval authors as being of the best purity and quality, and must have come north along the routes from Sijilmasa (Gondonneau and Guerra 1999:267; 2002:587). This gold, by chemical characterization, is the same gold used by the Fatimids, and arrived in Spain and in Sicily, but is different from the gold used in the east (Gondonneau and Guerra 1999:267). During the Fatimid dynasty the gold sources from the East and from the western periphery were from two distinctly different sources.

3.8 Coins and Change

The use of coinage in northern Morocco as a political, religious, and financial tool is undeniable. Coinage, aside from marking historical events, such as who is governor at a particular time and place, provides information on trends over time for a region. This focus on coin evolution in northern Morocco during the formative years of Islam in the western periphery provides insight into both internal regional workings and regional differences within the Islamic empire.

Through examination of coin iconography, changes are seen for the whole of the Islamic empire, reflecting the growing inclusion of the Hadīth in religious interpretation. The variance in coin inscriptions from the east to the west of the Islamic empire also reflects the degrees of affiliation of the regions to the state. The rapid expansion of the empire westward produced an unstable political and religious body, necessitating the minting of coinage with relatively restrained religious phrasing. These coins served a
dual purpose: establishing a uniform politic by putting into circulation a tangible symbol of the state, and supplanting the region’s numerous and diverse religions.

Location of a mint in proximity to its mineral source informs on a different level, indicating degrees of affiliation between the political entity and the region’s inhabitants. By establishing mints in recently conquered regions, like Tanger, for the purpose of paying troops, the Islamic empire was able to immediately, both literally and figuratively, strike its mark. That this strike was made in copper, and not in silver or gold, is key. The core of the economy was to remain within established areas of the empire, but the copper symbols could travel to the peripheries in Andalusia and beyond, as a calling card of sorts.

Within cohesive regions of communication and access, such as Fès, new leadership required a different tactic. By minting gold issue, the wealth of the state was distributed to the people of power. By putting economic symbols of authority into the hands of the people who have influence, jurisdiction over a region is established. The Idrisid dynasty was established in northern Morocco on such financial maneuvering, and in turn eventually firmly established Islam in the region.

Currency was one identity marker for the relatively unified Islamic state. With Islam on a firm standing in the western periphery, people were free to explore the rest of the domains of the Islamic empire. The religion, like the currency, became a calling card.
CHAPTER 4: Transcendent Experiences

According to the Hadith, the aspirations of any Muslim are but two: to be like a man whom God has given wealth and spends it righteously, and to be like a man whom God has given wisdom and acts according to it and teaches it to others (Hadith 09.89.225).

“Take talc and ammonia and what is found on roads, All in due measure, making no mistake, Then if you love your Lord, You will be the master of creation.” (Poem attributed to Khalid Ibn Yazid, grandson of Mu’awiya [Lunde and Stone 1989:358])

4.1 Introduction

Most modern studies of Islam “pay a disproportionately large amount of attention” to the Islamic jurisprudence and Islam’s social and political teachings, to the detriment of studies on the internal logic of the Islamic world view (Chittick 1992:xiii). The roles of metals in the form of gold and silver coinage studied in Chapter 3 are physical manifestations of this Islamic world view. That case study analysis of material culture provided only one branch of insight into the religion’s driving power. Islamic literature can provide another perspective.

The exchange of knowledge surrounding the Islamic traditions and the local customs also had implications for the growth of science and technology. This chapter is divided into two distinct parts: the first part presents the Islamic knowledge culture and how knowledge within the Islamic religion is based on doctrine and experience, while the second part presents an examination of metals in alchemy writings within the Islamic culture. These studies of theory and application of knowing are illustrated through the translated literary works of thirteenth-century religious texts,
travelogues written of eleventh- to sixteenth-century experiences, and Ibn Khaldun’s discussions of science in his *Muqaddimah*. The chapter concludes with a reflection on how the knowledge of metals and the knowledge of God play complementary roles in the exploration for perfection.

### 4.2 Islamic Knowledge Culture

‘ilm and the ‘ulamā’

The Islamic empire, by the middle of the tenth century, was established under the Fatimid caliphate from Egypt to Syria, Iran, and India and across the Maghrib to al-Andalus (Gregorian 2003:31, Harvey 1987:11). Though this Islamic state was unified in traditions, the customs varied from region to region. Because the traditions were universal, “a period of stagnation in one segment of the ummah ['āmma, community of believers] might be reverse by an infusion of intellectual, economic, or military energy from another” (Cleveland 1994:21). The rulers within the Fatimid caliphate encouraged contacts between regions, particularly contacts of a commercial nature, in order to facilitate the spread of the religion and to foster advances in education and intellect (Turner 1997:17). These contacts through commerce perhaps also pushed the boundaries of mercantilism that Islam originally sought to address. The caliphate’s urging for contact with other regions was bolstered by the words of the prophet Muhammed concerning knowledge. “He who pursues the road of knowledge God will direct to the road of Paradise” (Turner 1997:17) is but one of the *aHādīth* attributed to the Muslim prophet.
The body of knowledge represents the power to transform the world and is found in many different forms. Religious knowledge or ‘ilm is but one form of knowledge within the Islamic culture. Up until the tenth century, the ‘ulamā’, those high Islamic religious scholars, utilized and expanded upon religious knowledge through Islamic jurisprudence, the sharī’a, in order to deal with religious concerns and to rightly guide the Muslim body away from bid’a. sharī’a, literally meaning “straight path to God,” is the body of Islamic law based on the five main sources of the qur’ān, the sunna, the Hadīth, legal analogies based upon the qur’ān and the Hadīth, and legal decisions that arise from a consensus of the ‘ulamā’. The theologians had a stake in the explanation of what knowledge really meant and in finding a definition acceptable for God and man and faith and reason (Rosenthal 1970:46-47).

The exercise of applying informed human reasoning to particulars not addressed in the qur’ān is known as ijtihād. But by the tenth century the consensus of the ‘ulamā’ was that principles and details of the sharī’a had been fully addressed and that ijtihād was no longer desirable nor necessary (Cleveland 1994:29). The religious knowledge and wisdom the ‘ulamā’ encouraged disseminating was controlled. Particularly within medieval Islamic societies, the “knowledge … treasured most highly was broad and disparate, but it was not diffuse” (Berkey 1995:51). While the ‘ulamā’ believed that religious knowledge and its transmission were the linchpins that held Muslim society together, they were reluctant to innovate, and focused on the Islamic traditions as “right guidance” for the pious Muslim. By the eleventh century, the central government in Baghdad established a formal system of advanced education to ensure the uniformity in
training of the ‘ulamā’. The madāris, schools of advanced religious instruction, provided standardized instruction in Arabic, Islamic jurisprudence, and exegesis of the qur’ān to Muslim scholars to the extent that the state created a class of scholars with a standardized orthodox vision (Cleveland 1994:31).

The traditions, those beliefs and ideas that were fixed and static and formalized in transmission, were considered the ideals. The customs, which varied from region to region, were the firm but malleable social practices of communal memory. A delicate balance of maintaining these customs and upholding the traditions was necessary for giving each of the diverse groups in the uniform politic the feeling of inclusiveness under the new religion. The uniform legal system that was devised recognized “the requirements of imperial administration and the value of local customs while remaining true to the concept of a community guided by divine revelation” (Cleveland 1994:28). The ways in which each group experienced Islam, however, were as varied as the regions in which they lived.

*Sufism and Experiential Knowledge*

In contrast to ‘ilm, religious knowledge, is *ma‘rifā*, experiential knowledge, especially that of the mystics. Mysticism in Islam, often referred to as Sufism, was a development of the tenth century within many of Islam’s denominations as an effort towards reformation of the worldliness and materialism of the Umayyad elite in Damascus (Cleveland 1994:28). At that time, Sufism sought to reemphasize spiritual rewards in the Afterlife over the material gains in the present by, in part, challenging the
literal and legalistic approaches to Islam and the Qur’ān (Gregorian 2003:22-23). Sufis did not deny the legitimacy of the juridical orthodoxy of the ‘ulamā’, “merely the exaggerated claims for authority” made by many of them (Chittick 1992:xiii). Sufis, instead sought the reconnection of each individual Muslim, as opposed to the Muslim body as a whole, to God through various experiences, including meditation, chant, and dance. Sufis, in turn, became some of “Islam’s most energetic missionaries” (Gregorian 2003:23), bringing the word of Islam to regions as yet unopened to the religion. The ‘ulamā’ thus tolerated many of the Sufi rituals (Cleveland 1994:32).

A translation and study of three thirteenth-century Sufi texts by Chittick (1992) has enabled him to critique the experiential dimension of Islam. Chittick (1992:2-5) identifies and defines three dimensions of Islam – works, faith, and perfection – based on the prophet Muhammed’s divisions of the dimensions of the Islamic religion in the “Hadīth of Gabriel,” which is similar to Qur’ān 2:177. Works is the domain of the ‘ulamā’, who regulate the practices within Islam, while faith consumes the domain of knowledge. The prophet Muhammad is attributed to saying, “Faith is knowledge [ma’rifa] in the heart, a voicing with the tongue, and an activity with the limbs” (Chittick 1992:6). Chittick argues that while in English “faith” is considered volitional rather than cognitive, in Islam it “pertains primarily to knowledge and the commitments that people make on the basis of knowledge” (1992:7).

Sufis recognize that knowledge is gained by two different methods: through reason and through “unveiling” (Chittick 1992:17). Knowledge through reason is rational and is obtained through the efforts of the individual to understand a succession of
ideas. “Unveiling” rather than being *ir*-rational, is *supra*-rational “in the sense that it is inaccessible to reason without God’s help” (Chittick 1992:17). While, according to thirteenth century Sufi texts, “unveiling” applies to religious knowledge, I extrapolate this idea to say that all understanding deepens faith in how and what we know. While the ‘ulamā’ are “below” or “behind” what they say because of how they understand God through the literature of jurisprudence, those with experiential understanding are enabled to “rise above” what they can verbalize to understand on a “higher plane” (Chittick 1992:17-20).

The knowledge culture of practice deals with the deepening of works, but the knowledge culture of “unveiling” deals with the deepening of faith. The following sections on travelogues and alchemy address the three dimensions of Islam – works, faith, and perfection. Just as there can be no faith without works, there can be no perfection without faith; works build towards faith builds towards perfection. The reasons for travel build towards the production of travelogues, through which ideas and experiences are transmitted. Through their transmission, the traveloguers reveal the importance of metals, the locations of mines, the rates of exchanges of currency and the cost of various items within the regions of trade. These documents depict the areas recently opened to Islam as well as the Islamic practices in areas where Islam has been for centuries. All this enables the construction of the networks of information and knowledge exchange. Alchemy is presented as a case study of how the knowledge acquired from travel and faith can build towards perfection and is directly involved in the creation and transformation of metals.
The Haj

One impetus for the sources of data are the religious experience. The religious experience, in its essence, is a journey toward self-understanding. For many Muslims, the ultimate travel experience is the Haj, a pilgrimage to Mecca, Saudi Arabia, which is at once both a physical and a symbolic journey and is seen as one of the five pillars of Islam. The root of Haj, H-j-j, means “to overcome” or “to convince” (Cowan 1994:183). The structure of the Haj is meant to recreate the path of Muhammed. By walking this path, the pilgrim becomes self-reflective of his or her path in life.

This “rite of passage” serves to mark the movement and transformation of an individual from one social position to another, by introducing the Haji (or Hajia), the pilgrim, to the diversity which Islam encompasses and by enabling the Haji to experience the sameness in belief which unites all those undergoing the journey. The rite of passage of the Haj can be viewed as threefold: 1) a separation -- from old societal, economic and political associations and from normal markings of time, 2) a transitional period -- when the Haji is neither in the old life nor yet in the new, but in the “journey”, and 3) a reaggregation -- when the Haji is reintroduced into his or her society with acknowledgement of the Mecca experience. The liminality of the experience encourages the Haji’s communion with fellow pilgrims and forces other distinctions between individuals to become irrelevant or to disappear. This communion with others on the same journey expands the worldviews of the individuals undertaking the Haj. Though the experiences themselves are different, the experiential knowledge gained is similar
whether the one on Haj is a fifteenth-century Morisco (Harvey 1987) or a twentieth century Turk (Delaney 1990).

4.3 The Travelogue -- Increasing Knowledge, Increasing Faith

By understanding that each rite of passage has the same ultimate goal of transformation, it opens and encourages the individual to explore his means of understanding a culture. Travelogues are important because they document the diversity of experience of Islam and the diversity of people within Islam culture. The section is important to my dissertation because it presents the works within Islam, the realm of Islam, the connections to others outside the faith, and the areas in which metals and knowledge of them are found.

That not every Muslim could afford the Haj to Mecca, or even to travel abroad is key to understanding these travelogues. It is in these instances that the recordings of the riḥālāt, the traveloguers, have great importance. The traveler’s journals -- the historical records of the length and conditions of the journey, the encounters with the unknown and the familiar, and the interpretations of variations on the theme of Islam -- all serve to educate the traveler’s contemporaries.

Knowing the ideal in economic, as well as social, situations facilitates passage into foreign areas; knowing what to expect in them affords one a certain degree of security in strange situations. The quest for trade, land acquisition, and religious conversion, were all reason enough to induce the acquaintance of people to the markets and landscapes of other regions. Experiencing the unknown stimulates on many other
levels. Travel for the sake of exploration, under most circumstances, is associated with rejuvenation, because the experience encourages new ways of thinking and adapting. In experiencing the unknown, both through the journey and at the destination, we learn new ways of understanding ourselves. Travel satisfies curiosity and a sense of adventure, and confirms biases of beliefs and values.

When traveling to areas foreign -- by religion, ideals, values, or customs -- one selectively keeps records based on preconceived ideas for the purpose of confirming already formed beliefs. In early Islam, travelogues of first- and second-hand accounts and observations provided the only means of introduction to foreign regions other than direct interaction with foreigners. The record of the travelogue informs on the trip, the journey, the destination, and the experience.

The impetus for recording the experience includes the personal reasons of the individual traveling, the prior travel experience of the recorder, and the need to satisfy motives of the sponsors of the trip. The concerns for the traveler are varied, depending upon his inclusion by other travelers, the recognition of his currency, and his social standing. The information gleaned from these travels yields encouragement for more exploration and contact. The record of the travelogue also introduces the variability of religious adherence as seen through manners and mores of the region. Because the recording is swayed by preconceived ideas, confirmation of these already held ideas lent a guise of authenticity to the belief. Chapter 2 has already presented us with one example illustrating the variability in aHādīth interpretation surrounding the use of gold and silver vessels.
Four well known travelogers -- al-Bakri, al-Idrisi, Ibn Battûta, and Leo Africanus -- inform us on the conditions of their times, and the role of western periphery of the Islamic empire and Morocco in the arenas of metallurgy. The sources were chosen for two reasons: their reference to specific sites in Morocco, namely Fès and Sijilmasa, and the perspective of each author in reference to his audience. The records of the traveloguers -- which date from the eleventh to the sixteenth century -- outline the geography, environment, architecture, government, travel routes, trade goods, customs and relationships, between groups of Muslims and between Muslims and non-Muslims, all yielding data from which to formulate networks of connected ideas involving metals and their variability and stability of meaning between and within the relevant social groups. All, except for al-Bakri, record firsthand accounts of the travel experience. Levtzion and Hopkins’s *Corpus of Early Arabic Sources for West African History* (2000) provide the reference sources for the citations of the first three authors here. *The History and Description of Africa by Leo Africanus* edited by Brown (1956) provides the reference sources in the form of an English translation and maps for the citations of the fourth author.

*Al-Bakri*

Abu ’Ubayd ‘Abd Allah bin ‘Abd al-Aziz al-Bakri (d. A.D.1094) is considered among the most important of sources for the history of the Western Sudan (the area now commonly known as the western regions of the Sahara and the Maghrib), because of his focus on geography, theology, philology and botany (Levtzion and Hopkins 2000:62).
Born in Spain, Al-Bakri lived the majority of his life in Cordova and Almeria, and it appears that he never left Spain, not even to visit Morocco. In spite of his lack of travel, his knowledge of the Maghrib and the Sudan was extensive due to his access to a variety of sources (Levtzion and Hopkins 2000:62). Al-Bakri’s sources included early works recorded before his lifetime, as well as personal accounts from people he met in Spain who had traveled to the Sahara and the Maghrib. Al-Bakri often acknowledges his sources, both historical and contemporary, and through his collections of information is able to present a detailed description of the Western Sudan of the time of the Almoravids and an increasingly expanding trans-Saharan trade (Levtzion and Hopkins 2000:63). His major work, *Kitab al-Masalik wa-l-Mamalik*, “The Book of Routes and Realms,” remains incomplete with large portions still unpublished to this day. The following portions, published in translation by Levtzion and Hopkins (2000:63-87), afford us a geographical and ethnographic account of social and political history from which information on key places (Sijilmasa, Ghana), and from which conditions of travel, religions, and trade, including that of metals, can be collected.

Al-Bakri’s source is useful in that he describes the town of Sijilmasa, the southernmost entrepot into the western Sahara from the Maghrib and along the trade routes to acquire metals. He describes the town, situated at the beginning of the desert with no inhabited places known to the west and south, located on salty soil on two rivers with many springs, with “twelve gates, eight of which are iron,” and a cathedral mosque … strongly built, through which one can travel to the Sudan [Sahara] to Ghana a distance of two months traveling through deserts (p.64-65). Al-Bakri describes the lore
surrounding the founding of Sijilmasa in A.H. 140/A.D. 757-8. The Bin Midrar, he relates, who governed some 160 years shepherded their flocks on the site of Sijilmasa, according to another tale the founder Midrar was a smith from Andalusia who settled in a tent there and used to attend the “market nearby with the iron implements which he had made” until the Berbers found him and the site thus populated became a town. Al-Bakri notes “the strange thing that gold, with the Sijilmasis, is bought of sold *juzaf*, i.e. by number, not weight” (p.66-67). In this text also, al-Bakri discusses the raid of Sijilmasa by the Almoravids and their army of 30,000 camelry, and the subsequent reciprocation of the Sijilmasis and their massacre of many Almoravids in A.H. 446/A.D. 1054-5, the later struggles between the groups and the encampment of the Almorovid army in Tamdult, “a fortress with abundant water and numerous palms, towered over by a mountain containing a silver mine which is well known there” (p.73). Al-Bakri discusses the salt mines of that desert, found twenty days from Sijilmasa, that produce salt for Sijilmasa, Ghana and other Sudan areas, and the salt mine of Awlil along the coast that has caravan traffic “over ground consisting of hard stone, from which iron rebounds and on which pick-axes are blunted” (p.76-77). Later, al-Bakri discusses the independent kingdom of the Farwiyyun and states that “in [that country] salt is exchanged for gold” (p.79). In that narrative Al-Bakri not only tells of construction materials, metal lore, forms of currency, and locations of mines and other natural deposits, he also relates information of bride-prices (p.74), means of “purifying” assets (p.74), the expenditure of a seasonal *zakat* tax (p.75).
Al-Bakri’s description of Ghana is equally informative. This city that was built on a plain consisted of two towns, one of which was Muslim and contained twelve mosques and salaried religious personnel. Ghana’s non-Muslim king had, among his retinue, ten pages “holding shields and swords decorated with gold” and excellent-pedigreed dogs who “round their necks [wore] collars of gold and silver studded with a number of balls of the same metals” (p.80). Upon “every donkey load of salt brought into the country [he] levies one golden dinar, and two dinars when it is sent out” (p.81). The king’s tax on “a load of copper” is five mithqals; on a load of other goods ten mithqals (p.81). While all “the nuggets (nadra) found in the all the mines of his country are reserved [for him], only the gold dust (al-tibr al-daqiq)” is left for the people, but they “accumulate gold until it [loses] its value” (p.81). The nuggets range in weight from an ounce (uqiyya) to a pound (ratl) (p.81). Al-Bakri writes that west of Ghana by fifteen stages is the town of Kugha, inhabited by Muslims who import “consist of salt, cowries, copper, and euphorbium” (p.83). The rest of the surrounding region is inhabited by polytheists and contains “many gold mines [so much so that it] is the most productive in gold of all the land of the Sudan” (p.83).

These metallurgical summaries of excerpts from al-Bakri’s work present how metals are incorporated into a foundation story of a region, linking metals to a specific place for all time. Comments on trade present the linkages between groups, places, metals, and ideas. Zakat taxes inform on adherence to Islam, while state tax informs on the finances of the region. While the types of metal artifacts noted indicate the ways and
means of consumption, their conspicuous consumption informs on how closely the religious practices of the “other” may align themselves with Islam.

*Al-Idrisi*

Al-Idrisi was of the Banu Hammud dynasty, an offshoot of the Idrisids, and therefore was probably Moroccan and could rightly claim descent from the prophet Muhammed. Al-Idrisi completed his work, commonly known as *Kitab Rujar*, the *Book of Roger*, for the Christian king of Sicily of the same name in A.D. 1154. Levtzion and Hopkins (2000:104-105), based on a comparison of al-Bakri’s and al-Idrisi’s texts, suggest that al-Idrisi selectively consulted al-Bakri’s writings in order to produce his own work. The following are the excerpts from the introduction of al-Idrisi’s book, presented by Levtzion and Hopkins (2000:106-131), that I have taken which pertain to metal and which I found informative concerning the trade between the Maghrib and West Africa, and on the changing relationship between, and population sizes of (in comparing with al-Bakri’s text), Muslims and non-Muslims.

Al-Idrisi’s source is useful in that it divides the region of west Africa into six different climes. The metal mentions taken from al-Idrisi come from the region of the First Clime, sections one and two, and describe the region of Sijilmasa and Ghana and their connections with the Maghrib. Al-Idrisi’s narrative of the first section of the First Clime begins at the Western Sea in the Sea of Darkness of which no one knows what lies beyond, except that on each of the two islands in it is a stone idol, 100 cubits high, which “has on top an effigy of copper” with hands pointing to what lies beyond (p.106). The
Island of Awlil lies near the coast and from it, by sixteen stages, is the town of Sila, which lies within the region of Takruri. Takruri’s capital, Takrur is larger than Sila and has more trade, as “the people of al-Maghrib al-Aqsa [Maghrib] go there with wool, copper, and beads, and they export from there gold and slaves” (p.107). Sijilmasa is a forty-day caravan ride from these two towns, and 40 stages from the Island of Awlil (p.107). Southeast of Takrur by no more than 22 days is the land of Lamlam, a source of slaves for the people of Ghana and Sila. The Lamlam are reportedly Jews who had been overcome by “infidelity and ignorance” and who, at the age of puberty, brand their faces and temples with fire (p.108). Al-Idrisi reports that there is no fresh fruit in this region of the Sudan [Sahara]; only dried dates from Sijilmasa, which are imported, even though the Nil river flows from east to west. The people of the land along the Nil wear “adornments of copper (nuhas)”, little beads, strings of glass, stones called badhaq, “old man’s slobber” and pieces of false onyx (p.108).

Al-Idrisi’s description of the second section of the First Clime contains a description of the region of Ghana quite similar to that of al-Bakri. In it, al-Idrisi relates information on areas near Lamlam where no dower or bride-price is paid (p.109). He goes on to describe the town of Great Ghana, whose inhabitants are Muslims; it is considered the greatest of all towns in the Sudan with respect to area, population, and extensive trade, which has merchants from the surrounding region and from the Maghrib (p.109). Wanqara, which is eight days journey from the town of Ghana and which borders the kingdom of Ghana, is a “country of gold” which has “quantities of it of good quality” and has an oddity of metal universally known by the Maghrib people; that oddity
is “a brick (libna) of gold weighing 30 rats made of one piece … entirely of God’s creation, without having melted in the fire or hammered with any tool” (p.110). The island of Wanqara is 300 miles long, 150 miles wide and surrounded by the Nil river year round so when the water levels drop in August, all its inhabitants in the Sudan return home searching for gold, “each on finding there what God … allows, whether a large or a small quantity of gold”, after which when the water level rises again, “these people sell whatever gold has fallen into their hands, trading with each other, [a good portion of which is bought by the people of ] al-Maghrib al-Aqsa [the Maghrib] who export it to the mints in their own country, where dinars are struck from it, which they use in trade” (p.111).

These metallurgical summaries of excerpts of al-Idrisi’s work depict metals as landmarks, metals as commodities for trade just as people were and for what trade metals are used, the implied use of metals for “rite of passage” scarification, and metals as artifacts of adornment. The location of outcrops of native metals and their means of exploitation are described, and to where those metals are traded and minted is also noted.

*Ibn Battūta*

Shams ad-Din Abu Abd Allah Muhammed Ibn Abd Allah al-Lawati at-Tangi Ibn Battūta (A.D. 1304-1368) left his native city of Tanger (Morocco) for the purpose of completing his Haj to Mecca (Saudi Arabia) in 1325. This religious pilgrimage turned into a 24-year journey that took him through the majority of the Muslim world, including parts of West Africa, and further to East Africa, India and beyond (Lee 1971; Levtzion
and Hopkins 2000:279). Ibn Battūta’s major work is the Rihla, or Journey, a seemingly extremely factual first-hand account of his travels. Levtzion and Hopkins (2000:279-281), in their introduction to the excerpt of Ibn Battūta’s Rihla mention that Ibn Battūta’s editor was the Marinid sultan Abu ‘Inan’s scribe Ibn Juzayy, who was on loan from the sultan for the specific task of recording Ibn Battūta’s experiences. Levtzion and Hopkins (2000:280) make reference to Ibn Juzayy remarks in the Rihla that he has not added to the narrative related by Ibn Battūta, except in the addition of phonetic markings and non-Arabic names, but conclude that the Rihla is “in fact a co-production by the traveller and his editor because of introduced material lightly veiled by Ibn Juzayy in his writing style.” Ibn Battūta recognized that at this point in history many people in Morocco were familiar with the Sahara and West African regions through other accounts and he, having “met some of his countrymen in the Sudan [Sahara] must have been careful not to discredit himself by mixing his eye-witness evidence with fanciful stories” (Levtzion and Hopkins 2000:280). I have chosen the following excerpts from Levtzion and Hopkins (2000:281-304) because they are informative on the variability of the purchasing value of currencies in the West African regions opened up to Islam.

Ibn Battūta’s source is useful in that he is a native Moroccan who could claim both Tangier and Fès home, and as such had a unique perspective on what information would be of interest to the Maghrib people. Ibn Battūta describes the roles of metals, especially their values to the foreign peoples he encounters, in terms of currency, exchange rates and purchasing power. The excerpt first discusses how, within the Sudan in a certain country, cowries are a currency and were “sold at Mali and Jawjaw at the rate
of 1,150 to the dinar” (p.281). Next, Ibn Battüta then arrived in the Morocco capital of Fez [Fès] and set off with the intent of traveling to the Sudan, arriving at Sijilmasa and passing some time there before heading to Taghaza, a village from which its salt is traded to the Sudan. One load of salt from the region sold at Iwalatan goes for eight to ten mithqals and “at the city of Mali for 30 or twenty mithqals, … sometimes fetch[ing] 40 mithqals” (p.282). Ibn Battüta relates that the Sudan “use salt for currency as gold and silver is used. They cut it into pieces and use it for their transactions” and in Taghaza “they deal with qintar upon qintar of gold” (p.282). Later, Ibn Battüta mentions that in order to get to Iwalatan one must hire a takshif, a person to go in advance of the traveling party in order to request, prepare, and supply water to be sent out to the traveling party in order to bridge the last of gap of travel between the traveling party’s already consumed water reserves and their arrival; on his journey they “hired takshif for 100 mithqals of gold” (p.283).

Upon arrival to the region of the Mali, Ibn Battüta encounters the sultan Mansa Sulayman, known to be a miserly king with little generosity who, in his house had a door which “three wooden arches covered with sheets of silver [beneath which were another] three covered with sheets of gold” (289-290). The sultan, while not generous, did adhere to the recitation of the Qur’ān during occasions. Upon the occasion of Ramadan, Ibn Battüta feeling snubbed as a guest in the sultan’s domain, requests his presence to ask about this slight; the response of the sultan was to provide a house and allowance to Ibn Battüta and to give him 33 and one-third mithqals and again, upon Ibn Battüta’s departure from the domain “bestowed on [him] 100 mithqals of gold” (p.290). On
ceremonial days, this same sultan adorns his court with “quivers (tarkash) of gold and silver and swords decorated with gold and scabbards of the same, and lances of gold and silver” and slave girls of the court interpreter have “on their heads bands of gold and silver adorned with silver balls” (p.292-293). One reward for entertaining the sultan was a bounty and “a purse … brought in which there are 200 mithqals of gold dust” (p.293).

Upon his departure from Mali, Ibn Battūta took the road towards Mima riding a camel “because horses are very expensive, one of them being worth 100 mithqals” (p.297). His party arrived at the Senegal River and crossed it and eventually left that region for Takadda and its people, who “have no occupation but trade” (p.301). The water of Takadda “runs over deposits (ma’adin) of copper, so its taste and colour are changed” (p.301). As for foodstuffs, there is no cultivation except for wheat which is eaten by the merchants and foreigners, this wheat being sold at “one mithqal of gold for twenty of their mudds their mudd being a third of the mudd of our country. Sorghum is sold among them at one gold mithqal for 90 mudds” (p.301). Concerning the copper mine outside Takadda, the inhabitants “excavate the earth for it and bring it to the town and smelt it in their houses,” a type of work done by their male and female slaves (p.302). Ibn Battūta relates that “when they have smelted it into red copper they make bars of it a span and a half long, some thin and some thick, of which the thick are sold at 400 bars per gold mithqal and the thin at 600 or 700 for a mithqal. This is their currency” (p.302). The copper is transported a distance of forty days from Takadda to, among other places, the land of Burnu, which is a Muslim land, and the copper is “carried from there to Jawjawa and the country of al-Muratabin and other” (p.302). Upon Ibn Battūta’s
departure from Takadda to return to Morocco at its sultan’s request, he “bought two camels … to ride on for 37 and one-third mithqals and proposed to journey to Tuwat [taking with him] provisions for 70 nights,” eventually passing through Sijilmasa and returning to Fès (p.303-304).

These excerpts concerning metals along Ibn Battūta’s travels detail the commodities and services and their cost, and thereby their value in the region, which he felt important enough to mention. He further details the use of collected alms in the gifting of money, and the consumption of metals and the form in which and by whom they are consumed.

Leo Africanus

The Muslim Arab named Al-Hassan Ibn Muhammad al-Wazzan al-Fasi was born in al-Andalus sometime between A.D. 1489 and 1495 into a family who had to immigrate to Morocco after the fall of Granada. By the time of his family’s arrival at the turn of the century, Morocco was in period of “political disintegration and moral decay” (Brown 1956:xiii). Because of his family’s affluence and faith, al-Fasi was raised with the opportunities to take customary pilgrimages to the holy sites in Morocco and as a young man, due to his connections, he was able to study formally and hold many positions (notary, judge, merchant diplomat) which enabled him to travel Morocco and its surrounding areas (Brown 1956:xxi-xli). By about 1520, al-Fasi was captured by pirates while returning from Constantinople and was carried to Rome as a present for Pope Leo X (Giovanni de’ Medici), who impressed with this learned young man, freed him and
became his patron; al-Fasi’s master became his priest of conversion and eventually his
godfather and patron in recognition of which al-Fasi altered his own name to Joannes
Medices (Brown 1956:i, xli-xlii). Al-Fasi is more commonly known to us as Leo
Africanus. Leo Africanus’s great work, The History and Description of Africa and the of
the Notable Things Therein Contained, written of his personal experiences, appears to
have originally been written in his native language of Arabic and then later translated by
him into his learned Italian (Brown 1956:lii). It is interesting to note that Leo Africanus
appears to have kept notes of his travels, unlike the three authors discussed above, but as
Brown suggests, Leo Africanus, as “the protégé of a powerful Christian sovereign
[perhaps] suggested to him the omission of much which might otherwise have been
inserted in to his volume” (Brown 1956:lxxxiii).

I choose the following metal mentions, all sourced from Leo Africanus’s
Description of Africa edited by Brown (1956), to briefly illustrate the role of gold, silver,
copper and iron in and around Morocco.

- Concerning gold and the customs and rites observed and the King of Telensin
  (Tlemcen) and his court
[This excerpt reveals to us the degree sincerity of the king, the practice of debasement in
the minting of coins, and the comparison of coins to Italian money.]

  (Brown 1956:671) “When the king goeth forth with an armie, there are not many
carriages transported therein, neither can you then discerne the king by his apparell
from any meane captaine: and though he conducteth neuer so great a garde of
soldiers, yet a man would not thinke how sparing he is of his coin. Gold-money he
coineth of baser golde, then that whereof the Italian money called Bislacchi is coined,
but it is of a greater size, for one pence thereof waigheth an Italian duckat and one
fourth part. He stampeth coine likewise of siluer & of brasse.”
• Concerning the economy of the city of Tednest (near Mogador), and its Jewish inhabitants
[This excerpt reveals to us the location of mint and religion of minters, the weight and shape of coin and how these compare to coin in Europe, the degree of taxation and communal spirit of the region’s inhabitants, and to where they relocated.]

(Brown 1956:231) “There are in this citie about an hundred families of Iewes, who pay no yeerely tribute at all, but only bestow each of them some gratuitie vpon this or that nobleman … and the greatest part of the said citie is inhabited with Iewes. These Iewes have certaine minting-houses wherein they stampe siluer coine, of which 170. Aspers (as they call them) doe weigh one ounce, beeing like vnto the common coine of Hungarie, sauing that this Asper is square, and the Hungarian coine is round. The inhabitants of Tednest are free of al tributes and yeerely taxations: howbeit if any summe of money be wanting for the erection of a publique building, or for any other common vse, the people is forthwith assembled, and each man must giue according to his abilitie. The citie was left desolate in the yeere 918. of the Hegeira. At what time all the citizens thereof fled vnto the mountaines, and from thence to Maroco.”

• Concerning the coinage of Tunis
[This excerpt reveals to us the purity of the metal, the current exchange rate with Europe, the shape of the coins, the rate of exchange within the bimetal system, and the names of the coins.]

(Brown 1956:725) “The golden coine of Tunis containth fower and twenty charats apeece, that is to say a duckat and one third part of the coine of Europe : there is a kind of siluer-money coined also, being fower square in forme, which waieth sixe charats apeece : and thirtie or two and thirtie of these peeces are equall in value to one peece of their gold coine, and they are called Nasari : the Italians call the gold-coine of Tunis Doble.”

• Concerning iron mines
[These excerpts reveal to us the locations of mines and their surrounding environment, the material crafted from the mine’s production and its usefulness as currency, and how Leo Africanus perceived those who work and utilize the metal.]

(Brown 1956:740) “Of the mountaines belonging to the state of Bugia … in some places of these mountaines are certaine mines of iron, whereof they make a kind of coine of halfe a pound weight. They haue also another sort of siluer coine weighing fower graines a peece”
(Brown 1956:740) “Of the towne of Adendum … the said riuer runneth through certaine vallies and rocks, where iron-mines are said to haue beene of olde, which may seeme probable, for the earth resembleth iron in colour, and the water in taste.”

(Brown 1956:535) “Of the towne of Meggeo … This little town standeth vpon the top of an exceedingly high mountaine, being westward of Tezzota ten miles, & almost 6. miles southward of the Meditarran sea. … At the foot of this mountaine are most fruitfull corne-fields. Likewise great store of iron is digged out of the mountaines adioining.”

(Brown 1956:550) “Of mount Beni lesseten … Vpon this mountaine are many iron-mines : and they frame their iron in manner of horse-shooes, which serueth them sometimes in stead of money, whereof they haue great want of in this mountaine, vnlesse the smithes by their arte keepe this money in store : who, besides horse-shooes, make certaine daggers with blunt points. Their women weare iron-rings vpon their fingers and eares for a great brauerie, but they are more basely apparellled then the men, and remaine continually in the woods, both to keepe goates, and to gather fewell. They haue neither ciuilitie nor learning , but liue after a brutish manner without all discretion and humanitie.”

(Brown 1956:672-673) “Of the towne of Tefesra … This towne standing vpon a plaine fifteene miles from Telensin [Tlemcen] hath great store of smiths therein, by reason of the iron-mines which are there. The fields adiacent are exceeding fruitfull of corne : and the inhabitants being the most part blacke-smithes are destitute of all ciuilitie.”

• Concerning the silver mines
[This excerpt reveals to us the location of the mine and the demeanor of the inhabitants who dwell in its surrounding environment.]

(Brown 1956:256) “Of the Mountaine of Ilalem … on the east it abutteth vpon the region of Guzula, and southward vpon the plaines of Sus. The inhabitants are valiant having great store of horses. They are at continuall warre among themselues, for certain siluer mines : so that those which haue the better hand digge as much siluer as they can, and distribute to every man his portion, vntil such time as they be restrained from digging by others.”

I conclude this section of travelogues with Leo Africanus’s entire entry on the alchemy practice in Morocco in Fès in order to present his perception of this field of science during the first half of the sixteenth century. Next, I present a brief discussion on
the history of alchemy in Islam, followed by the sentiments of Ibn Khaldun of the
fourteenth century, in order to illuminate on this science of metal/spiritual transformation.

- Concerning alchemy in Fès
  [This excerpt reveals to us Leo Africanus’s perceptions on the practice of alchemy.]

(Brown 1956:469-470) “Of the Alchymistes of Fez In this citie likewise there are
great store of Alchymists which are mightily addicted to that vain practice: they are
most base fellowes, and they contaminate themselues with the steam of Sulphur, and
other stinking smels. In the evening they use to assemble themselves at the great
temple, where they dispute of their false opinions. They have of their arte of
Alchymie many booke written by learned men, amongst on Geber is of principall
account, who liued an hundred yeeres after Mahumet, and being a Greek borne, is
said to have renounced his owne religion. This Geber his works and all his precepts
are full of allegories or dark borrowed speeches. Likewise they haue another author,
that wrote an huge volume of the same arte, intituled by the name of Attogrehi: this
man was secretarie vnto the Soldan of Bagahded, of whomwe haue written in the
liues of the Arabian philosophers. Also the songs of the articles of the said science
were written by one Mugairibi of Granada, whereupon a most learned Mamaluch of
Damasco wrote a comentarie; yet so that a man may much more easily vnderstand
the text then the exposition thereof. Of Alchymists here are two sorts; whereof the
one seeke for the Elixir, that is the matter which coloureth brasse and other metals;
and the other are conuersant about multiplication of the quantities of metals, whereby
they may conueniently temper the same. But their chieuest drift is to coine counterfeit
money: for which cause you shall see most of them in Fez with their hands cut off.”

4.4 Alchemy

In the Islamic state, trade was made easy through the uniform currency. In even
the most mundane of transactions of goods and commodities, people exchanged
information. The trade routes in many regions were established prior to Islam. The
movement of Muslim traders through these regions led to the spread of ideas. The trade
was not only secular, but also religious. Information on Islam diffused to areas where
even the Muslim traders had yet to tread, and information of other topics were infused
into the knowledge culture of Islam. Seeking knowledge – “to the extent that it pertains
to knowledge of the objects of faith – helps in the deepening and perfecting of faith. One cannot have faith in something in which one has no knowledge” (Chittick 1992:11).

*Science as a Perfection of Faith*

Alchemy is one example of works of faith toward perfection. Alchemy derives from the Arabic *al* (the Arabic definite article) and *kīmyā*. The etymology of the kimya is unclear. Anawati (1996:854) hypothesises that Kimya perhaps derives from the Egyptian *kemi*, meaning black. Another possibility is that the kimya derives from the Greek *kemia*, meaning “Egypt” or the “black land”, or “the black” in reference to the original substance of transmutation, the starting point for the production of gold (Anawati 1996:854).

Alchemy is a philosophy which strives to unearth the mystery of life and to understand and control the formation of inanimate substances (Albertus 1974; Waite 2002). At its most noble endeavors, it seeks perfection of the human soul -- transcendence of self in an effort to achieve union and communion with God. Alchemy’s lesser endeavors seek the methods of transmuting lead into gold and discerning the formula for physical immortality. To the true alchemist, the religious mysticism must be understood before the methods of the physical transformation can be revealed. The nature of alchemy teaches that the gradual ordering processes of earth that occur over long stretches of time can, through alchemy, be achieved on smaller scales in shorter amounts of time. These small scale orderings or “perfectings” can be achieved by individuals pure of heart and noble of spirit. Thus, alchemy was a Divine art, growing
with the cultures in which it was practiced, and subsuming and altering the intellectual
(Read 1997).

Sufism as a form of Islamic mysticism sought these “perfectings” of self while
alchemy sought these “perfectings” of material, specifically of metals. Sufism signifies
what the mystics themselves call a Path, a method for living whose “key goal is the
mystical experiences, the effacement and disappearance of the self” (Mortensen
1996:301). In order to achieve this Divine union and communion, Sufis must pass
through the seven levels of the Path to heaven. These steps are 1) repentance of the
rejection of an irreligious life by turning away from all that is sinful, to 2) patience (a
passive form of resignation) and 3) gratitude (an active form of resignation), to 4) holy
fear of the separation from God and 5) hope of being eternally united with God, to 6)
voluntary poverty and 7) asceticism (Mortensen 1996:302). Seven metals were known
by the early alchemists, and were commonly called the “seven metals of the ancients”.
The processes of transforming lead to copper, to tin, to mercury, to iron, to silver, to gold
parallel the steps on the Path of unification. Sufi Path had similarities to the alchemists’
processes of transformation of base metals into precious metals.

This Divine art of alchemy, however, was controversial, as demonstrated by Leo
Africanus’s remarks. Muruj al-Thahab wa al-Ma’a al Jawahir (Meadow of Gold and
Mines of Precious Stones) (Lunde and Stone 1989) written under Abbasid rule by Abul
Hasan Ali al-Mas’udi (d. A.D. 957), points out this controversy. Al-Mas’udi presents
that well known philosophers al-Kindi and al-Razi were of different opinions. Al-
Mas’udi states that al-Kindi “demonstrates the impossibility of man’s rivalling the
creative powers of nature and exposes the lies and artifices of the practitioners of this art [in] his treatise … *A Refutation of Those who Falsely Claim that Gold and Silver Can be Artificially Produced*; al-Razi, in his *Book of Mansur*, refutes al-Kindi’s work demonstrating “the falseness of al-Kindi’s allegations and maintain[ing] the possibility of transmutation” (Lunde and Stone 1989:358).

Anawati’s “Arabic Alchemy” (1996:853-885) presents a detailed summary of the essentials of the history of alchemy, first studying the old sources which were known and used by Arab alchemists, including the works of the Greek authors through their Arabic translations, and continuing with Egyptian, Indian, Jewish, and Christian sources. This presentation acknowledges the growth of philosophical and technical literature within the alchemical knowledge culture, and presents excerpts which demonstrate how previously known literature was synthesized and expanded to produce the body of knowledge passes down to today. According to Halleux’s “The reception of Arabic alchemy in the West” (1996:886-902), by the beginning of the thirteenth century the exchange of information between the Arab world and the West created flows of information exchange. The alchemical practices played a role in technological development, enhanced knowledge of the mineral world, and increased pharmaceutical information. It was the “affirmation of a divine character, secret and revealed, and the language strategies” between the two cultures which slowed this knowledge exchange however (Halleux 1996:894). In the fourteenth century, a synthesis of the development of alchemy, and its relationship to other methods of instruction, was presented by Ibn Khaldun in his *Muqadimmah*. 
Ibn Khaldun

Ibn Khaldun was born in Tunis to a family of Moorish ancestry in A.D. 1332, but for great parts of his life called Fès home. His *Kitab al-‘Ibar*, or Book of History, has as its Introduction and Book 1, the *Muqadimmah*, completed in 1377, which was unique for its time as an approach to discover a rational, patterned history in the social and political aspirations of mankind, rather than an descriptive survey of history. Ibn Khaldun’s diverse education is impressive, even by today’s standards; he studied the Qur’an, the Hadith, jurisprudence, and Arabic poetry and grammar, and applied himself to the study of Arab mysticism and the philosophy of the Moorish Aristotelians (Dawood 1974:vii).

The *Muqadimmah* dedicates two sections on alchemy: the first entitled “*Fi ‘ilm al-kimya*” (“The science of alchemy”), and the second entitled “*Fi inkar thamrat-al-kimya wa istihalat wujudiha wa ma yansha min al-mafasid ‘an intihaliha*” (“A denial of the effectiveness of alchemy, the impossibility of its existence, and the harm that arises from practicing it” (Anawati 1996:879-880; Dawood 1974:397, 409). In the first alchemical section, Ibn Khaldun defines alchemy as “a science that studies the substance through which the generation of gold and silver may be artificially accomplished [through which the alchemists] acquire knowledge of the temper and powers of all created things and investigate them critically” (Dawood 1974:397). The commentary of operations and technical terminology, and the technical operations all fall under the definition of this “science.” Ibn Khaldun presents “the truth with regard to alchemy” which he believes is supported by fact, stating that it is “one of the ways in which the spiritual souls exercise an influence and are active in the world of nature” ((Dawood 1974:397). Ibn Khaldun’s
first section ends with the comment that since alchemy is a “kind of sorcery,” the famous sages of the literature of the time strove to “protect alchemy from the disapproval that the religious laws express … not because [the sages] were reluctant to communicate to others” (Dawood 1974:398).

The restrictions of the ‘ulamā’, the closing of ijtihād, the development of Sufism and the spread of knowledge through travelogues written by those explorers with first- and second-hand accounts of the Islamic world all came together in the development of the science of alchemy and towards the later production of treatises. The ways in which the Islamic knowledge culture allowed for the dissemination of knowledge affected all future scientific research. The impetuses for knowledge exploration had roots in the qur’ān and varied depending upon the motivations of those to whom God had given wisdom and acted according to it to teach it to others.

For those who chose a different path, I refer to Ibn Khaldun’s criticisms on false alchemists in the Muqadimmah. In the second section on alchemy, he undertakes a systematic refutation of the science, noting that “people who are unable to earn their living are led by greed to cultivate alchemy” (Dawood 1974:409) and they resort to using the science for their own means, mainly forgery, and only succeed in “ruining themselves and losing all credibility once the futility of their attempts is discovered” (Anawati 1996:880-881). Ibn Khaldun cautions that while not all alchemists are forgers and may practice in good faith, “we know of not one in the world who has attained the goal (of alchemy) or got any desirable result out of it” (Dawood 1974:410). The Sufis and those
true alchemists would perhaps argue that the “unveiling” of knowledge is, as yet, incomplete.

The production of the fourteenth century text *al-dawHa al-mushtabika fi DawābiT dār al-sika* (*The Intricate Tree in the Realm of the House of Minting*) sought to “unveil” metals within the Islamic context. This Arabic text presents a history of technology passed down to us in its final form by A.D. 1346, which details the meaning, production, and uses of metals in medieval Islamic society. Within *The Intricate Tree* are references to the social-cultural uses of metals, the technologies necessary to prepare them for appropriate use and trade within the Islamic state, the means by which they should be secured and maintained within the state, and the Muslim-Jew relations at the time. *The Intricate Tree*, by its mere existence, informs on important connections between knowledge cultures in the world of metallurgy within the Islamic state. The presentation of my full English translation of the text of *The Intricate Tree* follows in Chapter 5.
CHAPTER 5: The Intricate Tree

5.1 Notes on the English Translation of *al-dawHa al-mushtabika fi DawâbiT dâr al-sika*

Chapter 5 of my dissertation presents the full text of *al-dawHa al-mushtabika fi DawâbiT dâr al-sika* (hereafter referred to as *al-dawHa al-mushtabika*) in English translation for the first time. The title in English translation is *The Intricate Tree in the Realm of the House of Minting*.

A version of the contents of *al-dawHa al-mushtabika* was transmitted in 1275-1276, according to Mohammed Al-Manouni’s *La Civilization Mérinde* published in 1996 in Arabic. Chapter Two of Al-Manouni’s text, “Coinage, Weight, Volumes, and Measurements,” relates a condensed description of the systems operations, practices and standards of the early Maghribi mints. The version of *al-dawHa al-mushtabika* translated here had been set down in 1346 and was printed in 1986 by the publishing company Dar Ash-Shorouq, London, edited by *abu al-Hasan ‘ali bin yûwsif al-Hakîym*.

The text appears to have been the work of one person, but the tone of each of the ten chapters is different and most probably reflects the original authors of each section. It was a popular custom in the past, and can be best thought of as paying homage to an earlier writer, to include large portions of the earlier writer’s work. This practice of including whole sections of another author’s work within one’s treatise while, at times, not giving credit to the original author, was not considered plagiarism. Still, the final author of the fourteenth century Arabic version that is handed down to us does make attempts to reference information.
I have made every attempt to produce a text that is as close to a literal translation as possible in an effort to retain the character of each chapter while still enabling the meaning of the written word to be understood by the English reader.

The text of *al-dawHa al-mushtabika* is divided into ten chapters. The synopses of these are as follows:

Chapter One deals with how metals were given to human kind by God and the uses to which God desires they be used, and how they are to remain in circulation and not be hoarded.

Chapter Two deals with the what is known about the names of the metals in the various known languages and how these names reflect the uses to which the metals, specifically gold and silver, were put.

Chapter Three details the knowledge of the time of how metals were created by God and nature through a process of vaporization and condensation, and lightly deals with the putative knowledge that existed concerning how to transform base metals into gold. It details in depth the processes that one can employ to obtain and extract metals from their ores and how to refine gold and silver from their alloys with copper and other metals. The processes of placer mining, cupellation, mercury amalgamation and pan amalgamation are described. The chapter concludes with references to the medicinal benefits of metals, their uses in potions (some of which require astrological intervention), and the application of these uses to ameliorate maladies and diseases.

Chapter Four discusses the means by which one can assay the refined metal, and includes a description of how to construct and calibrate a double-pan balance for use in
specific gravity testing using the water displacement principle. It puts forth the methods of calculating the proportions of gold and silver based off of counterweight measurements.

Chapter Five is divided into 12 parts. The overlying theme of the chapter is the development of a governmentally-controlled system for weights and measures, and appearance and inscriptions, of the *danānīr* and the *darāhim*. This chapter also details the roles of the supervisor and other workers of the mint and the chains of custody of the standards, the blanks and their stamps, and the resulting coins.

Chapter Six deals with the exchange rates of the various coinage in use at the time. It describes the weights and measures standards in use in various regions and polities, and the strategies considered and used to set these standards and the standards of minting in Islam and the Maghrib, and in Morocco.

Chapter Seven concerns itself with the transactions using gold and silver and the cautions against the use of them in improper money-changing, for purposes such as usury and price-fixing.

Chapter Eight references *aHādīth* dealing with the allowed and permissible among the uses of gold and silver in personal adornments and possessions, specifically jewelry, swords, tableware, and copies of the *qur’ān*.

Chapter Nine relates quotes from the *qur’ān* and numerous *aHādīth* concerning the prohibition of hoarding of gold and silver, and the portions to be given in almsgiving.
Chapter Ten concludes the text with a warning about the corrupt persons engaging in fraudulent dealings with the mint and its lending, and presents the mandatory punishments for the thief of restricted things.

This translation of *al-dawHa al-mushtabika* is presented in “facing” pages where line by line Arabic and English are matched as closely as the translation will permit. Each line of text is numbered and each new chapter of the translation begins with line 1. For purposes of the rules of dissertation formatting, the English translation and the Arabic text cannot be presented on two-sided “facing” pages. Therefore, the English translation is placed in the body of my dissertation, immediately following this note, while the Arabic text is found in Appendix D.

I have transcribed the text (found in Appendix D) as presented by *abu al-Hasan* in his 1986 publication, including all diacritic markings, double quotation marks, and brackets, i.e., [ ], contained (intentionally or otherwise) in his 1986 publication. The brackets include the additional information provided by the 1986 publication’s author. *abu al-Hasan* left some brackets intentionally blank, as the meaning was unclear to him due to (the absence of the words in) the text that he used for his transcription. This bracketed information is included in my translation. The parenthetical, i.e., ( ), remarks included in my translation are my own.

The syntax of my translation is also meant to retain the original meaning. I have altered the original punctuation in order to preserve the intended meaning in light of the differences between fourteenth century Arabic and twenty-first century English prose.
Where the intended meaning does not translate well into twenty-first century English, I have provided footnotes indicating the meaning of phrases, lines, or paragraphs.

While *abu al-Hasan*’s published version of *al-dawHa al-mushtabika* also contains footnotes for explanation of the text, I abstained from using these notes for the purpose of translation. I felt that the meaning of the original text should stand alone. The footnotes included here are my commentary, solely, on the text. These footnotes give reference to the chapters of my dissertation, comment on the use of particular words and the nuances of their meanings in context, and provide definitions for words or ideas that have been presented in the text of the translation. When found, the original sources of quotes from the qur’ān or the aHādīth have been referenced.

Please note: Language is a negotiation. Meanings of words change through use, over time, and with context, and are sometimes lost in obscurity. What I present here is meant to be a literal translation of the fourteenth century Arabic text.
5.2 *The Intricate Tree in the Realm of the House of Minting*

*The Intricate Tree in the Realm of the House of Minting*

The English Translation of *al-dawHa al-mushtabika fi DawābiT dār al-sika*

by Martha E. Morgan
Chapter One

On the bestow of God by means of the two of them on mankind and making them means for his benefit and his lawful goal, no matter whatever it is

Among the words of the imām ab ʿabd allāh muHammad al-rāzi fakhr al-dīyn al-khatīyb -- may God be pleased with him -- concerning the explanation of His saying, may He be exalted: “It was decorated for the people the love of desires, of women and sons and hoarded treasures of gold and silver and well bred horses and cattle and tilth; that is the provision of life in this world; and Allah is He with Whom is the good goal (of life)”\(^a\). He (al-rāzi) said concerning gold and silver: “Truly the two were loved because they were made a price of all things, and their possessor is like the owner of all things, and a characteristic of ownership is ability, and ability is a characteristic of completeness, and completeness is beloved for itself, and as for gold and silver, they were the most complete of means to obtaining this completeness which is beloved for itself, and what is not found beloved except without it, it is then beloved, and no doubt, the two were beloved.” When God counted the seven things that were most loved, He (God) said, “That is the provision of life

\(^a\) qurʾān 003:013
in this world”, and it is known that the provision is created to be enjoyed, and
pleasures in this world are of different kinds:

Some of those blessings of God the Almighty will be kept by some
peoples for themselves, and this is blameworthy [and among their blessings
that which are left without being utilized despite the need for them, and that is
also blameworthy] and among them, that which are lawfully utilized, but not
for the sake of the HereAfter, and that is not praiseworthy and not
blameworthy, and among those things one benefits from them in such way that
he is rewarded in the Hereafter, and that is praiseworthy.  

The use in these desires is the means to gaining the HereAfter.  God the
Almighty had encouraged [enjoying them and therefore made them enticing.
The reasons we said that utilizing them is a means to the recompense (for good
deeds) of the HereAfter, are:[]].  One can give them as a charity and is
strengthened by it to the submission of God the Almighty.  If one benefited by
it and it was known that those benefits [in what God made available by His
creation] God [the Almighty] and His support, one then finds two reasons - to
continually thank God.  If the one who is able to enjoy these pleasures,

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b lines 23-29: This paragraph is in reference to the idea that only God’s prescribed uses of
metals will be rewarded with an Afterlife and any other use is blameworthy.
abandons them and devotes himself to worship God and endure (life’s) hardships, he will have the greatest of recompense. This proves that enjoying in these delights is a means to the recompense in the HereAfter.\(^c\)

Another reason (explanation): He whom God gives these earthly pleasures, must spend it in what is [the best] for the Day of Judgment, and he obtains access by it to the HereAfter.\(^d\)

It is related in the literature as transmitted by some thoughtful persons that when our prophet Adam, peace be upon him, did what he did, he abandoned everything except the ‘ūwd tree and indeed he took refuge in it. Everything in Heaven lamented over him except gold and silver, and God the Almighty spoke to the two of them: Why do you not mourn over the lover rejected by his beloved\(^e\)? And the two of them said: Verily we do not lament over a lover who has renounced his beloved! So God said to them: In the name of my majesty and glory, I bless you and make you a value for everything and I will make the sons of Adam slaves for you. Then God

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\(^c\) lines 31-41: The uses of gold and silver are prescribed by God. See Chapter 2, “The aHādīth Relating to Metal”.

\(^d\) lines 43-45: Charity spent from God's gifts before death is described in the Qur‘ān 063:010.

\(^e\) The use of the term “beloved” here and later in this paragraph could also be used to signify "The Beloved", i.e., God.
addressed the ‘ūwd tree: Why did you give home to a lover dismissed from his beloved? It answered: My God, it is a mercy from me on him! So God said:

In the name of my majesty and glory, I torture you in this life and after life so nobody can use you unless for the purpose of burning you, because you gave home to a person that did not follow God’s will.

...abū nu‘īym, in his hilyat ❋, related that wahib bin munabbih, blessing of God [on him] was asked about danānīr and darāhim, and he said: The dīnār and the dirham are seals of the Lord of the World on the Earth for the sustenance of humankind, not for eating, not for drinking, and indeed [if] you went by the seal of the Lord of the World you fulfill your needs.

He who collects of gold and silver lawfully and spends the two of them lawfully, is among the protectors of Islam. Some learned scholars said: The protectors of Islam are five: the protectors by weapons ❇️, and the protectors by tongues, and the protectors by hands ❁, and the protectors by hearts, and the protectors by wealth. As for the protectors by weapons, they are the caliphate and the kings and those who are armed with weapons, who

❋ Ornament, Refering to the book hilyat al-āwliya’
❇️ qur’ān 008:072
❁ qur’ān 004:075
defend the religion and subdue the corrupt ones; as for the protectors by tongue, they are the educated scholars [ ] and who say this is lawful and you may enjoy it and this is wrong, so leave it; and as for the protectors by hands, they are the judges and the record keepers, who record the laws and safeguard the blood and the wealth for what each person possesses wherever he is; and as for the protectors by the heart, which is among the names of the soul, and they are the good, the vigilant, the holy ones calling on their Lord throughout the night to guide them and mend their ways; and as for the protectors by wealth [whose wealth consists of wealth], it is silver. And the collectors of it and the spenders of it are counted among the protectors of Islam, for the people use it when needed and asked. The poet has mentioned them (all five protectors) and he said:

If you want to lament a dead man
And weep over him after the honorable Prophet,
It would then be a brave person who unsheathe his sword against the enemy
He obstructs (the enemy) at every jagged seaport,
And the one who bears knowledge, a modest counselor is he
Desiring the instruction for the educated,

lines 81-93: The five protectors of Islam are the rulers of the Islamic states, the ‘ulamā’, the judges, the holy ones, and the givers of zakāt.
And the one who is the judge, he has integrity in the *shari’ā*

He answers to the rule of God not by arbitrariness,

And the one who gets up at night (and) is pious of the nighttime vigil

He experiences hunger more than anyone can endure,

And the one who accumulates money of large, vast quantities

He betters himself by it in the service on every Muslim

These are the five of which he should lament on them, but all others are

Where the swift rider of death has already cast his baggage.\(^j\)

Some wise ones said: gold and silver put an end to the weak and supply
the lazy, and by the two of them the kingdoms flourish and the institution is in
order, and there is no power except by men, and there are no men except by
money, and there is no money except by citizens, and
there are no citizens except by justice, and there is no justice except by the
power.\(^k\)

What writers abundantly mentioned about the importance of the
positions of gold and silver [confirms] the truth what the chief *abū nāSr bin*

\(^{j}\) lines 100: This line is from the suspended ode of *zuhaifr al-būwrri* (translated and referenced by Adel Gamal).

\(^{k}\) lines 102-107: A description of how money is intertwined in the circle of reality
habat allāh said concerning the contest of the al-dīnār wa al-dirham\(^1\) and their resorting to the sword as a referee. He said in one of its chapters:

“I am the king and there is no dispute, and the master and there is no extension greater than me, and the victor and there is no subjugating me, and the well-known, no one can deny me, and the preferred over every thing, and the beloved to all judicious, and the venerable - the safeguarded, the powerful one who (the people) can not despise. My announcement proceeds, and my usefulness is in progress, I put an end to poverty, and bestow blessings, and the market of pleasure I raise, and I draw the remote near good things. My face is noble and my lineage is firmly established. My name is happy outcome, and my surname is abū al-surūr. Age-old and tumbling down, my potency does not fade away”. This is just one of its many chapters. This is a persuasion to whoever scrutinizes it and contemplates it.\(^m\)

\(^1\)The Dinar and the Dirham, a book

\(^m\) lines 109-123: A testament to the veracity of the preceding argument
Chapter Two

Concerning the names of the two in all the languages and what is special in the type of the two of them among the characteristics and the descriptions

The author of “al-jamāhir fi āSnāf al-jūwāhir” said: Gold in Arabic is al-nuDār, and that, which – due to its (sheer) purity – does not require melting, is known as: al-’aqyān (pure gold). In Syriac it is dhhbā, and in Hindi swarn, and in Turkish altūn, and in Farsi: zir.

tibr (ore) is what gold and silver are before it is worked. Some people use the term to refer to all precious metals before they are worked, however, the term is more commonly applied to gold than it is to silver and other metals.

And it has been said: This body (the metal) was called al-dhahab because it is fast in departing and slow in returning to the possessors. And it was said that it is called by that name because from the sight of (the metal)

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a “The Collection of the Types of Gems”, a book
b Meaning, The Departer
goes one’s reason, and (when one notices it,) his mind almost departs and
leaves him. It is said: A man afflicted in that way by it is rajul dhāhib (a
man who has gone away). And one of the sages said, Why is gold yellower (in
color)?, to which he refrained: Because it has so many enemies it runs away
(scared) from them.

Concerning the record of language: ‘asjad is gold. Among its names is
zukhruf (ornament), and originally the term referred to speech that was so
embellished that is was associated with truth. Then the term was used in
connection with the arts of tazwīyq (embellishment) and tazyīyn (decoration) is
in painting, and from it was rendered, literally, gold (dhahab), God the
Almighty said: “Will you have a house (made) from the ornaments” that is
adorned (with) inscriptions in gold (?).

There are indeed certain types of gold that are refined in the fire, either
by simple melting, or by the singling out of soot black and choice, good
quality gold; it is called laqT (a gleaning) because it is gathered from the
metals as individual pieces. However, it may not separate when in a mixture
from some particular thing,\(^h\) (which are removed by) and the refining (by melting) until purification, until it is distinguished by ibrîyz (the pure gold), and after (that process) the gold retains its weight and that does not diminish, even if it is melted.\(^i\)  

\(^i\)  

\(\text{abū isHāq al-Sāb}\) said:

I was afflicted by the fire of worry and a yellowness increased,

In the same way gold becomes pure by melting.

And another said:

I see the old man decreasing in his body (in size),

And increasing in years in his wisdom

Just like the ore decreases in its weight,

And increases in the mold in its value.

For such a situation it was said: He who forgoes red gold is more generous than he who forgoes yellow gold.\(^j\)

As for silver, its name in Arabic is al-lujīyn, and in Greek arjūsa and in Syriac sīyma [and in Farsi sīym] and in Turkish kumush and in Hindi rūb. And it is called Sarīyf\(^k\), and it is assumed, that the word Sayrafi (money-changer)

\(^h\) Meaning, the gold may still retain some impurities
\(^i\) lines 33-40: This paragraph is referring to the fact that all gold is not native gold and sometimes must be refined by various means to obtain a pure sample.
\(^j\) lines 41-51: In reference to alchemy: Submission to, and study in the name of, God enhances metallurgical processes.
\(^k\) The Arabic root S-r-f means “to change”.
comes from it, and indeed [the job of] the of the money-changer is the
engaging in the change from the ready money and the paper\(^1\) (leaf) in the
preference between the different coins/currencies, such as are derived from it.
And it is also called the *Sawlaj*\(^{\text{m}}\) (cocoon of the silkworm). And that word
seems to be an attribute for it of the quality, because it is said that silver is of
the *Sawlaj* and *Sawlaja*. The author of “*al-Tanbihat*\(^{\text{n}}\) said: It is said the
dirham coin struck from it (silver) is called *al-wariq*. (The term) *riqa* is a
fraction of the apparent and the introduction of the outside and the weakening
of the minted-coin dirham, and this is not said concerning the others.\(^{\text{o}}\) The
minted *wariq* and the other (than them), the two of them are said to be for the
purpose of minting. The author of *al-muSanaf al-gharīyb*\(^{\text{p}}\) said: *al-sām* are
the veins of gold, its singular is *sāma*. It is said that gold is known as *al-
*nuDār*. Concerning silver, it is said that one single piece of it is called

\(^{1}\) The term *waraqa*, literally, in the modern sense, means paper. While it could mean the term "check", defined as the system where one could have a paper writ in one place for the purpose of verifying their funds in another, which is a concept started within Islam, this does not appear to be the case here. Based upon contextual use throughout this manuscript, the term *waraqa* appears to refer to gold leaf for decoration, which would be used on ornamentation and might enter into people's head as something to put on a scale.

The theoretical concern in this manuscript's discussion is gold-leaf weight is worthless in valuing gold or silver since one needs to consider both weight (intrinsic) and need (instrumental) value, as well as complex calculations, in considering the worth of gold leaf, if one wishes to avoid usury or fraud in the marketplace exchange. The term paper, used throughout this translation, refers to gold leaf.

\(^{\text{m}}\) The meaning here is unclear. No other meaning for *Sawlaj* has been found.

\(^{\text{n}}\) "*al-Tanbihat*", a book

\(^{\text{o}}\) lines 62-64: This section refers to the fact that the *wariq* was a term used to denoted minted *dirham* coin only, and that the *riqa* was a lesser standard, and not used for anything else. This section may also refer to the debasement of metal currency due to the introduction of fiat money from sources outside the Islamic empire. See also Chapter 3, "Multiple Currencies: Bimetallism".

\(^{\text{p}}\) "The Compilation of the Foreign", a book
The author of *adâb al-kitâb* said indeed among the names of gold is *nuDîyr* (the herald).**

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** lines 69-70: The use of *nuDîyr* from the Arabic root *n-D-r* (see line 8) is, perhaps, referring to the use of coinage as a marker of political and religious affinity. See also Chapter 3, "Coins and Change".

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** “Etiquette of the Book”, a book

** lines 69-70: The use of *nuDîyr* from the Arabic root *n-D-r* (see line 8) is, perhaps, referring to the use of coinage as a marker of political and religious affinity. See also Chapter 3, "Coins and Change".
Chapter Three

Where the two metals are and how the two of them are produced
and the extraction of the two of them and the purification of the two of them
and advantages all from the two of them until it is collected in full

The metal workers mentioned that gold and silver [are found] in places
among some of the territories of the land. Gold is in the island of sirnadīyb in
the land of hind a, and the land of Iraq, and the shores of ifranSa b, and the land
of ilbiyra c from the island of al-andalus, except in small quantities, and in the
land of the South from the land of the Sudan, and howsoever you move away
from the civilizations is more gold.

Silver is (found) in places from the Maghrib like the mountain of jandar
and what otherwise of it is among the land of the suws d and in the mine of
‘arām and wānsharīys. But the research [concerning the two of them] was
neglected, and much [of what] was imported to it was from the city of
sardānīya e, and a little from the land of ilbiyra by way of ishbīyiya f and

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a The land of hind refers to India.
b Considering the next places to be mentioned, this could refer to France.
c Iberia
d Possibly indicating the lands governed under Islam
e Sardinia
f Spain
kabrafiq \(^g\) from the production of *qarTuba* \(^h\), and the mountains of marsīya \(^i\) and baijāna. And in this, all of it, is wisdom and proof, and a declaration on the existence God the Creator is made clear.

The two choicest bashār discusses, and he mentions the metals of the earth and other than them:

You claimed that fire is the most honorable of [elements] and on earth you survive by rocks and lava

And created in its womb and its uterus are wonders that cannot be gauged with words

And in the deep from the depths of the sea are benefits of the hidden pearls and the blooming amber

So the pleasures of the earth are in the entire sea and in the rich tenderness\(^j\) and the hard mountain

And, in the open earth, metals are concealed, For them, caves cut a passage with wealth\(^k\)

Of pure gold and silver which are to the liking and temptation of the self-assured and ascetic

\(^g\) Cabrafiq, Portugal?

\(^h\) Cordova

\(^i\) Marseilles

\(^j\) Meaning, the soil(?)

\(^k\) Meaning, the caves contain veins of minerals, exploding with wealth
And each metal, from copper and lead
and from active mercury and ammonia, it fills the gap
And in it are arsenic and kohl and litharge
And from *narkhāṭyshan* not *kāb* and not *mukid* ¹
And in it are the varieties of bitumen and alum and
and types of sulfur that continue to ignite
You see the vein among them, in the minerals, does not pulsate
like what the beautiful woman cut of the hem of the garment
And from antimony, *jūwnin* ² and calcic lime, silver
and from zinc in the minerals from India
And in each depression of the land are minerals
And in the surface of the desert wilderness among flat ground
And that organization/guidance, and benefit/utility and wisdom
and clarity are in proof of the glory of The One, The Only

**Part:** Gold and silver are, the two of them, among the molten/soluble bodies. God the Almighty brought about in his wisdom and his organization of it that the planets were necessary for the extraction of the metallic substances from the earth if the earth agreed to what was agreed to from that substance, on

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¹ line 41: These words, which have not been found in dictionaries and are not known by present day native Arabic speakers, appear to have lost their meaning in antiquity.
² The same as stated for the immediately preceding footnote applies here. The meaning of the word is lost.
the predestination of what was inside it from the similar vapors for that
celestial substance, and each body from it was suitable for a planet among
the planets.

First of what exists, on what the author of “zatabat al-Hakiym” mentioned is lead (metal). The cause/problem of its existence/availability is that the heated water is in the inside of the earth in fixed places. If the sun were to kiss that place, the location would become hot, and if the water which was in the interior of the earth were kissed and it would become, in weakness, (like) the ascension of a fugitive seeking (escape) from the heat. [Then] it lacks (is deprived of) the heat, because the sun does not run away on it, remaining on it endlessly, and indeed it is moving. If the heat came about it, it was returned downward in demand (of restoring) of its position. And it benefited from that heat in part, and that heat which went by some agreement did not stumble upon the resting place which was in it and it adhered on its surfaces so that it became thick - viscous and condensed - and it left from the boundary of the aqueous to the boundary of the golden, and it became mercurial in what was acquired from the heat of the morning and it rolled down in order to escape its thickening, and because its condensation

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\[n\] The root of this word is \(q-d-r\), which has dual meaning; in addition to meaning “predestination”, it also means “quantity”.
\[o\] “The Order of the Wise”, a book.
\[p\] lines 64-68: This section is a metaphor, describing the process of the vaporization of water under increased temperature and pressure.
\[q\] Meaning, place of origin
thickens. And for that the heat had no ability on the influence to it, until its moisture was dispersed throughout, and the heat in its surfaces adhered to something after a thing. And that heat and that radiance were on it, the two of them are what kissed it to this manner which is called mercury. It is an unction among the unctions of metals, and it is one of the bodies, and if this water was more elegant in substance from the initial water, it is because the waters change in the thinning (vaporization) and the thickening (condensation), and if this water was in a location which is more intense of heat from the first place and the water is more thinned of substance and more condensed of body from the second, and the heat of the sun heated it up, it drew from the heat and received from it more elegance by the heat of the place which [in it] is greater than what was before the initial water, and its moisture was destroyed and it became dry in desiccation in its entirety. And the sun goes about it and the heat which intermingles with it remains unchanged (is retained), breakfasting on the moisture leisurely. And this diligence of it remains until it is put to flight to a colder place that is nearer to it lest it disappears, and the cold makes it corporeal and the excess [in] desiccation and the dearth of the moisture in it is turned to stone; and it comes to pass gold from the metallic unctions, except in it is more heat and more drying than the first unction, and it is called sulfur, and the first is more entitled to the name of the unctions. And by this reason if

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7 Literally, “picture”
8 The root of this word is d-h-n; in addition to meaning “unction” it also means “painting” or “oiling”. The multiplicity in meaning here is key; unction also connotes something that is used in anointing, as for a religious or spiritual consecration.
the two rocks in the metal meet together it would be all from the two of them
are precious in proportion of the meeting among the earth and the air and the
cooking (heating).¹

The authors of the metals said that the lead, if it were most fierce and it
flew (quickly) and preferred it, it would manifest from it silver.

Part: The means of extraction of gold from other metals and its places
is, on what was related by the author of “al-jamāhir fi [ma’rifat] al-jawāhir”¹¹,
different. Among it is what made the water flow in some of the times in the
places in which people are not established. If one were to dig in the ravine
pits, and one were to put in them mercury, and it were left until one year
transformed it, then one would be successful by it and the mercury would
become gold, and this is because of that water which was in its origin if it came
to pass. And the sand is carried with the gold, which like the inclination of the
portions, (has) a fineness and a minuteness and it is charged in it on that
mercury. And the gold clings to it and the sand leaves going.

It was related that [in] some of the places a source is for their king, no

¹ lines 80-99: These lines (of the passage beginning on line 62) are a metaphor, using a play on the words “manner” (picture) and “unction” [painting or oiling (of canvas, i.e., surface of the earth)] in reference to the description of how mercury and sulfur came about.  
¹¹ “The Compilation of [the Knowledge of] the Substances”, a book
one gets close to it, and he empties it out each year, and he extracts from it a lot of gold, and there is no doubt that it is among a variety of what was mentioned.

And [like that is] the gold which is left from the water of jiyHuwn, and if it were near to its source, the descent would be from high. And when the force of the water carrying subsides for the gold in its approach [among the level], it is incapable of carrying it and it is left for the streams. If it were extracted with the sand and the soil, it would be caused to stand out in the washing and in the act of pressing [and the fire] in plucking out (like) hazelnuts/filberts.\(^v\)

It was related that in some of the mountains there is a village devoid of provisions and wealth completely,\(^x\) and in what is their subsistence is the laying in wait for the springtime rains; and indeed if (the rains) were to come seeking (their) favor, they (the people) would leave its quietness and depart by means of two paths; namely, iron tent pegs [they carve] from the river bed, and the disclosure of its potential in gold exposing to extensive greed their fabrication of extensive articles of jewelry, in order to acquire from their price what they can carry back in terms of provisions, and meats, and fine clothes; and had it not been for that, for what inspired them was unique, and had it not

\(^v\) lines 126-127: The reference to the handling of hazelnuts/filbert is a simile for the panning process for gold.

\(^w\) lines 121-127: This paragraph relates the process of how placer gold metal is deposited into river beds, and how it can be easily extracted using the panning technique.

\(^x\) Meaning, areas where there is no arable land
been for that, for what enabled them was their faith in it, and God knows best

by the advantages of worship in him.

And the gold imported from the land of the Sudan does not reach it except the deep-rooted in it by means of an aberration of disposition of that vacant soil over an extended period of time, and in the ability to carry the provisions and the benefits from them is its competition. From it is what one does not stumble upon except after the rise of the sun for the shine of its rays, and it is claimed like hazelnuts/filberts that one collects from one’s knowledge of it, and from it is what is taken [from flowing streams] the descending torrential streams from the qamar (Moon) Mountain and the southern mountains about it, and those mountains are very intense in height. And the water carries by means of its strength the big fragments of gold that are mottled of clay. And in it the Nile is called the land of gold and some metals of much interest are in the rough of the Nile.

Part: The stones of gold are, on what was mentioned by the metallurgists, red and yellow and a third color and there is little (of it), and it is black of the surface, red of the it interior, and it is, all of it, in result from the gravity. If its imperfections were the gauge, it would be red or yellow. If
you were in doubt, smash it and pulverize it and place it in a kawjal\(^y\) of bone
and ignite it with the bellows and the charcoal for half the day, and if
something smelted for you, in luck you would be. And it is placed in the
kawjal at the time of the smelting a vitreous borax and a lead and a soap
desiccant, and like that it will make scoria. And by means of the sand, if there
were doubt about it, from the body is ten parts, and from the borax and the lead
and the desiccating soap from each one come one or an increase from that
which was set out.

The rock of silver is itself of colors five: white and black and green
infused with red and infused with yellow and the type of scoria and veins of
black and from stones is its sulfur-ness. And it is all of it; if it were broken, its
interior would be shimmering in clarity, gracing it a scratch at the most. If its
imperfections were its gauge, it would be for the white. And if there were
doubt concerning its stones, pulverize it, and put it by the weight in a kawjal
like what we mentioned, and put with it a quantity one fourth from a vitreous
borax and a lead, and ignite it in the fire of charcoal and the bellows a period
of two hours or three, and the silver would be purified and left behind in the
bottom of the kawjal.\(^z\)

\(^y\) The term kawjal has not been found in any of the references cited, but in context appears to
mean a container made of bones, possibly a cupel. Note the similarity in the two terms; Arabic
does not have a letter for the sound of “p”.

\(^z\) lines 156-178: These two paragraphs contain a description of the cupellation process.
**Part:** As for its purity from the slag, the condition in question is what *al-Tabri* mentioned in explanation of what (God) the Almighty said: “And of what they ignite in the fire desiring ornament or personal possession is a dross*aa*, similar to it also God strikes (forms) the true and the false”*bb*: and it is an illustration of God forming it in the right and the false, saying: Like what remains pure of this gold and this silver upon inserting the two of them in the fire, and the dross*cc* of the two of them goes, like that the righteous of His people remain. He (God) said: “Or personal possession is a dross similar to it”. He is saying: This iron and this copper which one benefits from, in (them) are advantages. [Then] he says: Like what is left behind pure is this iron and this copper upon inserting the two of them in the fire, and the dross of the two of them goes, like that the righteous of His people remain like what remains is the purity of the two of them.

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*aa* The root of this word is *z-b-d*; in addition to meaning “dross”, it also means “cream”, and “slag”, i.e., that which rises to the top but is not the core substance desired.

*bb* *qur’ān* 013:017. The same metaphor made earlier in the text is spelled out by this saying from the *qur’ān*, which literally states: “He sends down water from the skies, and the channels flow, each according to its measure: But the torrent bears away to foam that mounts up to the surface. Even so, from that (ore) which they heat in the fire, to make ornaments or utensils therewith, there is a scum likewise. Thus doth Allah (by parables) show forth Truth and Vanity. For the scum disappears like forth cast out; while that which is for the good of mankind remains on the earth. Thus doth Allah set forth parables.”

*cc* The root of this word, *kh-b-th*, has multiple meanings. In addition to meaning “dross”, it also means “slag” and “wickedness”. See also its earlier use in line 181 and compare it to the use of *z-b-d* in line 188.
As for the height of what the most prominent among the Arab philosophers who produced the practical books like jābar bin Ḥīyān and al-rāzi and ibn waHshiya, and who entered upon the study of antiquities, mentioned - They put for the bodies of gold and silver wash waters, an exemplar, and from it by means of hot water and from if it by means of vinegars to what resembles that, and the wash of it little-by-little accelerated its cleanness, then by means of the spirits, then by means of the stones, and it is that which settled down in the salts. From cleaning it still is its dirt, and it is not possible that in a body there is no cleanness, because the clean body is that which becomes dirty. If the surface of dirt were washed from it, it would be returned cleansed to its original condition, and that cannot be except in the example of gold and silver which the two of them are clean bodies. If these two bodies -- if there is a mixture other than the two of them among the dirty bodies -- were filthy, and the dirts adhered to the two of them, one would wash the two of them on its surfaces: And in what was from blackness is by the result of combustion or the proximity of what damaged it like sulfur. If silver, if it were snuffed it would be blackened, and it would not be cleaned except in the alum$^{dd}$, and it is by means of the salts and it is by means of the alums.$^{ee}$ And it is all of it one, because the color of the combustion and the blackness from the silver and the gold abate, and color of

$^{dd}$ Referring to any of various double salts that are isomorphous with potassium aluminum sulfate

$^{ee}$ lines 195-213: The first half of this paragraph describes the process of pan amalgamation.
the two of them, bright, is concealed. And this washing is not easy in the gold and not in the silver except in what the copper mixes with one of it. As for what is a mixture of one [two of them], (it is) lead, its cleanness is not forever except by means of the removal of lead from it, and this is the washing of the body, and it is that which differentiates between the substance and the lead [or between] the dirt and the clean substance. And that is like the alloyed silver in the lead. If it were separated from it, it would be by means that a *kawjal* is made one-third of it of bone and two-thirds of it of gypsum, and it binds the two of them in the fire. If the *kawjal* drinks (absorbs) the lead, it diminishes it, and the fire hastens its agreeableness and its rarity(?), and (of) the silver (there) remains not a thing in it, and like that is cleaned from the copper, by the means that you bring it about in this *kawjal*, and you eat (consume) the lead for good so as the pure unmixed remains. This is a method from the practice.

As for washing gold from silver and copper, it is done by two methods: The washing of it from the copper is alone similar to the washing of silver from copper by means of lead by the aforesaid pattern. And if you like, you feed the two of them sulfur and the copper is burned, and the gold that remains is pure.

As for washing the gold from the lead, it is like washing the silver from the lead -- the same. And as for washing gold from silver, it is done by two
methods: one of the two of them is by means of stones and the other is by means of mixtures. That which is by means of stones \[\text{is}\] by means that the combined gold is mixed in the silver and it is thinned until it becomes very thin sheets, and it is spread out for it a bed among the pulverized powder of the other except the great stone\(^\text{ff}\), and the alloy in the salt is sharply divided(?) into two parts equally, and that which is in a sheet is bound and it is ignited in an oven that is known as the furnace of soot, and if the silver were to end up in the belly of that taken dirt, the blocks would be left behind pure.

Also, this practice by means of the alum and the salt on this level, works.

The gold is washed from the silver like what washes the copper, by that it is added to the gold mixed in silver something from the copper and the whole is smelted and it is fed to the yellow sulfur. And if the gold were purified from the silver and left behind pure, the former would be better.

The silver, which was extracted from the gold and began in that dust which is called soot, is washed by means that on that dirt is thrown mercury. If that mercury was roughened and became viscous until it became like paste [and] it was its indication, and if it were to become like the paste put on it and

\(^{\text{ff}}\text{Meaning, a stone of great value(?)}\)
the fire on top of it were ignited, and if it were to rise up from the silver and
(the silver) sinks to the bottom, it would be is silver. And like that the mercury
washes each body, and it was understood.

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261

262  **Part:** *abū al-Hasan bin rajā’* said in the book “*al-Sina’at al-‘amilīya*”:

263  For the operation in these surfaces is an owner who is skilled and proficient in
it and knowledgeable and experienced, for he celebrates success (of) that in the
inspection for what was worked in it. If other than it is
266  among the skill it would take out the error in it except this -- and if it was an
error in sooting the gold and its removal from the oven of cooking, it would be
incomplete -- the gauge came on it in its returning, forfeit and deficient, and if
one was unmindful of it and forewent the sooting above its limit, he would be
in it greatly deficient. And like that the purification of silver -- if it were
melted, if successive examinations were not in it (for) a knowledge with its
states and characteristics between its features, it would be negligent -- what is
known is that the right of it was taken from the smelt and removed on the
ebullition, - and except in it from the negligence, it was great. And some who
work in that communicated [and said of it] if in the majority of heat it were
split, the fissure would be in its fingers/digits and, it would be deliberate like
the intimate and countless on it, and (there is) no threat on it and no damage of

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*86 lines 254-260: This paragraph is a description of mercury amalgamation.
87 “Practical Industry”*
it and also for its knowledge, by means that the time which expires in it sooted it and separates from the slag that which in it was a period of cooling. And it splits it by means of its digits in that time and it is on the fire in the state of boiling.

He said: As for the ore imported from the land of the Sudan and other than it, it is taken and put in mercury and the rough (paste) from it named is smelted by means of “al-ʾantūwn”, then thinned by the hammer and cut and mixed by means of that which [remains] from the ore which is not smelted, then the sooting is made easy, and it is a pulverized substance of the new red baked bricks, and the salt is halved and mixed in the fire, and it is placed in the amount and it penetrates in the furnace of sooting, and the fire burns on it a day and a night or, lacking that, in a moderate fire, then taken from it without [ ] and it is tested and measured by means of the standard. If its limit from agreeableness were reached, it would be reduced and smelted. Then it is handed over to the workers by the weight. And it was taken from them after the work and the stamping by means of the weight. If from the weight something were diminished, it would be cut from their wages.

Part: The chief abū muHammad al-bīyTār, in his generalizing, said if the masquerades were among the types of salt, the goldsmiths would use it
more than other than them, and that it would be earmarked for the casting of
gold and they would soften it and shape it with gentleness, and they would not
change the fire on the variety of gold if it were with it.

Part: bakhtukān al-Hakīym said: The countable litharge from the slag
of the gold and the silver is called murdāsinj, and appears on the slag of the
two of them after the refining from copper and other than it. And its
usefulness is that it fills the decaying sores of a piece of flesh and the excess
flesh is repaired in the sores and its blood, and it would be beneficial against
the itching of the legs and against hidden sweats and the odors of the two of
them and it saps the strength of the sores and blisters/pustules if it were coated
on them, and it prevents against the (alcoholic) drinks\(^\text{ii}\) and the flatulence, and
if it were mixed in vinegar and oil it would be useful against the abundance of
lice if they were coated by it.

And if washed litharge were taken and soaked in rose oil and coated by
means of it, the traces of the sores would be in recovery and their blackness
would disappear.

\(^{\text{ii}}\) Meaning, intoxication
Part: It was said: Gold is balanced in agreeableness, its filings are included in the melancholias medicines, and the best of cauterization and the wealth of its recovery is what was by the cauterization of gold, and holding it in the mouth calms down the fume and its filings are included in the disease of hair loss and the disease of the snake plating, and it strengthens the eye of congenital blackness of the lids, and it is useful against the pains of the heart and against the palpitations (of the heart) and the misgivings (of the psyche) and the wickedness of it.

Part: And he quoted the authors of old that if a stone from a ring of gold were taken from it, then heated until glowing by means of the fire, and cauterized by means of it the primary quills of the wings of the dove/pigeon domesticated to its tower, it would not be separated from it. And the others said: Equally the gold of a ring or other than a ring is cherished, and if from it a weight of two grains in the weight of 10 ārTāl were removed, mercury would be packed to its bottom, and if in that amount 100 darāhim or other than it from the heavy bodies were removed, it would float to its top and would not sink in it.

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ji Meaning, bile-related (?)
kk Meaning, halitosis
li Meaning, alopecia
mm Meaning, psoriasis (?)

nn ārTāl is the plural of raTl. See also Chapter 5, “Chapter Six” of this translation, line 78.
Part: If the ear were pierced by a needle made of gold, it would not heal up. And if one were to affix/suspend the accentuation (earring) on a child, it would not hit and it would fall. If one were to wear a ring from it on a finger with an ingrown nail, it would lessen its pain. And if from in it there is a malady necessitating cauterization, then if cauterized by the gold, the position would not scar. And if, there was taken from it, a stick of kohl, by it by the kohl the eyesight is limited. And (if) the bladder were be injured, its impairment could be driven away by means of drinking honey and musk, and the best of it is what was not mixed (by) a debasement. The potion (of the medicine) from it is a karat.

And from the book “al-bustān” by laftaH bin khāqān: Aristotle describes the stone which attracts silver, and it is a stone white of its color to the dust color, and if there were intensity on it by the teeth, it would be scratched like what scratches lead, and there is not in it a thing. Whosoever were to take a weight of ‘āwqīya from that stone and put it on a quantity of 5, a greater measure than silver would attract it to itself. And if the silver were tarnished, it would completely remove that tarnish from their places. And whoever put a piece of that stone on a ring of gold or copper, then its proximity

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oo Meaning, not hit the ear and not fall off
pp “The Garden”
qq The ‘āwqīya is a weight, the magnitude of which varies depending upon the region in which it is being used.
to the likeness of its weight from the silver attracts it and pulls it out. And if
that stone from a ring of silver were close, the ring would move forward to it.

The stone of gold also is known. And that truly the gold, if it were
planed by the rasp from iron and mixed in the dirt, then it would pass over this
stone. And if it were removed from the dirt, one could glean it until not
remaining from it was a thing except its attraction to itself.

If the gold, because the people were making change by it in what was
between them, and on it the circulation revolved, they would protect it. And,
if the contact bordered upon it and it was copper, and if its color were
examined, its redness would be blackened. And if its border (were) of silver, it
would whiten it and would decrease from its strength. All of what was made
from the inferior substances on the noble substance was mostly inferior
because each body, if it intermingled with what was not close to it in the type,
it would alter it and degrade it.

‘ali bin ‘aïysa al-kuHal said in “tadhkiratuḥ”**, if the two were localized,
that which is removed from the soot of gold and of silver, it would be among
the most preferred of eye remedies, and it would be useful for the drying if in it
was a hot moistness or flow, [or] mild, especially if that

**“His Memento”, a book
were from an abrasion. And you are made well for the effect/action, which is not by accident. And for the ulcer/sore, it is among the burning (sensation) remedies, (as well as for) the whiteness\textsuperscript{ss} and the mouth foam and the age-old mange and all ailments of the old like the age-old flowing (incontinence).

\textbf{Part:} The authors are in agreement that if one sketched on a sheet of gold a hexagon in accordance with 111 from the count at the time when the sun is in its sunrise, even on among its work, abreast of its demands and its service, and it is that:

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w & lb & j & lh & lh & alif \\
\hline
n & ïyá & kz & kH & H & l \\
\hline
ïyT & ïyb & ïyúw & ïyh & kj & kd \\
\hline
ïyH & k & kb & kl & ïyz & ïyj \\
\hline
k:h & kT & y & T & kúw & ïyb \\
\hline
lúw & h & lH & d & b & lā \\
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\end{tabular}
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\textsuperscript{ss} Meaning, cataracts(?)}
As for silver on what al-Hakīym said in “āduwīyatah al-mufrada al-mujadwala” a cold ground is in the first order. If the silver were chilled and mixed by means of the drinking medicines, it would be useful against many of the moistures and against sticky phlegm and against the existing maladies from the decomposition/mold. A characteristic of it is the benefit from copious urination and from excessive phlegm, and the disadvantages of it are by means of the bladder, and its detriment is turned to advantage by the honey and the nut. Its fumes – what was not mixed of it is debased – the potion (of the medicine) from it is a dāniq.

And if one sketched on a sheet from it a square from the quantity of 34 from the count at the time when the moon is in Jupiter and one observes it in contemplation, in praise or Jupiter was in the house among its houses even on among its work of protection, and the authorities were proper and in peace, if one were to enter the two powers, and it would be in the power of God the Almighty:

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"The Medicines of It of the Cataloged Expressions", a book
The meaning here is unclear. dāniq is the singular of dūwāniq. See also Chapter 5, “Chapter Six” this translation, line 13.
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Chapter Four

Concerning the knowledge of what is mixed in the two (gold and silver),

including the amounts of impurities, the purification costs,

and the techniques of separating what is not (wanted)

from what is (in its entirety, including dust)\(^a\)

It is an engineering advantage to be informed about the debased coin and the quantity [of its debasement by means other than heating in the fire] and not by filing with a rasp and not by scratching with a stone specialized to scratch gold. Rather, that is to be instructed, and gold and silver, on the condition of the two of them among minting or goldsmithing or inlaying (with gold) of gemstones with the retaining of it on its splendor. The jurists and the judges are in need of it concerning the orphanages’ monies and also for kings and the owners of valuable properties.\(^b\)

And a picture of that on what al-shohāb al-qorāfy\(^c\) discusses in “\textit{dhakhīyratuh}”\(^d\) is that you invent a balance that moves the bearing of its scale/measurement from the outermost point (side) of the column to its center,

\(^{a}\) This chapter deals with the methods of assaying gold and silver portions and the discernment of their purity from debased metals.

\(^{b}\) lines 8-15: This briefly explains the advantages of using the non-destructible technique to be described and those persons for who this non-destructible technique is an advantage.

\(^{c}\) The author al-shohāb al-dīn abūw al-‘abās aHmad bin idrīys bin ‘ali bin ‘ali bin yilīn al-qorāfy al-Sinhāja al-bihnsa died A.D. 1258.

\(^{d}\) “His Repertoire”, al-shohāb al-qorāfy's book.
and you make on the outermost point of the column symmetrical, close
together grademarks, the subsequent of which is delineated equally. Then
you take some gold and some silver, the two of them pure, and you level the
two of them in air. Then, the two are immersed in water, equal of portion,
disturbing minimally the level of movement, like the crystal-clear
(undisturbed) water and its fashion. And you move the scalepan of the gold in
the water more than (that) of the pan of the silver -- this is because the gold is
more crammed together -- and the bearing of its pan is driven across the
column until it is equal to the silver in the water, like what the equivalence of it
is in the air, and you preserve the count of those grademarks which the bearing
of its pan’s measurement) cuts across, (such as) for when it is six for example,
and you know that that is the preference of pure gold over pure silver. Like
that, to the determination of the material body is the test of gold, and you
weigh pure silver in air, then you place the two of them in water, and the pan
of the test falls, for the gold is more crammed together, and you level the two
of them by moving the bearing on the column. If the bearing cuts across these
six grademarks, then it is pure, no debasement in it. And if the equivalence is
pure without that, and if it happens rather in operation on four only

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*e Meaning, equidistant grademarks
*f lines 18-21: The description appears to be of a double pan balance.
*g lines 21-24: This passage describes a measurement by water displacement which is described by the Archimedes' Principle. An object that sinks displaces an amount of fluid equal to the object's volume; the weight of the object is reduced by its volume times the density of the fluid.
*h lines 25-27: The density of gold is greater than the density of silver.
and one-third remains, one-third of it would be silver on this percentage.

Or you can make the two masses equal of greatness, one of the two of them pure gold and the other pure silver, and you heat the weight of the two of them, and (let us say) for the silver (it) is 4 and the gold, 5, and you make another mass the equal of its greatness -- for the greatness of the tested (quantity) is pure silver, and you know its weight, and it is 7 and the weight of the tested (quantity) is 8. The increase of the tested (quantity) is 1, and its attribute to the 7 is the portion of one-seventh, and the attribute of the 1 in the pure gold to the pure silver is the portion of one-fourth. And in the tested (quantity) among the debased in amount is what is one-fourth and one-seventh, and if the tested (quantity) is 8 and one-half and one-fourth, then the excess is like one-fourth of the silver which the opposite was pure.

If it is difficult for us to find silver equal to the mixture\(^1\), we fabricate the two masses from wax or other than (wax), one of the two of them is the equal of its greatness for the greatness of the mixture and the other [equal to] its greatness for a greatness of silver that we prepared. Then we learn the weight of the two waxes. If a [portion] of the weight of the tested wax to it is like a portion of the weight of the silver to it, then the tested (portion) is pure.

\(^1\) The mixture refers to the debased metal or alloy.
silver.

And if it were gold, then replace silver with gold.\(^j\)

If it is difficult [finding] a body equal to its greatness, the greatness of the mixture, then you weigh it by the \(Sinaj\)\(^k\) in the air in a precise balance. Then you remove it from the balance and you fill its pan with water, then you place the tested (quantity) in the pan. Some of the water rises and the pan returns. It is met by the \(Sinaj\) in the other pan, and this \(Sinaj\) is greater than the \(Sinaj\) of air if its substance was lighter/lesser than the substance of gold was, in brief, from the water with it lesser, and with the tested (quantity) greater, [and if its substance was] heavier than the gold substance, it was greater than the \(Sinaj\) of air. [And if it were] equal to it [concerning the substance], it would be equal to the \(Sinaj\) of air. Then you observe the portion of what is between [the weight] in air [and the weight] in the water from the increase of the \(Sinaj\) and lack of it, and you make that in a pure body from the gold. If the tested (quantity) were gold, or [from] the silver if it were silver, and if the two portions were equal, it would be pure. Or if the two were different, it would be debased in proportion to the difference. And in this way, you can test the rest.

\(^j\) line 60: Meaning, to use for gold, where you see the word “silver”, replace it with “gold”.  
\(^k\) The term \(Sinaj\) has not been found in any of the references cited, but in context could mean the counterweight of the balance.
The above mentioned technique is applicable to all solid metals, and depends on the densities of metals and their different specific gravities in water and air.
Chapter Five

Concerning the first among the striking of dīnār and dirham
and the construction of places for stamping the two of them
and the rules of casting the two of them and the worth of the two of them,
and what is cautioned about the imbalance when
paying the two of them and receiving the two of them.

And this chapter is the majority of the book and in it are twelve parts

Part One

Concerning the first among the striking of dīnār and dirham before Islam
and after it, and the first caliph who inscribed on it in the name of
God Blessed and Almighty in Islam, and the appointment of the locations
in which they were struck and an emphasis in its purity.

Judge abū al-Hasan bin lubbāl said in his explanation of maqāmāt al-
Hariyry\textsuperscript{a}: Indeed, the people in the beginning of the era were bargaining by
means of the presentation in what was between them -- like the wheat and the
barley and the grains and the fruit and what is its combination of that -- they
complained to their king about their possession of what would deteriorate of

\textsuperscript{a} The Research of al-Hariyry, a book
them among that, and what they feared from the decay of their goods if they were to remain in this condition. So he ordered them that they choose what does not become bad over the long residence of time, and they chose the stone of gold, which is the most durable of all the jewels of the earth, not spoiling ever. And all of what remained under the earth was good and was pleasing, and all of what entered the fire is purified and became good. He commanded the striking of the danānīr and he stamped them by the seals of the king, and he forbade that they were distorted or that their impressions were infringed. And for whomsoever did that, he would cut off his hand, (and by this) he induced their line of conduct.

And they informed him also that they had need of what does not compensate fully for the value of the dīnār, [even] by less than it or by its replacements, from what certainly for them was among an advantage to being most precious to them for the purchasing of necessities. So he commanded them in choosing another stone lesser of the gold, which is the value of the dīnār, from it 10 darāhim, and they chose the silver. And he struck from it the dirham and stamped it by the seals of the king, and the value of 20 danānīr was 200 darāhim.

b Meaning, they feared that the food would spoil and, thus, its value would be lost
c See Chapter 5, “Chapter Ten” of this translation.
d Indicating that the exchange rate values of the dīnār and the dirham, which were both derived from the value of perishable goods
The Romans used the *danānīr* and the Persians used the *darāhim*, until Islam came. And the people were using that at the time of 'abd al-malik bin *marwān*. And he struck the *danānīr* and the *darāhim*, and he inscribed on the *dīnār* “God is one”; before that, it was smooth, without inscription in it, and he inscribed on the *darāhim* like that.

The *darāhim* were, in the days of Persia, different and of three weights; among them, a *dirham* on the weight of the *mithqāl* was 20 karats, and (there was) a *dirham* on the weight of 12 karats, and dirham on the weight of 10 karats.

When Islam arrived, and it required the valuation of almsgiving (*zakāt*), taking the average from the total of weights, from the collection of the three, which was 42 karats. They agreed that the *dirham* was on a weight of 14 karats from the karats of the *mithqāl*: and the *mithqāl* was 24 karats, each karat from 3 grains, and 24 by 3 is 72, and it was from 72 grains.

*al-barqy*, on the account of *wathīymihi* by means of backing *ibn ʿabās*, said: The first minting produced on Earth were the *danānīr* and the *darāhim*. *nimrūwd bin kanʿān* produced them, and the people before that were bargaining by the ore from the gold and the silver. When the *danānīr* and the

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*Probably, a book.*
63 darāhim were struck, the Devil was reduced to ruins completely. And he
64 grasped them in his hand and kissed them, and he said: I have the command of
65 the sons of Adam! With you two (danānīr and darāhim) kinsmen will fall on
66 each other and shed blood and be cruel to each other!

67 It was said by 'umar bin al-khaTāb, God’s blessing upon him, for (in)
68 what the variation of the darāhim was seen, it was considered the greater
69 portion of what the people traded from its maximum and its minimum. So he
70 made from it 12 dūwāniq and took half of it and it was 6 dūwāniq, and when to
71 the dirham was added three-sevenths, it was 2 mathīqīyl, and when from the
72 mithqāl was subtracted three-tenths, it was 2 darāhim.

74 The Persians were, upon the corruption of their affairs, debased of their
75 currency, and the coin was free from the silver and the gold, so one became
76 wealthy in it, until the urging was made that each payment was in cash from
77 each thing, and the distinction of the debased was from the pure.

80 Concerning the first who struck it in Islam, it was disputed. It was
81 said that the first who struck it in Islam was 'abd al-malik bin marwān. And

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\(^f\) An Arabic expression meaning, the Devil was completely bowled over by the implications
\(^g\) Meaning, the dirham was more widespread in use than the dīnār, and was of variable values
\(^h\) mathīqīyl is the plural of mithqāl
\(^i\) Meaning, through the practice of debasing the currencies' percentages of pure silver and gold, and hoarding the precious metals, the coinage contained no precious metal
there was at that time the danānīr from the strike of the Romans, and the

darāhim from the strike of the kisrā\(^1\) and the himyar\(^2\), and they were few.

And ‘abd al-malik bin marwān ordered al-Hajāj in the striking of them (in) the
year 74 from the hijra, and it was said (that in) the year was 75,\(^1\) he inscribed
on it: “God is one, God is everlasting”. Then ibn habīyra ruled in the days of
yazīyd, and he struck them better than what they were. Then khālid bin ‘abd
allah al-bajly ruled, then al-qisrī, and he struck them and he became firm in
their improvement. Then after him, yūwsuf bin ‘amar struck them and he
exceeded in their improvement. So the habīyrīya and the khālidīya and the
yūwsufiya\(^m\) were the best darāhim of bani umaīya\(^n\), and al-manSūwr did not
accept other than them.

It was said that the first who struck them was muSʿab bin al-zubīyr on
the order of ‘abd allah bin al-zubīyr (in) the year 70 on (the model of) the
strike of al-ākāsira\(^o\), and it had on one face [ ] and “God” on the other face.
Then al-Hajāj changed that and he inscribed on it “in the name of God”.

The Prophet, blessing of God upon him and peace, narrated the
proscription against breaking the lawful darāhim of the Muslims with them.

\(^1\) Khosrau, designation of the Persian kings, in general
\(^2\) Himyarites
\(^1\) Both the year A.H. (hijra) 74 and 75 reference to A.D. 694.
\(^m\) al-habīyrīya, al-khālidīya, and al-yūwsufiya, based on context, are names of minting houses.
\(^n\) The Umayyads
\(^o\) The Persians
The blank\textsuperscript{p} is the metal, which is stamped upon it the \textit{dīnār} and the \textit{dirham}, and it was called a minting, by means of them that the \textit{danānīr} and the \textit{darāhim} (are stamped).

The ancestors wrote that \textit{‘abd al-malik bin marwān} ordered \textit{al-Hajāj} in the adoption of the house of striking, and \textit{al-Hajāj} asked about what the Persians were using in the striking of the \textit{danānīr} and the \textit{darāhim}. So they adopted the house of striking, and he was the first who adopted it and he rounded up in it the printers. And the money for the sultan was struck [from what they assembled for it] from the ore and the pure (extracted from) the counterfeit [and the \textit{satūwqa} \textsuperscript{q}] and the empty show.\textsuperscript{r} [Then it was allowed for the merchants and other than them] in that the \textit{āwrāq} \textsuperscript{s} were stamped for them.

And it was regarded as permissible, among the preference of what was imitated from [the preference] of the others, for the manufacturers and the printers, and it was impressed with a stamp by the hands of the printers.

When \textit{‘amar bin habīyra al-‘arāq} was in charge for \textit{yazīyd bin ‘abd al-malik} to refine the silver better than the purification from before it of the

\textsuperscript{p} Meaning, “minting die”

\textsuperscript{q} The meaning of \textit{satūwqa} is unclear, but appears to relate to debased precious metals.

\textsuperscript{r} lines 109-111: See also Chapter 3, “Multiple Currencies: Bimetallism”, and Chapter 6, “Islamic Craft Production: Labor Organization”.

\textsuperscript{s} The meaning here is ambiguous. \textit{āwrāq} could be the plural of \textit{wariq} (see this translation, Chapter 5, “Chapter Six”, line 85) or papers, as in bill-of-sale.
existing *darāhim*, he increased the standard (of silver coins).

Then *khālid bin ʿabd allāh al-bajli* was in charge, then *al-qasry al-ʿarāq* for *hishām bin ʿabd al-malik*, and he was rigorous in the currency, greater than the intensification of *ibn habīyra*, until he mastered the command of them greater than (*ibn habīyra’s*) exactness.

Then *yūsuwf bin ʿamr* was in charge, and he exceeded the proper bounds in severity on the printers and those entrusted with the standards of the coins, and he cut the hands and struck the people¹, and the *al-habīyrīya* and *al-khālidīya* and *al-yūwsufīya* were the best of the currency of *bani umaīya*.

Among the words of *al-HāfiZ abi muḤammad bin Hazim* concerning some of his writings [ ] the *imām* has the right to command the people that they do not circulate between themselves in their transactions (anything) except genuine pure gold and genuine pure silver; and the *imām* adhered to shaping each inscribed blank, and separated the genuine of them from the debased of them. Then he distributed that to its owner.

¹ This phrase, “struck the people” could be translated as: “the people were struck” (physically, for neglect of the standards), or “the people struck” (meaning, were encouraged to strike the coins correctly).
Part Two

Concerning the first from the striking of the maker’s mark darāhim
and the first who erected the House of Striking in Fès,
the cradle of it God Almighty

He, who is the owner of the square dirham, is abu ‘abd allah al-mahdi
al-qā’im, by order of al-mūwaHidiyn\(^{u}\). The darāhim, before the appearance of
the Almohad dynasty, were, each of them, round; so al-mahdi ordered that his
darāhim were square. And it was like that from the calculation of 20 from
them in the ‘āwqīya and 3 from them in the dīnār.

In the city of Fès, al-qarawīyyīn and al-andulus were two houses of
minting; so the caliph abu ‘abd allah al-nāSr ibn al-manSūwr al-muwaHidi
relocated the two of them to a house, prepared it in the capital (of the city) at
the time when it was constructed in the year 600, and designated it for the
monies flowing by it and for the stamps of its mint. And the culture of it
gained mastery on bringing to perfection the state of affairs. The majority of
what was formed in it was the gold, and as for the darāhim, they were flowing
in from all over (the world), with difference in (their) minting and (their)
weight. And the people were trading with each other by each impression from
it, until the transactions began in the darāhim on the weight of this al-

\(^{u}\) The Almohades
According to what was mentioned in the power of God.

Part Three

Concerning the characteristics taken into consideration in the supervision of the mint, and that from what is indispensable, and what is necessary in it

Since this gold and this silver were among the highest ranking of things, so was the consideration in the matters of the two of them among the highest ranking of matters. [And] like what is considered by the imām of the prayer, who is an expert in what is not right of the prayer except in reading and its comprehension; and like what is considered by whosoever wanted to take upon himself a degree, so as to become an expert in his undertaken domain; like that, it is appropriate that the supervisor is in this alone, and it is the duty on all from what was set forth on his command, because he knows the wisdom in it, and he perfects the appearance for it until it is well done, and he does not accept it offhandedly in his consideration, and not on [the assumption] and of what resembles it; rather he is aware in himself of the recompense for whosoever knew and copied it, and of the infliction of punishment for whosoever did wrong or evil and acted unlawfully/unjustly. If (his) trustworthiness were well known, for him would be the accounting industry, in

\* The Jacobian
it information and knowledge -- like the differentiation of the coins and the
descriptions of the metals, and what was proper of it and what was corrupt of
it, and the reasons of its debasement and what removes it; with familiarity in
the styles of writing of the stamps, and the shapes of the presentation and its
classifications, and the script and its diacritic markings; with uprightness and
faith, the people would trust in their mint and the profit would be greater and
the revenue would be increased. If he were to enter in it from not among its
people, he would not be counted among its important men, especially with the
inattention to its details and the disregard concerning its faces; the research in
the true state of its affairs would flow back in the loss and nullification of the
superiority (of the mint), and it would be impeded in its profit and decreased in
its revenue.

Part Four

Concerning the conditions of its witnesses

and the assessment of its final results

It is necessary that two witnesses act justly for the purpose of evidence
when the matter concerns the two of them, for what was feared among the
disavowal/dispute between the payer and the manufacturer, and the two of

\[w^\text{Dual meanings, 1) the gold and silver and 2) the payer and the manufacturer. Concerning the latter, see also Qur'\text{ān} 002.282.}\]
them\(^x\) were presented from the supervisor’s introduction. And if the two of them were introduced by the supervisor, then they were for him and not against him.\(^y\) And each of the two of them should be present daily just like the supervisor, for what might come up of requests, and the two should be experts in what they witnessed, otherwise the two would be the reason for the squandering of the monies and the unbalance of conditions. In the hands of each one of the two of them was a key of the \(jūwlaq\)\(^z\), the combination of which was imprinted in them\(^aa\) in order to secure it, subsequently restricting individuals (to its access). And in this \(jūwlaq\) was the reference standard of the gold and the \(Sinaj\)\(^bb\) of the weight and the standard. And if the two of them were among whosoever alternates by turns in each month with other than the two of them, it would be better.

For the minters are on their guard concerning their striking of a \(dīnār\) or a \(dirham\) other than by means of inspection of the two of them. The two examine by weight the work in what each minter took possession of and what was struck in the declaration of the month. And if it were equal, it would be known that it was right by the control/safeguarding of the strike; and if a thing

\(^x\) Meaning, the witnesses
\(^y\) Meaning, they followed the supervisor's authority
\(^z\) The term \(jūwlaq\) has not been found in any of the references cited, but in context could mean a lock box.
\(^aa\) Meaning, the millings, the side cuts or bittings on the key's blade, which specifically join a key to its lock
\(^bb\) The term \(Sinaj\) has not been found in any of the references cited, but in context could mean the counterweight of the balance. For the first reference to this word, please refer to Chapter 5, “Chapter Four” of this translation.
remained from what his hands obtained, it would be demanded back. And if a
thing were burned (lost) in the striking of it, the supervisor would research it,
and from whatever was the face (nature) of it, if it were a strong suspicion.
And this ‘burning’ they have is called karūwba\textsuperscript{cc}. And it is confirmed on the
two witnesses the inspection of what is taken possession, and what is struck,
and what is paid out; and that was controlled, all of it, by the safeguards of the
two of them in each day and its integrity by each month.

\textbf{Part Five}

\textit{The duties of al-fattāH\textsuperscript{dd}, and what is related to that from his means of reclamation}

For every thing (there) is a source, and the source of works of the
minting house is al-fattāH, and he is the foundation among its foundations.
And if (he were) upstanding, (his) works by it would be honest. And it is
important that he be a talented calligrapher, for in that there is security for the
dīnār and the dirham. [And it was said by] the wise Arab: The inscription is
the source of the spirit even if it was manifested by result of the body. And

\textsuperscript{cc} Meaning, “agony”?
\textsuperscript{dd} Meaning, by contextual inference, the person who carves the inscriptions on the coin dies; 
al-fattāH is also one of the names of God, meaning “Opener of the gates of profit”.
the wise Roman said: The inscription is a dual spirited engineering and it was
manifested by a dual-bodied result.

The impressions of the dinār and the dirham are the seals of the king,
and whosoever struck upon it (was) like, truly what struck upon the seal of the
king.

If he was not outstanding in his inscription, what kind of merit would he
have? And what kind of sanctity is for its stamp? The weak inscription goes
into the strike on it, like what was struck on the evidence of the witness who is
not wise recording his evidence.

And by means of the inscription, the imprint was called the impression,
and it is a foundation of it, and indeed it was the ultimate of the work, because
it, by it, was a seal.

It is appropriate unless [it is modified] what was committed among the
messages of the dinār and the dirham, and it is not increased in its lines nor
decreased from it by its consideration, nor is it that except by authorization of
the king, and he is the exemplar and the convention. If the name of the king of
that time was in the dinār and the dirham, then it was among the perfection,
lest it was spoiled of the striking.
For his instruments and his pens, by which he are prepared them, are by the key, protected by the *jūwlaq* of the combination (so that) when he needs them (his tools) it (the key), it is brought to it (the *jūwlaq*). For with it, whosoever accompanies it is from the confidences upon the opening; if it were other than trustworthy, for it would be the corruption of the times. And he keeps himself out of sight from the eyes of the people, until his work is complete. Then his instruments are returned to the *jūwlaq*.

Nor is it (revealing his identity) allowed for him by confidential talk with whosoever is charged with requesting the stamps, like the chemists and the suspicious by way of swindling in the *danānīr* and the *darāhim*.

For it, is the metalsmith who surrenders for him the combination of the two guardians over it. And he was entrusted to it lest he surrenders it except by means of the minting house; nor is it allowed for him to surrender it unless face-to-face, nor on condition.

The supervisor monitors the money exchange, and he renders clearly the writings on the *danānīr* and the *darāhim*, which were prepared by their hands for the purpose of the money-changing, lest they were outside of the stamps.

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*ee Possibly, alchemists?*
He also looks for those jewelers (who specialize in) inscriptions on the jewelry. Indeed, they are the source of the introduction of outside stamps, especially since they are not to be trusted in their lands, with no state official entering their way by day or by night. And if they were like that, what sort of thing would prevent them from the striking of the dīnār and the dirham?

The ruler of the region perseveres if there were a sincere adviser for the king that researches the conditions of the free non-Muslims (under Muslim rule) and others. And whosoever heard the sound of a hammer, or engineered a fire for goldsmithing, his hand would be struck, (as well as) whosoever does not desist a manufacturer (from) working (at) goldsmithing in his house, nor keeping himself out of sight from the eyes of the people, because the industry of the dīnār, and the dirham, and the goldsmithery, are one industry; so it unites the two of the them, the hammer and the fire. The penalty for those who forge the seal of the king is in accordance to what was set by it among the (divinely inspired) laws, and God is the accordance.

Part Six

Concerning the conditions of the minters and the recommendations/instructions for them, and what they are cautious about it
They are three ranks: masters and workers and apprentices.

The words in this are with the masters, and they, in our time, do not have interfering with them in their industry a (single) foreigner. If one were to interfere with them, they would claim (it causes) disorder and the loss of money.

The gold and the silver should not be paid in the house of minting except to the one whose trustworthiness and faithfulness in his religion in what he takes hold of (his (dealings) [ ]), were well known. And if they were identical in what was between them, that would be how the people’s monies would be handled, and he is whosoever is firm-willed.

If the minter were to take hold of money, he would be in the presence of two witnesses of the site and the consent of the payer, and the two of them would write their names; and whosoever from the two of them does not know the condition of what was inscribed, the two shall investigate what the manufacturer (the minter) has received. And it is mandatory naming the wages and the type of what was manufactured for it among big, and small, and karats, and the amount of the appointed time of the work; and the working of the gold, all of it, should be between the hands of (under control of) the supervisor, and
the minter should not conceal a thing from him (the supervisor).

As for the silver, it should be taken to the house of minting. And the supervisor, in the course of that, inspects the metalsmith and other than him, and become thoroughly acquainted (with it). If the supervisor were to weigh it for himself by the gold and the silver, he would observe it in his balance/scales, and he would put the needle of the dome on the needle of the tongue;[^ff] and he would neglect neither the right of the payer and nor the right of the payee, for anything; for he would understand intuitively that God, glory to Him, supervises it and is aware of it. For he knows that the precise determination of the weight (was what) was ordained by Him; God the Almighty said: “They made correct the weight by the equitable and they did not corrupt the balance.”[^gg]

If the minter were to take hold of [something set out to be weighed] by his Sinaj, and after that the wages were taken, it would be better and it would be incumbent for the purposes of correctness. And he takes great pains in inspecting the danānīr and the darāhim and deeply investigating the entire by the Sinaj, which is a guide in that place.

[^ff]: This turn of phrase could mean that he made the scales of the balance equal as indicated by the match, or that the supervisor would speak the truth and would not lie.
[^gg]: Qurʾān 055:009
If he were to stamp, he would be engaging the stamp on his brother (ensuring) a mounting very accurate, very well-prepared, and he preserves from the processing the inscriptions in it. And the dīnār and the dirham were not at ease relaxing excessively outside in relation to the normal measure in the stamp;\(^{\text{hh}}\) for he is forcing back the submissiveness, not exceeding the proper bounds on the circle of the dīnār, and not the borders of the dirham, from its four sides, a perceptible amount\(^{\text{ii}}\). If he had exceeded the proper bounds on that, it was an inferior thing; the dīnār not being preserved, for what exceeded the bounds from its circle, nor for what exceeded the bounds from the borders of the dirham; which an inscribed blank is that ‘burning’\(^{\text{jj}}\) for the fair game of its loan. If not, he imposes the capital punishment on whosoever took from the inside edges, and the edge of the dīnār and the dirham are the well respected of the circle, by it the enclosure for it; and on account of it, it is a requirement of the loan. So it is necessary that the printer demands by means of that, all of it, because the border is related to this concern.

If the minter were to take hold of the money of an individual, he would put it aside, not confusing it with money other than it, nor would he pay the

\(^{\text{hh}}\) Meaning, the coins should not be stamped in such a way as to be lop-sided, to a measure beyond that which is normal for the stamp

\(^{\text{ii}}\) This turn of phrase has dual meaning. The phrase “a perceptible amount” could also mean an "amount (or value) of a barley grain", referring to the now-produced coin having a specific exchange value with respect to a specific number of medium-sized barley grains, or within the limitations of that number.

\(^{\text{jj}}\) The burning, is also called the karūwba. See Chapter 5, “Chapter Five: Part Four” of this translation.
former money out as the latter, nor would he pass it out of his country for a
country other than his.

Part Seven

Concerning the amount of the standard of gold
and what is in it and its caliber among the gold

The convention (of operation, use, etc) was brought on and the Arabs
continued concerning the guideline of the house of minting, that five golds
selected from the better of the coins -- like the al-yaqūwbi and al-Hasūwni and
al-HafSi and al-sabti and al-murdanshi -- were taken; and they remained fixed
in their stamps until the inspectors of them knew them by sound examination;
and they were gathered and shaped in the presence of the two witnesses of the
house of minting, and one collected by them an ingot the size of a pinch\(^{kk}\) and
he stamped in their face after the regulatory change\(^{ll}\), by means of the stamps
of the house of minting, and he put (it) in the jūwlaq with the combination.
And when he has need to other than it, it is brought back in the presence of the
two witnesses.

\(^{kk}\) Meaning, literally, as much as can be taken between the finger and the thumb
\(^{ll}\) Meaning, as per the regulations for coinage
One is cautious from the craftiness of the Jews, God damn them and their cheating. If they were fabricating its example, they would look for ways among cheating in its conversion.\textsuperscript{mm} And one concluded this from a number of years in the house of minting in the mint of Sijilmasa (where), for what was necessary, one worked by the guideline when they selected good gold pieces; they were in agreement on their high quality, and they shaped them in the presence of their trustee/manager and their two witnesses. And at the time, when it was claimed more was needed, (and) this more than doubled the standard (amount), suspicion was aroused in the trustee/manager and his two witnesses,\textsuperscript{nn} and it elevated (the suspicion in) that for whosoever worked hard in it. The Jews, who were casters, were present, and it was undermined by them, but their authority was restored\textsuperscript{oo}. Then one of them confessed that he took, when casting, a portion from the silver, and he put it in the middle [of a piece] among the charcoal, which they cast after piercing it and sprinkling it in it; and it was removed from the gold after it melted by the quantity of silver and he ruined it in the casting furnace. The result of the investigation was the punishment of the guilty and that the work was sent back for another test. And this is one of the proofs [of the debasement] of the Jews, God damn them. It is mandatory that the casting of it be restricted to whosoever is proper of it, [and]

\textsuperscript{mm} Meaning, through counterfeit
\textsuperscript{nn} Meaning, the trustee/manager and the two witnesses began to have doubts
\textsuperscript{oo} Meaning, they were thought to be above suspicion
trustworthy by it, and faithful on it, and it is not permitted to each (person) who

desires it.

The \textit{mīylaq} \textsuperscript{PP} of the standard adheres closely to the guideline, and it is a
flat stone, if possible extremely wide darkened with kohl completely, and it is
sticky with the fat of the head of the she-goat on what the experienced people
reported. And if in it is a characteristic feature, it would be for taking in what
strays in it. And it was smeared, occasionally, by the grease of the rancid
(wal)nut. And if there were for it a link\textsuperscript{qq} and a wrapper coating, it would be
that from its gentle treatment. And (it would be) in order to keep it away from
the cold spots, so if the cold (were the cause of) what spoiled it, its tendency
would be for what strays in it. And when a need for purifying it and
polishing/burnishing it, it is from what adhered, if the scoria sets in. If there is
a need to calibrate in it on a cold day, it would be warmed in the hand of a
person [or] under his armpit or under his knees. It is mandatory that the
supervisor does not separate it from his hand, lest it were worked in it what
were to spoil it and the supervisor enters into doubt for what he entrusts from
it.

\textsuperscript{PP} The root of this word, \textit{y-l-q}, refers to a dull / unpolished white. In this case, the \textit{mīylaq} is a
stone on which gold is scratched to test its quality (by color). Mineralogists call this a "streak
plate".

\textsuperscript{qq} Meaning, a loop for hanging(?)
Part Eight

Concerning the shape of the balance and its preservation

with its Sinaj and its inspection in the condition of good performance

And it is established that the balance is the judge between the payer and the payee, and it is mandatory that measurement is based on a straight needle, without distortion in it, and a hole is drilled for the pin of the dome in the lowest part of the tongue, not in the needle itself, and the hole is equidistant from the two sides of the tongue. In addition, a narrow hole is drilled through the dome for the pin of the dome and fit in it. Then select the middle of the tongue and verify perfectly the balance point. And if it does not balance, the preponderance or diminution will quickly be evident.

And for the dome, a strong linkage suspends it when the weights are in it in the upright [being stationary] (position), and the balance is hung from a hollowed space in a pillar of wood.

The two scales of this balance are two halves of a ball not extended, and the strings of the two of them are from silk, of the silk fabric if possible. And before its preparation for the weight, it is tested, lest one is lighter than the other.
And the Sinaj also is from the empty copper, reinforced of the lathing from other than clumsily (constructed). And one is wary that when the work is diminished, then it is increased on it (by) a substance from its kind or from other than its kind, like the falūws of the hind ṭṭ, and this is an uncertainty in it.

From it in the house of minting are two copies in complete agreement in accordance with the modification of the two of them. One called an imāmss; it is not taken from the jūwlaq of the combination except for the emergencies, and the second is used in the weights always. It is imperative that the examination of this copy and the examination of the Sinaj of the minters is by the imām which was produced by the jūwlaq in the first of each month or each Friday, and for it is an identifying mark that distinguishes it from other than it. It is mandatory, unless the supervisor removes it from its enclosure, that it not disappear (from his sight) over one from it, nor over the working Sinaj between the hand of the supervisor. If the absence were in agreement, then the examination of it by the imām would be necessary, for what would be feared would be that one seeks to gain access from the missing at the time when the absence is over what is in the minting house [from what] one should always

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ii Meaning, the copper money of India
ss Meaning, reference standard
464 have doubt.

465 And from what was stumbled upon, truly one of the Jews, God damn them, discovered by his hand (that) grains from barley prepared it for weighing by it. So one of the nobles accused him for weighing better in it; then he examined it, and if in its inside were a trace of iron, he concentrated it in it (on that section). After that he moistened it by water, and then dried it, so he was increased on that condition. And with it was whole barley among that; so this Jew, if he grasped for himself a weight in which in it were traces of the needles, and if he weighed for other than it a weight by which there were not needles in it, it would be called this in their languages, by cheating. And like that they put it in the heart of the kernel from the carob bean and other than it.

476 Following are the words on the amount of the *raTl* and the *'āwqīya* and the *dinār* and the *dirham* and other that, God the Almighty willing.

479 As for the locking of the *jūwlaq* and the deposit, it is skillful work, not deemed easy in the work of its illustration. Truly, the keys were inspected stamped on their locking. And it is mandatory lest one leave a key (in) his hands, and like that the two witnesses, nor is there a glance for the sight,
fearing that one imposed on it."\textsuperscript{11}

From the resoluteness and the oversight that was in the house of minting is a companion, in its highest,\textsuperscript{12} who guards it by the night from the pedestrians of its sides, from beyond comes a guide in patrols of its lower part. And like that he takes for it a guard for the door during the day, lest the people of the void and the greediness enter it, and by God is the reconciliation.

Part Nine

Concerning the words about the two fires, if they are a source in this matter

God the Almighty said: “The same Who produces for you fire out of the green tree, and if you were among it, you would kindle.”\textsuperscript{13} And Glory and Exalted said: “See ye the fire which you kindle? Is it you who grows the tree which feeds the fire, or do We\textsuperscript{14} grow it? We made it for you (as) a reminder and a benefit for the fortified.”\textsuperscript{15}

\textsuperscript{11} Meaning, one would not be affronted at the request to see his hands, because the safeguards of his work stipulate that

\textsuperscript{12} Meaning, on the roof

\textsuperscript{13} qur’ān 036:080

\textsuperscript{14} The “We” is the royal “We” and refers to God.

\textsuperscript{15} qur’ān 056:071-073
al-jaHiZ, in kitāb al-Hīyūwān\textsuperscript{yy}, said for it: Fire is among the most abundant of the implements and the greatest of the attainments of civilization, and if there were not in it save that God, to Whom be ascribed all perfection, He made it the deterrent with regards to the disobedience, for that was from what He increased in its divine power and the nobility of its reputation.

There is not in the world an unadulterated body other than commingled, and sent other than combined, and absolute of the power not restricted, nor represented better, than the fire. The fire is a supernal, celestial, because the water is upon the earth, and the air is upon the water, and the fire is upon the air.

Then in the fire the people of the earth live from its faces: From that the sun makes in the cold the water and the earth, because all the animals were exposed to the blaze when a need to them repelled the everyday cold. Then their lamp, which guides their way [by it] and their light which by they differentiate, and each vapor evaporates from the seas and the water and the sources of the mountains, and each fog rises or dew evaporates, then returns as a blessing [outstretched] over all the plants and animals. Verily, that which it simplifies, and it moderates, and opens for it the doors, and takes its wilderness from the bottom of the earth and the sea is the mixed fire, for it is from under,

\textsuperscript{yy} Meaning, The Book of Animals, a title
and the sun from above.

And each of what is in the each among the substances of fire [and substances of] tar, and mercury, and petroleum, and sulfur; and all categories of metals among the gold, and the silver, and the copper, and the lead. Except for the fire, in view of the fact that it melted, there is not an ingot in their category, a thing from the gems, and in view of the fact (that) for its power is everything, nor for the wastes of them a differentiation.

Among the comparisons by it, they were saying: Drink like the fire, and it is the face of the fire. If they describe it by the intelligence, they said: What is he except fire? And if they described the redness of the horse, and the redness of the gold, [they said] What is it except fire?

The aged of the wise Easterners, in describing the gold, said: The gold sparkles constantly and is smooth, complex, and light by radiance, and it is the fire staying, and the red sulfur; [and of old, *al-ʿatāby* said]: And beautiful is each room that its ceiling is red and in its floor is red. And *bashār bin barid* said:

A mix on it the redness in its whiteness,

It delights by it the two eyes and the pleasant is the more red.
And they said: The cities are not built except on the water, and the food, and the wood. So the fire entered in the wood if [each] stick was burned.

The working fire in the house of minting is a fire of wood and a fire of coal, and no one is permitted [by imitation of] the furnace by semblance, in no condition. And the fire is the clearest standard, and by it the pure gold is differentiated from the counterfeit.

**Part Ten**

*Concerning the requests by which the work is completed and the operations improved*

And that is the outflow by the house of minting, as far as gold and silver are concerned. The gold is of two types, as for ore and as for jewelry (ornamentals).

The face of the work is in the ore, which is by comminution, and then it is sifted by a fine mesh sieve prepared for that. So what is above the sieve is called ‘*ashūwr*, and what left from it is smoothly run over by the mercury beneficiing; then what the mercury accepts of it is the gold, and what is not accepted is tossed. Then this mercury is heated by the fire until its mercury
goes and the gold remains, and then it is mixed with 'ashūwr. And one
weighs it, and records its weight, and smelts it by the fire in a crucible; and if it
were made in it upon the smelt, a masquerade\textsuperscript{zz} departs; and if he set aside his
ingot and made it malleable, then he would remove (it) from the fire by the ash pans or mīyshiq\textsuperscript{aaa}, then he would empty, in his pledge of the known, by the
\textit{marāT}\textsuperscript{bbb}, ingots. Then he weighs to learn the amount of what decreased in
the ingot from the first weight; then he spreads thin balanced sheets, and he
puts in the ashes. They are the dusting particles of new red sand and the stone
of salt by equal shares. Then he spreads out from it from it in potsherds of
clay, other than the glaze, and he puts over it from those sheets a layer; and on
it from those particles, a layer; [a layer] from this and a layer from that; and
that after he moistened the sheets in water. And those layers are covered by
these particles after its soaking by the water. And he puts a coat of clay over it
from each side, and they are stamped by the stamps prepared for that, and they
are introduced into the furnace of the ashes prepared by the house of minting;
and he closes its door, and kindles over it by the fire of the wood of the dry
oak/acorn tree.

He stays by the hearth of the furnace and his fire is reflected on it for a
known period of time (that) they have. He protects in the course of that from

\textsuperscript{zz} Meaning, the mercury that was combined with the gold, pretending to be gold
\textsuperscript{aaa} The meaning of \textit{mīyshiq} is not unclear, but may be a cloth of wool or silk used to remove items from the fire.
\textsuperscript{bbb} The meaning of \textit{marāT} is not known.
the growth in the fire or the decrease from it. If from what is not set right, he
would make a mistake (of) it; and if it were known that it were to reach its
limit, it would be removed and remain in the ashes after they cooled from their
fire. And the sheets are removed from them and cleaned by water; then
collected like a ball and dried from their water, and weighed, for knowing the
amount of what was lost from the weight which was before these ashes; then
he smelts in a crucible. If he mixed his particles, he would proceed to cast in
the customary marāT in the presence of the supervisor, and he works from it
ingots when the casting is like the short sticks; and they are removed from it
and left until those ingots cool by themselves without water, nor does he come
into contact with them when unloading in the marāT waste, nor other than it.
And if that from his fire were cold, and a thing from it was not lost, then the
supervisor would scrutinize it; and if, on the ingot’s surface, there were
nothing, no holes in it, and its color were red, beautiful not blackness in it, then
he would pierce by it on an iron needle from between his hands; and if it were
sharp, then that was would be from their toughness; and the sound is proof of
their being well-done. [Then] the they were calibrated by the mīylaq, and it is
what they scratch in it intensely until their color in it changes distinctly
between the two of them; then the imām of the gold scratches a base of that,
scratching intensively. And the people of knowledge and the experts counted
meticulously when the scratch of the imām was by the stone of the mīylaq.
From them, was whosoever counted twenty-one, and from them was
whosoever counted twenty-five, if the nerves were weak. And he took into account of them that a piece from the times passes and the scratch was not counted, until its customary color changes distinctly between the two; and he compares this to this and inspects by it. If the two were in agreement together, then it would be the desire; and if it were lacking, then he would return that to its payer for his sincerity. And if a degree higher from it, he would not return it to its payer, lest he added to it not from the bad quality. That is not permitted in the religious understanding; so if the bad were not mixed by the good, then that would be an injury in a statement from what he did.

This gold is that which is in the grade of the *imām* (the reference standard), so an ingot was taken from it and a sheet was really spread wisely; and its thickness was thick of what is worked from it, comparable of the *dīnār* they have. And then it was really well heated, increasingly, and removed from the fire and dropped over potsherds and stones, until it cooled from its fire by itself from other than water. And it is wiped/polished by the hand and its purity is scrutinized. If it were one (drop of) water, it would be uninjured of face from the holes and the scratches, uninjured of its edges from the roughness and the processing; and it was accepted and weighed for the two minters. If a thing were unbalanced from these surfaces, it was returned for to its payer until it was fixed.
The work was noteworthy in the jewelry (ornamentals) over which a condition was stamped like the danānīr, and some of the anklets and [what] is similar to them or was other than stamped. So what was from it was munīylā or (something) glazed or a lot of the adjoining (through stickiness), so that is removes from it, lest it create by it (something) and its purity is difficult (to attain). If that were removed, it would put to an extreme until it were blacken with soot, like what was described in the work of the ashes. The rest of it is heated by the fire of increasing heat and scrutinized by the phases which we mentioned.

As for the silver, either it is in bits and pieces mixed by the copper or other than it from what debases in it, whether the unwholesome and the noxious, or it is an empty hole or ingots, like the anklets and similar to it. If the adulterated from it is purified by putting (it) in the kawjul -- constructed of bones from bones and gypsum grounded together, one-third from the bones and two-thirds from the gypsum -- and the kāwjul is put in sheets of clay, this adulterated silver is put in it; and one kindles over it by the fire of the coal, and that which is put over it during this time is lead by the amount of what purifies it, and a bit is decreased from the kawjul, and it is scrutinized by its surfaces being clear like the mirror, not roughened in it, and its base is concave, (like) a

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cc The meaning of munīylā is unclear, but it could mean pure gold.

ddd The kāwjul is the pot made of bone described in Chapter 5, “Chapter Three” of this translation.
drill boring a hole is pure and illuminating. By this scrutiny coins are tested, all of them.

As for the ingots and the anklets and what resembles them, they are observed in their color. If white and not blue in them were moistened, upon the bending it would not break; so that is from their advantage. Then one rasps a place from it by the rasp, and it is heated increasing by the fire of the coals, and it is left until it cools itself from other than water. If the rasped place were removed also, a white purity and not a blue would be in it; and it is pure.

As for the exaggeration in the purification, for it there is other than reason, one manufactures that from working from it a string, or what is similar to it.

From the bundle, the supervisor stamps on each piece; the minter grasps it by the stamp of the allowance in it, and meanwhile, one hurries off for the pattern-makers and restricts the pattern-makers, except they conceal/neglect over a thing from what was hurried to them; and the supervisor checks them during that time. And whosoever was caught by him in debasing, he would be punished and not forgiven of it, and a scolding is for other than him.
Part Eleven

Concerning the names that define the work of the minters when transforming the gold and the silver by their hands

First, what is done (by) the minter for the ingots of the gold and the silver is that he invalidates them, then he heats them up, then he folds them (together) by the instrument of the hammer, then he heats them, then he overheats them time after time, until they reach the limit of honor. Then he treats them with deference, whichever of them he cuts to pieces, on the valuation of his diligence in the amount of the dinār, then he examines by them by the place and the balance, then he investigates them by the two of them. So they are called at this time square pieces, and if they were danānīr, he would make them round by their know value. Then he strikes them by hand with the hammer, one by one, and not striking them by hand two or three together; so if he were to strike them (singly), he would (perform it) skillfully. Then he heats them, and then he puts them in a kāra-kāra fifty or forty each from them in the kāra, and he strikes them by the kāra on the piece of iron; and they are between the digits of his forefinger and his thumb three times, and he switches during this, by returning the edges to the middle and the middle to the edges, until they are normalized of their direction, infringing not in precision; and he does not restrict himself in that one time nor on two. Then he heats them and

\[\text{eee} \text{ Meaning, the minter works the metal ingots together until they are uniform in nature}
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\[\text{m} \text{ The term kāra-kāra, by context, appears to be the name of a special box for coins.}\]
seats them among the *kāra* one by one, and he burnishes them, and he hands
them over for the supervisor to test them out by his balance. If he takes them
from him, the just investigation in them scrutinizes by what place is from the
faces, and he tests it by the education for their preparation, and the addition
and the subtraction, until the given, which was handed over of them for the
testing (to the supervisor), is exact.

If the supervisor found in them less, or removed from the circle from
them something, or found in them a blemish, or a dent, or cracks, or breaks, or
there was other than the reasonable of failures, a thin side and a thick face; the
supervisor would cut them from one side of the *dīnār*, and return them to him.
If he minted from the returned *dīnār*, it would be one-fourth and one-eighth.

Then if the accepted (coins) were struck from them, he would stamp
them after assemblage of the individual from the mixture; on his worker is a
forming of readiness, from without that he exceeds on his circle a fraction. If
the circle of the *dīnār* is its fortification, and if from it a thing on the circle
exceeds its proper bounds and it is in overweight, so the stamper gives as a gift
to the user for the fair game of his bite.\[888\] If the limit was not upstanding
except on whosoever took from the fortification, then the fortification of the
*dīnār* and the *dirham* were the well-treated of the circumference of the circle

\[888\] Meaning, the user got the small excess in weight on the coin present from the stamper’s faulty strike
by it.

And the stamper is assured that the mixture is well-turned, for the strike of by the hammer is on one side. If that of the work was long by it, it (the coin) would not break; and if he had not transformed them, then most probably it would break quickly. And in the strike by the hammer on a side from what is attached to the middle of the base, and if it were attached, it would circumscribe then the stamp.

If it were a dirham, which in the hand of the minter was working, and if he reached by them to the limit of them becoming like money, then the rightly square of the edges and the clear points were level of sheet, and the more secure that its becoming money after the approximation and before the inspection. Then he judges the squaring and boxes it by the right angle, then he sets it in place also, and he burnishes it. Then he hands them over to the supervisor by the outline of the trial and he scrutinizes them one by one, or he scrutinizes them by the first two, and returns them until they jingle to an amount of what was received in it first. Then he stamps them, and prevents [from] that they are overweight, or splintered, or bent, or dented, or broken, or not level of the sheet, one of the two edges too thin and the other thick. And if he were to stamp them, then he would heat them for the reason of what was gained in the condition of stamping from the remains of the metal. Then he
would burnish them and dry them like what we mentioned.

And like that he does the by the *danānīr* in the heat after the stamping.

It is mandatory that the supervisor check the *danānīr* and the *darāhim* after the stamping from flipping them, or studying them (their inscriptions), or grinding them, so if that defective, then he could cut into them.

And from the assurance of the work of the supervisor checking on the alloy on its mixture (of different kinds), and the amount of what was alloyed from the percentage, an *ʿāwqīya* is like the known of (what) he has, lest the minter increase from what he has in the alloy what is bad and takes his difference on the good; and whenever a deficiency to it, it was necessary to heat it in the pieces for the appearance of its good from its bad and its debasement. If the minter knows that by the house of minting whosoever checks on him and asks by this of him, the questions, and if he had no possibility to do a thing from what is not right in his work, then by reason, for that he would be punished.
Part Twelve

Concerning the increase of the revenue

The revenue of the house of minting in the past was (in) buying the ore and the jewelry from the gold and the silver and others of that from the money of the sultan, and striking danānīr and darāhim, and it goes out by the exchange. So whatever surplus is from that is called a revenue, and the owner of the operations is paid in monies. Then that was neglected and the supervisors put in it honorifics/titles over whosoever paid gold or silver for the striking in it. They call it sometimes by the almsgiving (zakāt), and sometimes by the assistance for the house of minting, and sometimes a license/approval. It is now by calculation of a dīnār six-eighths from the gold for a percentage of a dīnār from it, and by calculation two darāhim for the one 'āwqīya from the silver. And the Jews became, all of them, God damn them, working by commercial trade in the gold and the silver for themselves, so the revenue of the house of minting and its returns decreased.

And our chief, the caliph, the warrior, the late emir of the Muslims abu al-Hasan, may God honor him, resolved to prepare in the house of minting in Fès 1000 danānīr from the stamped gold and 1000 'āwqīya from the stamped darāhim; and that is in its place under the key of the supervisor and the two witnesses for purchasing the ore, and the jewelry, and the silver on different
types of that, and refining what one needs for its purification, disbursement of
what one needs for its exchange. The inside and the outside from it are
accurate documents by means of the stalemate of its two witnesses and the
supervisor in it. And that pays the revenue and its gains at the end of every
month, and an accounting is worked by it at the end of every year. Perhaps
the [ ] like that and God knows best. I hope that one benefits by the power of
God on the hand of whosoever substituted them. God triumphs over them and
his authority over them is everlasting, and a recompense of that in their
balance. So if there is a huge public benefit, it is for the Muslims.

And this, one does not operate by it except (whosoever is) acquainted in
the types of currency, and its faces of the money-changing, and the knowledge
of answering questions concerning the taking and the giving; and better is this
revenue, and the gains, and the returns from this face for the house of the
money. And the Jews would remain, if they were working by that, laboring
under the night and the morning and the evenings. The revenue of the house
of minting was removed by their work; and the operations, by their role; and
the outside *danānir* and *darāhim* appeared through them at different times and
their more valuable things escaped from it by bribery. And if it were widely
known and circulated when the people of the house of minting released (new
coinage), for that they would proceed straight-away and copy/imitate it, and
God knows best; He has authority over them, the correctness is by His mercy.
Chapter Six

Concerning the measure of the dīnār and the dirham belonging to us and the reason for striking this Jacobian dirham in our Maghrib

This chapter was produced by what abū al-Hasan bin al-qīTān transmitted concerning the amount of the dīnār and dirham at the start of Islam. Then, what was said of the authors of the resources, concerning our dīnār and our dirham mentioned, is summarized. The darāhim which (the people) traded were, with regard to the times, of two styles: a style that on it was inscribed Persian, and a style that on it was inscribed Roman. The former of the two types was called the bughlīya and it is black, the dirham among it is 8 dūwāniq; and the latter says on it Tabrīya and it is the [age-old] of the dirham among it 4 dūwāniq. Then Islam arrived and it was like that, and the people traded them jointly to the portion from this and the portion from this near the application. What was not specified in the wording was the first of the two styles. And like that they were struck for almsgiving (zakāt) in Islam by considering [a

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a This chapter deals with the systems of weights and measures for of determining equal exchanges in the Moroccan Maghrib.
b lines 9-14: The two types of dirham in circulation prior to Islam were the Persian bughlīya and the Roman Tabrīya. 1 bughlīya =8 dūwāniq, 1 Tabrīya =4 dūwāniq
c lines 16-17: The use of the bughlīya and the Tabrīya continue after the advent of Islam.
d line 18: Perhaps referring to the absence of an impression/inscription on the bughlīya?
portion] among this [and a portion] among this in the proper place, and among
who mentioned that is *abū ‘abīyd.*

At the time when *‘abd al-malik bin marwān* restricted its inscriptions
and wanted to mint *darāhim* with the inscription of Islam, he investigated their
known methods of it. And he imposed for it the appearance, that was the law
also. In that, he took into account the arguments of the owners of the
resources from finding for it the almsgiving, and the owners of the money
wanted the consideration of the proper amount in the greatest (quantity),
and he wanted from finding for the almsgiving a consideration of it in the
smallest (quantity). He found among what is just between two sides like what
is fair between two people claiming something but with no proof by one or the
other on their claim on that which is to be divided between them. He collected
between the *bughli dirham* from 8 *dūwāniq* and the *Tabri* from 4 *dūwāniq*, and
there were 12 *dūwāniq*, and he divided into halves, and he struck the *dirham*
from one half of it, and it is 6 *dūwāniq*, and the *dirham* arrived at a value on
the halves of them by volume on the limits of the people using it. And he
agreed that what was determined on it from the issue of the *dīnār*, which did
not differ, that it was 24 karats and the karat is 3 grains totaling

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*e* lines 23-26: *‘abd al-malik bin marwān* imposes restriction on inscription and appearance of
currency. See also Chapter 3, “Coinage: Iconography”.

*f* lines 32-35: *‘abd al-malik bin marwān* standardizes the *dirham* by assigning the value at $\frac{1}{2}$
*bughliya* (=$4$ *dūwāniq*) + $\frac{1}{2}$ *Tabriya* (=$2$ *dūwāniq*) =1 *dirham* (=$6$ *dūwāniq*)
72 grains, and normalized to 10 *darāhim* from the *dirham* of volume this is 7 *danānir* from this, and it became the value of almsgiving\(^g\) which is 200 *darāhim* from that *dirham* -- half from the big and half from the small equal to 200 *darāhim* -- from this which ‘*abd al-malik* struck, which is the *dirham* by volume. It was accurate that 200 *darāhim* from it is the original value.

And the multitudes agreed with that, for (the new *dirham*’s) approval was a consideration before it was advanced. And it’s (endorsement) was not opposed except from a claim that the citizens of each country consider the original value in what they had from the *dirham*, diminished or increased, and madhhab ibn Habīb al-andalusi (proposed this). (The claim) was rejected on what was indicated by the True *Hadīth* from the weights of the people of Mecca, and this which we mentioned was its weight.\(^h\)

This was established, and it was reported that the total of 7 *danānir* weighed from the *darāhim* of dry volume was 10 *darāhim*, and it was determined that the *dirham* of dry volume was appraised at 50 and one-fifth grains, and it differed on that when the counterbalance weighed it and the grain. So this was the verification for it: the *dīnār*, without a doubt, is measured to 24 karats, and that is 72 grains equal to one *dirham*

\(^g\) lines 39-40: The *dinar* is standardized by making official prior agreed upon standards of 72 grains=24 karats=7 *danānir*.

\(^h\) lines 45-51: The weights of currency established by the *Hadīth* are based on Meccan use.
and three-sevenths dirham from the darāhim of dry measure.\(^{i}\)

Among what abi al-‘abās bin al-binā’ al-mrākshi outlined in his article:

It appeared in the True Hadīth about the Prophet, blessings of God upon him and peace: Less than 5 awāq of silver does not qualify as (giving) alms (sadaqa), and he stated: The weight is the weight of Mecca and the volume is the volume of Mecca. The learned scholars decided unanimously on that definition (based on) the Hadīth in the sharī’a: The almsgiving, the reparations of the right-hand, the portions, and the dowry -- in them he wanted the weight of Mecca and the volume of Medina in its proportion, and as for the weight of transactions and its volume, for each country in that it is the legal practice, and it is different.\(^{j}\)

\[\text{abū ‘amr bin ‘abd al-bir said: The wasq is 60 sā’a by the consensus of the learned scholars in the measure of the Prophet, blessings of God upon him and peace.}\]

And the sā’a is four amdad\(^{k}\).

And the mudd is one and one-third RaTl.

\(^{i}\) lines 53-59: The exchange rate of the currency is 1 dīnār =1 and 3/7 darāhim.

\(^{j}\) lines 64-70: zakat is based on Mecca weight and Medina volume versus currency which is based on Mecca weight and Mecca volume.

\(^{k}\) amdad is the plural of mud.
And there is consensus concerning the raTl also. It is appraised at 128 darāhim dry volume, and the āwqīya is not considered in its calculation. Rather, it is considered in its proper place among the almsgiving of silver. And indeed it came to be mentioned in the Hadīth verbatim.\textsuperscript{1}

The āmma (Islamic community) unanimously agreed that the wariq is 200 darāhim -- there are no alms without this -- and that 200 darāhim can be exchanged for 5 awāq (plural of āwqīya), and the āwqīya is 40 darāhim.\textsuperscript{m}

Indeed it is more useful to us that we assess the raTl in this āwqīya, and it is 3 awāq and one-fifth āwqīya, in view of the fact it is 128 darāhim dry volume.\textsuperscript{n}

It follows to reason from that that the measure of the dirham dry volume was researched. And it had been established that 10 darāhim dry volume weighs 7 dinars, and this is well known at present in the documents of the ancient people and their contracts, and it was established that the dīnār is 24 karats, and this was agreed upon. The learned scholars acknowledge that the karat weighs 3 grains from the medium (sized) barley grains by the dīnār

\textsuperscript{1} lines 80-83: No specific reference to this could be found in the Hadīth, SaHīH al-bukhāri.
\textsuperscript{m} lines 85-87: 1 wariq=200 darāhim=5 awāq; 1 āwqīya=40 darāhim
\textsuperscript{n} lines 89-91: 1 raTl=3 1/5 awāq=128 darāhim
which is the almsgiving dinār which is determined in 20 among its weight of 72 grains. It was determined by that that the weight of the dirham of dry volume is 50 and one-fifth grains from the medium(-sized) barley.

Muhammad bin al-qiTān, in his article, said that he witnessed darāhim for the dry volume struck ‘abd al-malik bin marwān in Seville (Andalusia) in the year 680. It was found in a treasure/hoard and it was raised for al-nāSr abi ‘abd allāh bin al-manSūr al-muwaHdi (The Almohad), and he gave from it to his father abi al-Hasan a good luck token, and it was a silver, round of shape, and on it written: “The Commander of the Faithful ‘abd al-malik bin marwān ordered the striking of this dirham”. He said: And we were able to appraise it more than once by the medium grains of barley, and the dirham from it is equivalent to 50 and one-fifth grains.°

Abū al-Hasan bin al-qiTān said in his article that he found the weight of the Jacobian dinār among the grains of medium barley was 84 grains, and that he found in the Almohades dirham -- and it is the square mint dirham -- 28 grains. The almsgiving dinār among our dinār is six-sevenths.

And in our Maghribi ‘āwqīya among those square darāhim is 20 darāhim.

° lines 103-111: The isnād, or chain of proof, of the ‘abd al-malik dirham weight
And in it also is 6 and one-third danānīr among our dīnār, because our dīnār weighs among it 3 square Almohad darāhim.

It was summarized from all of that that:

The wasq is 60 sāʿa.

And the sāʿa is 4 amdad of the mud of the Prophet, blessing of God upon him and peace.

And the mud is one raTl and one-third.

And the raTl is 128 darāhim from the darāhim of dry volume.\(^p\)

And [the dirham of dry volume] the weight of it is 50 and one-fifth grains by the grains which in it the Jacobian dīnār was weighed comparable to the weight of our dīnār, and it is 84 grains.

And in the grain is 4 rice grains.

\(^p\) lines 126-133: 1 wasq=60 sāʿa =240 amdad=320 raTl=40960 darāhim dry volume=2068480 (barley) grains
And in the rice grain is 4 sesame seeds.

And in the sesame seed is 4 mustard seeds.

And in the mustard seed are 4 [among] the sheets of the husk (of grain).

And in the sheet of the husk (of a grain) are 4 atoms/specks.

And the atom/speck is a fraction among 1024 portions from the grain of barley.

And God designated [the atom/speck] in weight.

Let it be known that in our 'awqīya is 10 and one-third darāhim dry.

<table>
<thead>
<tr>
<th>Single measure</th>
<th>Multiple Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 wasq</td>
<td>60 sā'a</td>
</tr>
<tr>
<td>1 sā'a</td>
<td>4 amdad</td>
</tr>
<tr>
<td>1 mud</td>
<td>1.33 rāTl</td>
</tr>
<tr>
<td>1 rāTl</td>
<td>128 darāhim</td>
</tr>
<tr>
<td>1 dirham</td>
<td>50.2 grains</td>
</tr>
<tr>
<td>1 dinār</td>
<td>84 grains</td>
</tr>
<tr>
<td>1 grain</td>
<td>4 rice grains</td>
</tr>
<tr>
<td>1 rice grain</td>
<td>4 sesame seeds</td>
</tr>
<tr>
<td>1 sesame seed</td>
<td>4 mustard seeds</td>
</tr>
<tr>
<td>1 mustard seed</td>
<td>4 sheets of husks of grain</td>
</tr>
<tr>
<td>1 husk of grain</td>
<td>4 atoms/specks of dust</td>
</tr>
</tbody>
</table>

\[lines 139-152: 1 \text{ (barley) grain}=4 \text{ rice grains}=16 \text{ sesame seeds}=64 \text{ mustard seeds}=256 \text{ grain husks}=1024 \text{ specks} \]

\[lines 124-152: \text{This section is summarized in the following table:} \]
volume, and from our dīnār of the present-day now, it is 60 and one-third danānīr.

And in it among the smallest Jacobian of the present-day dirham now, it is 69 darāhim.\(^5\)

The original value of almsgiving from these smallest is 18 awāq from our 'āwqiya, and 224 danānīr was amended by twenty small silver.

The minimal amount the hand of a thief was chopped off for was 18 and six-tenths darāhim\(^1\), and it was also the minimum dowry on the manner following the ruling of the mercy of God.\(^u\)

The amount which the producer can sell from his single batch is 70 danānīr and nine-tenths dīnār and five-seventeenths dīnār on what abū ‘abd allāh muHammad bin aHmad bin al-qīTān fixed upon in his

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\(^5\) lines 154-159: Referring to the changes in the values of the awāq originally set at the start of Islam (seventh century) to the present day of the author (fourteenth century)

\(^1\) lines 165-166: Referring to the penalty for theft in the Islamic empire

\(^u\) lines 166-167: Referring to the minimum dowry for marriage. Compare with aHādīth 06.61.547, 06.61.548, 07.62.024, 07.62.054, 07.62.058, 07.62.063, 07.62.066, 07.62.072, 07.62.079, and 07.62.080
manuscript, and it is that which equals 20 Cordovan danānīr which he
mentioned was commonly observed, and it is that which in the one dirham
from it is 36 grains, and it was in equilibrium with 100 darāhim from the
dirham of volume as well as 40 Cordovan and this is the meaning of, they said:
“The income of 40”. Similarly, ibn futHūwn transmitted its meaning.

And the income dirham is that which, if it were increased upon it one-
fifth would be a dry volume, and if diminished from it one-fifth of it would be
a revenue/ return. It is called a revenue/return in your incorporation on it one-
fifth of the diminishment from the dry volume, and it becomes a dry volume in
this interpolation.

And the original value of gold among these present-day danānīr now in
almsgiving is 17 and one-seventh danānīr.

And the income dirham of dry volume exchanges among our smallest
dīnār by 6 and one-fifth darāhim.

The weight among gold, [which] in it is the weight and the transactions
in all the countries of the known Sahara that they have in the provinces,
exchanges seven-eighths and half one-eighth danānīr from our dīnār.
And the reason our Jacobian dirham -- which in the single 'āwqīya from it is 69 darāhim -- was struck is that it is the first dirham of this Merinid state, God blessed it, and made it sound. It was different of the weight and the mint. Among it the qarTūwbīya\textsuperscript{v} and the baja 'īya and the janūwīya\textsuperscript{w} and the murābitīya\textsuperscript{x} and the Tabarīya and the zarjanīya and the Jewish and the Mohammedans and the faithful, were coming to disputes between the people by reason of that.

For what the Caliphate strengthen and verified, our head -- the Commander of the Muslims, the Warrior in the Way of God of the Universe -- abu yūsuf ya‘qūb bin ‘abd al-Haq, the generosity of God on his face, the way of his shortcomings to what was put in order is his rule, and his faith and devoutness was made great, that he considered in what is not [from it] an option among the investigation of the dīnār and the dirham and the qanTār\textsuperscript{y} and the raTl and the 'āwqīya and the wasq and the sā‘a and the mud, and he prohibited that which he allowed among the coins except what was on it of his mint, or on the value of that and its quality and its fineness, and he chose from the perfect of those Mohammedan coins the level in what they profess for

\textsuperscript{v} qarTūwbīya are possibly the Cordovans
\textsuperscript{w} janūwīya are possibly the Genovese
\textsuperscript{x} murābitīya are possibly the stationed, as in troops
\textsuperscript{y} qanTār is the hundred-weight.
Muhammad al-nāSr, who in the one āwqīya from it is 23 darāhim, and he executed his order, God chill his grave, that it is made from the one dirham from it 3 small darāhim for it satisfied the sale agreement by it between the people, and 3 (times) 23 (is) 69.2

And it was proceeded over by two guardians and two supervisors in the House of Minting in Fès. Our recent development was the wise ali bin muHammad al-kawmi al-madiyuwni, for his knowledge in coinage, and it proceeded what was with regard to it, and the people went to the right by that and they were happy, and still it is minted like that and on its adopted procedure, and that was in the year 674AA BB

That dirham was the work of accomplishment, proportionate of the weight of the balance, exact of the inscription. There remained in it a method for 50 years. And it was impossible to increase upon its brilliance, and its equivalent advanced from not attacking it operations, and incorrectness entered in no way.

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2 lines 202-215: This paragraph describes the final decree of the study of weights and measures and restrictions concerning inscriptions and variability in appearance in their striking.

AA A.H. 674 corresponds to A.D. 1275-1276, which relates to the earliest date for this manuscript.

BB lines 217-221: Detail of the execution of the above mandate in Fès and the supervisor of operations.
Chapter Seven

Concerning the transactions by the two of them in money-changing or murāTla\(^a\)

and warning against the usury in that,

if it were [a reimbursement], or a claim for remuneration, or murāTla

At the time when this chapter was needed was when the transactions by means of the gold and the silver restricted us to proportions based on the need for each. Its branches (of study) in the jurisprudence writings are many. And they rely, in large part of their transmission, to the book “*al-nihāiyat wa al-tamām*”\(^b\) of the Judge *abu al-Hasan al-matīyiTi*, God’s mercy on him.

As for the money-changing, [it is] among the narrower of the openings to usury. The escape from usury over whosoever was (in control of) the money-changing was difficult, except among whosoever was from the people of piety and knowledge, by what unbinds in it and is forbidden against it. And what of them is few.

\(^a\) The meaning of *murāTla* is not known, but from its contextual use in this chapter, it appears to be a type of weighing mechanism, similar to a double-pan balance.

\(^b\) Meaning, “The Conclusion and the Complete”
For mālik, God’s mercy on him, was saying: Does one cultivate it that man works by means of the money-changing? He said: Yes, unless he was God-fearing in that.

From what the messenger⁶, peace be upon him, explained, some of the methods of usury are the gold by means of the gold and the paper by the paper, and they are not offered for sale except same-for-same hand-to-hand, and the gold by the paper is not offered for sale except hand-to-hand. It is not allowed in the money-changing, nor in the sale of gold-for-gold or silver-for-silver is there an agreement, nor is there a preference, nor a guarantee, nor a bill-of-exchange, nor is it proper except in the legal contention. It does not part its owner, and betwixt it and between it, it is work.

The messenger, peace be upon him, said: You do not sell the gold by means of the gold except same-for-same, and you do not disclose some of it over some, nor do you sell the paper by the paper except same-for-same, nor do you reveal some of it over some, nor do you sell from it anything not present in (its) entirety. ‘amr bin al-khaṬāb, God’s approval upon him, said: If he bided his time for you until he enters into his house, then you do not see him, truly I fear over all of you usury.

⁶ Meaning, Muhammed
The view concerning money-changing is subdivided according to three parts: One (the first part) of them is that the money-changing between the two of them is entered into/contracted on the basis that one of the two of them views its owner by something from what is exchangeable in it, if a small quantity. If the abolishment of all of the money-changing by the contract were to occur, it would be the convening on corruption.

The second (part) is that money-changing is entered into/contracted between the two of them on the basis of haggling. Then one of the two of them defers its owner by something from what is exchangeable in it. This violates the money-changing in what occurred in the deferment by a contract. If a dirham became unsound, the exchange of one dīnār [for the dirham in what is more than it to the exchange of a dīnār] was neither good nor bad, or (if) that which occurred in the deferment was greater than the exchange of a dīnār, then an exchange of [another] dīnār cancels. In this way, under no conditions is this augmentation of this arrangement.

It was disputed, whether from the money-changing is allowed what was ignorant in the haggling and a deferment did not occur, or whether it is not, on the two sayings: One of the two of them is that that is not allowed because the two of them have doubts over the endeavor for that, and the agreement on it, and it is the teaching of ibn al-qāsim in the record and the saying of
muHammad bin al-mūwāz. And the second is that it is allowed, and it is the saying of *ibn al- qāsim* in the book of *ibn al-mūwāz*.

The third part is that the money-changing between the two of them becomes entered into on the dispute. So a thing (a portion), from on what the money-changing occurred, is deferred, on account of forgetfulness, or rudeness, or theft from the money-changer, and whatever its combination of that from what gets the upper hand is that one of the two of them [occurred in it], and this proceeds with what occurred in the haggling and there is no invalidation by agreement.

And differing in opinion: Does it invalidate in what was ignorant in the haggling if there is no paying attention [to] the diminishment?, like (if) one exchanges from it *dirāham* by means of *dinānīr*, and then one finds two *dirāham* short (absent) and says: ‘I gave it up.’? Nor is it invalid from the exchange, a thing, on the two sayings: One of the two of them is the saying of *ibn al-qāsim*, that that is not permissible, and it invalidates from the exchange one *dīnār*; unless the value, which was diminished, is greater than the change of a *dīnār*, the change of another *dīnār* is invalid. In this way, under no conditions is this example the augmentation of the agreement. And the second is the saying of *āshhab*: If the money-changing is permissible, nor is there invalid from it a thing, if there was an omission from it [in connection with]
the diminishment, like the counterfeit, accordingly it was satisfied by it. It was
transmitted on the strength of *ibn al- qāsim*, the example of the saying of
āshhab concerning the insignificant diminishment, like the *dāniq* and the two
dūwāniq. ĀSbagh said: In the *dirham* among the thousand *dirāham*, and that
that the scales had differed is in the equal of this proportion. One of the
sheikhs said: And what differs on the scales? There is no difference in it, in
my opinion, in the lawfulness of its omission. It is not, what was transmitted
on the strength of *ibn al- qāsim* concerning this, different from his saying; on
the contrary, the significance is in that *dāniq* and those two dūwāniq; he
supported a view that the scales are not different concerning it (the *dāniq*).
And the omission in connection with it was not summarized. As for if one
wanted that he returns by the diminishment, so he would take it, and it would
not be permitted except on a teaching of whosoever authorized the
compensation in the money-changing; and he viewed that the upper hand on
the deferment in it, is by means of forgetfulness, and error, and theft, and
fraud, and whatever its combination of that, does not null and void the money-
changing and does not corrupt it. If one found in what he exchanged after the
parting, a counterfeit of its replacement, and if one found a reduction taken of
it, and if one were limited from it a thing, one would take its equivalent; and
this, all of it, is on their teaching in the assembly of what was not divided in
two on knowledge of that.

\(^d\) The *dāniq* is the singular of the *dūwāniq*.

\(^e\) The value of the *dūwāniq* is outlined in Chapter 5, “Chapter Six” of this translation.
It is not permitted that a contract of sale is bound together by the money-changing, unless an owner, God’s mercy on him, authorizes that it is with the insignificant non-essential things. Then he could offer for sale by means of the insignificant dinānīr and dirāham, for they are less than the exchange of a dinār. If all of it were in advance, there is no deferring anything.

The judge abu āṣHāq said: On the contrary, one authorized that for the necessity of the people to it in their sales, because they were not cutting the gold and the paper. mālik said: If the dirāham were augmented, they would not be summarized, and one entered into the sale and the money-changing; and if the gold was one dinār by means of tender (for goods) and dirāham, then it would be permitted, (whether) the dirāham decreased or increased, if that were in cash; and this, all of it, is the saying of mālik and ibn al-qāsim in (the) effect.

ibn al-qāsim, in the kitāb muHammad said, on the contrary, one permitted that in less than the dinār, for example that one purchase clothing by means of thirty dirāham or three-fourths of the dinār, so one pays a dinār and

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\footnote{f} Perhaps meaning, a fraction of the dinār; see Chapter 3, “Early Western Periphery by Legend: dinār variability by legend” concerning the issuing of gold fractions of halves and thirds of a dinār.

\footnote{g} Perhaps meaning, in contrast to the preceding paragraph, if only one form of dinār were issued/considered as legal tender.

\footnote{h} Meaning, The Book of Muhammed.
one takes his preference of paper; and if the paper were greater than the dinār,
then there would not be in it a good thing; and mālik also said it, as well as
others than him.

129 The sheikh abu IsHāq al-tuwnisy and others than him said: Concerning
the record of what is clear on it, there is a difference of opinion in this, [and]
one was permitted the half of a paper and the half of a commodity.

130 The opinion of ibn Habīyb: If the dirāham were greater and the
commodity were lesser, that would be permitted; and the judge abu
131 muḤammad ‘abd al-wahāb said: The sale and the money-changing in the
dinār are not permitted, unless it were insignificant; for example, (if) one
exchanges a dinār by means of ten dirāham, and the dirham or the half is
weakened, so one pays to it a compensation by the amount or one increases the
dirham or the half; and (if) one broke it other than is permitted, so here one
permits for the purpose of exigency, because one knows that the sale is other
than intentional.

133 muḤammad bin ‘abd al-Hakim said: Concerning the one dinār sale and
the money-changing, it is not permitted unless the dirāham, which with the
tender (for goods), were less than half a dinār, because they are subordinate.
It was permitted (by) ashhab in his record of the money-changing and the sale, and for mālik in the kitāb muHammad is his example. If the sale and the money-changing in an abundant thing were to occur, it would be invalid and the commodity would be returned, unless it were relinquished by an increase or a diminishment or a bill-of-exchange/promissory note of a marketplace; then the purchase, by its value on the day of contraction, would be adhered to, and the property is bound (in contract) on its weight. *ibn al-qāsim* said it concerning the reproof.

And whoever’s was the duty, over whosoever God created to it something from the orders of the Muslims, that he is invested with authority the inspection of the weights, by means of the investigation for the conditions of the money-changers; he did not pass over from them in their marketplace except whosoever had legal knowledge in his religion, like what *‘amr bin al-khaTab*, God’s mercy on him, said: The foreigners/non-Arabs do not buy in our marketplace until they understand in the religion. And the money-changing is the more suitable of the trades for the people of learning and refinement.

The sales are adhered to, [by orders] three: The price, and the appraisal, and what the sale accepts by it from the (volumetric) measure and the weighed. The price is the first of them. The prices/values of the gold and the silver and
the returns of the two of them to the money-changing, in most cases, were established. And from the consideration, it is not applied to a free non-Muslim subject living in a Muslim country nor his profit/revenue extended to them. And whosoever was ignorant in the entirety of its reasons, and its legitimacy, and its unlawfulness, was prohibited from its trade and the right dealing with in it. And the money-changers are prohibited from the money-changing by means of deferment, and preference, and recommendation, and bill-of-exchange. Truly, the judgment transforms (renders illegal) whatever evades that to which we agreed.

Like that they prohibit that they paid in cash the evil with the good; they stipulated that as a condition or they did not stipulate, and this which they call it is the license/authorization. And unless they sold a gold by a silver, then they bought from it that (same) gold by means other than it, they prohibit from that unless that the period of time between the two exchanges is decreased, like (by) the two days or the three. They forbid also the exchange in the cashier’s office upon the say-so of whosoever did not summarize it and it was viewed that the exchange was invalidated. Truly, it was said of it concerning the period of time of the exchange: What was returned to you of its recompense, there is a community upon it, so that is not permitted.

They prohibit also from the division in the money-changing in the
presence of dispute. (When) one spends, they have a dinār by the dirāham they take hold of, in order that they sell them (the dirāham) well upon the money-changing they have.¹ And like that they prohibit from purchasing the gold by means of the gold and the silver by silver except what [was not] significant for it.

From the swindling, the dinānīr of the good gold was comingled with the bad. And truly, it was clearly evident for it, because the purchaser was not aware of the value of what was taken from each kind.

As for the murāTla, truly the gold and the paper are two different kinds. Each one from the two of them is a kind distinct by itself; [there is no selling one of the two of them] by the other in preference of superiority [and there is no selling except] hand-to-hand. For the saying of it, peace upon it: The gold by means of the gold is a usury unless a yearning and a desire, and the paper by the paper is a usury unless a yearning and a desire. And one said: Do not sell the gold by means of the gold except like-for-like, and do not reveal/betray some of it on some;² nor sell silver except for like-for-like. And do not reveal/betray some of it on some]; nor sell from it something not present in full. If the tab of the balance were straight,³ then the murāTla of the two of

¹ See Chapter 3, “Multiple Currencies: Bimetallism”.
² Meaning, do not present some and hold back some
³ Meaning, if the marker on a double beam balance pointed directly vertical, indicating both sides were of equal weight
them would be perfect/completed; and the sale of the two of them, of what was not returned in the weight of one of the two of them, whether for authorization or for industry salary, would be sound. No matter whether the two golds or the two silvers were two pieces of jewelry, or two coined pieces, or two fragmented pieces, or one of the two of them were different from the other in that, it would be permitted. If one of the two of them was better than the other, and greater a quantity over and above the requirement, it is because in front of the murāTla it was not needed, for one of the two of them in front of the other, something was abandoned by them in what was spent freely, for it was more preferred than what was taken from it. And in the requirement, if one needed for it gold minted or artistically worked, and if he took raw gold better than it, he would be concerned that he was relinquishing the minting or the goldsmithing for the preference of the gold which was taken.

mālik said: Each asset is indispensible, the preference in it from one category, in cash, it were, or in foodstuffs, and it is not indispensible – and if an abundance – with the good type from it, one creates something of the worldly life regarded as lawful by the preference.

ibn al-qāsim and ibn muHaraz said: If the two golds were two coins or one of the two of them (were), then the murāTla by the two of them in the two pans (of the balance) would not be permitted, except after the information by
weighing one of the two of them, because that would be from the issue of
selling the coin randomly, and it was a risk not permitted.

muHammad bin al-mūwāz said: The uses of the murāTla, all of them are
legal\(^1\) except for two uses. One of the two of them is the one that measures
gold; and the other uses two amounts of gold, one of which is perfect in
essence or superior, and the other\(^m\) which is inferior to it, \(^n\) and this is not
permitted. (And as for the first,) if the gold weighs more than materials or
paper, this is not legal because it is a means for usury.\(^o\) However, if it were
isolated (alone on one scale), and worth more than the two or less, or the same
as one of them and less than the other, or intentional, then that would be
permissible.

The inheritance, chosen (at one’s discretion) by the gold and the silver, is
split by a murāTla or cashier’s office. And if one weighed one of the two of
them on the selfsame of it, and the two balances conferred the weight of their
shares from that kind, it was permitted on the opinion of ibn al-qāsim if [it
were] that in cash.

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\(^1\) Literally, a gift from God
\(^m\) For example, imagine if it were a coin
\(^n\) Meaning, when the scales do not balance
\(^o\) For example, imagine if silver were on the other scale
From a rāTl, its owner is by means of the mathāqīyl, so he puts it in a pan (of a balance) and the gold in the other, until it strikes a balance; and he made the other like that to investigate for the equitable composition. Lest there is in the balance a corruption, then there is no objection to it. ashhab and muHammad transmitted it according to mālik.

It is not permitted that contracting a sale in something from the things be associated with the (a specific) murāTla. Similarly, if it were that from the two of them, or from one of the two of them, then one would take possession in that preference between the two papers and the two golds.

Neither is permitted, after the perfection of the murāTla, that one purchases one of the two of them from its owner by some paper taken away or tendered, because another ordered the two of them to result in that one of the two of them gave for its owner a paper or a tender (for goods) by means of paper, and the preference between the two weights was taken under possession.

Sale of a gold and a silver by gold are not permitted; and nor that a dirāham, nor a tender, nor a foodstuff is with one of the two golds; and like that the dirāham is by the dirāham. And a gold and a silver are not permitted

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p Meaning, from context, a weight used in the murāTla
q mathāqīyl is the plural of mithqāl, a monetary unit, the exchange rate of which is defined in Chapter 5, “Chapter Six” of this translation.

r Meaning, after the completion of weighing
— and if the two types concur with one another — by a gold and a silver, it is like what is not permitted of baked bricks of wheat and baked bricks of barley by means of baked bricks of wheat and baked bricks of barley.

As for the exchange, it is permitted by means of the counted from the dinānīr in what was less from it, like the dīnār and the two dinānīr. And if some of it were more inferior than some as a way of the favor and the courtesy together, it would not be permitted in what was a large quantity.

As for if the more inferior were heavier, it would not be permitted, because preference is taken in the gold of its owner in the increase of the weight of his gold. And if the heavier weight was the more preferable, then that was permissible according to ibn al-qāsim and mālik abhorred it.

Whosoever advanced by silver to the people of the house of money-changing, so their raTl by it is minted dirāham, and they given to him and he took it. mālik, God’s mercy on him, said: I do not like it, and what people of the pious and God-fearing make of it. And it was reduced in weight for the traveler for his needs to it.\(^8\) ibn al-qāsim said: And the coerced, he dried up the needs. asshab, according to mālik, said: Verily, it was this at the time.

\(^8\) Meaning, a traveler got lighter currency (apparent of the same value face value, if not by weight) issued to him for the trip. Whether this was by request of the traveler or the mint is not known.
when the gold was not debased and the mint was one. As for today,
consequently, in each country is a mint, and it is not permitted except that one
gives it whole and one strikes for it dirāham.

ibn Habīyb said: What the people of the mint make of it, from their
collection, is for the gold of the people, and if they were exhausted, they
would give for each one the equivalent of the weight of his gold; consequently
this is not permitted at the time since I met some of the friends of mālik.

mālik said: There is no advantage in [that] the manufacturer (mutually)
exchanged jewels by your paper and you gave him his pay, nor that you say to
him, produce for me some of it from (what) you have until I give you.

The sale of the gold by the paper, preferentially hand-to-hand, is
permitted like what we mentioned previously, for the saying, peace on it: Gold
by means of the paper is a usury unless a yearning and a desire ... the Hadīth.

Nor is a deferment by an hour, nor a bill-of-exchange, nor a guarantee,
nor a trusteeship, nor a preference permitted in anything from the money-
changing. And like that it is not permitted that one engages in exchange in one
place and takes possession in another, nor that one of the two of them

\(^1\) Meaning, had no more gold to give
disappear from the sight of its owner, nor that the money-changer of the
\textit{dinānīr} enters in his coffer and leaves the \textit{dirāham}, nor that he engages in
exchange and takes possession of his measure it after his departure. This
saying of \textit{mālik} is the well-known and well established.

As for the consideration of the minting and the goldsmithing in the
requirement, \textit{ibn shās} transmitted that the sheikh \textit{abu al-Tāhir} said: There is
no difference in the teaching that the minting and the goldsmithing in the
requirement are two considerations; whereupon he gave an account of \textit{abu al-Hasan al-lakhmy} that he applied that on two sayings, if the differences come to
pass in the requirement: Is the opening the opening of the \textit{murāTla} or not?
And he had confidence on accounts from it of their saying: If he advanced an
invoice by a measurement or sold by the invoice of its weight in this manner;
and if he permitted that he makes requisite a sum-total by example of that
weight, and if a greater quantity, he said: This is one of the two sayings: That
the requirement is like the \textit{murāTla}. Sheikh \textit{abu al-Tāhir} said: And it is not
like what he deemed it, and the basis of the quantity truly is considered if the
transaction were not by the weight; and if a transaction (were) by the weight,
then here the quantity would be subtracted.

As for the return in the \textit{dirham}, \textit{abu muHammad Sālih} said: The return
in the \textit{dirham} is treated on five parts:
The first: The permission of the return with it.

The second: In conditional clauses of permission of that.

The third: In finding the defect in one of three things, which are the commodity, and the *dirham*, and the revenue.

The fourth: In departure of it in the beginnings by means of some parts from other than income of a commodity.

The fifth: In leaving some of it upon the sale until one takes by it a commodity.

As for the first part, it is the permission of the return with it, *ibn al-qāsim* accorded its permission, and his teaching is in the record, he accorded external appearances/manifestations to forbid it; and it was apparent what occurred in the record in the house of sale and exchange, and the saying of it. And the principles of *mālik* are that the silver by means of the silver with anyone are the two silvers, or with each one from the two of them, a commodity, which it is not permitted. The commodity was a lot or little, unless one is saying, if the intention is that, what is more than the *dirham*? And he accorded its
permission in a region where there is not in it falūws\textsuperscript{u}, wherein it compels the
people to that. And as for the country that in it has falūws, then it is not
necessary to resort to that.

And the authorization of \textit{ibn al-qāsim} had as its aim that, with the
preference in it, it is apparent on the foundation of his teachings that he
respected the disagreement in selling a silver and a commodity by silver. And
they said: We forbid for the silver from the silver on its value, and it remains
for the commodity, the remainder. So as for the opinion of the disagreement
between them, in the greatest from that it was allowed; in the least, for the
needs of the people; and \textit{ibn rashid} said it in “\textit{al-bayān}”\textsuperscript{v}.

And the second part, it is the permission of the return with it, and as for
the teachings of \textit{ibn al-qāsim}, on what he related to the sheikhs, it is not
permitted except by six conditional clauses:

One of the two of them: In the one \textit{dirham}, then less.

The second: That is that hand-to-hand is feared from the deferment
between the two silvers.

\textsuperscript{u} The term \textit{falūws} literally means coinage of copper, but is used colloquially in present day to
mean any form of small change money.

\textsuperscript{v} “\textit{The Statement}”
The third: That the revenue is the half, and so, less; and as for the greater from the half, then a misfortune. And the narration of asshab permitted it, if it were greater than the half.

The fourth: That it is in the sale, not in the loan. And the difference is whether it is permitted in the payment among a price of sale or not.

The fifth: That the revenue is coinage, because if it were not coinage, it would become a sale of silver by silver from other than a murāTla.

The sixth: ibn al-kātib mentioned it, and it is that the dirham is the known of the weight, and like that, the revenue; and over this, the return in the money-lending is not permitted in the salary today in Fès. ibn yūwnis said: And this in a region, there is not in it ruination; and as for a region in it, is the ruination; so if necessity resorts to that, then this is proscribed in the teaching of asshab.

As for the third part: It is finding the defect in one of three things. And the sheikh mentioned that he took an interest in some of the commentary/explanatory remarks of some of the contemporary authors; on reply he took a favorable view of it in that. And he (stated): The power in that
is not free from one of two points-of-view: Either that it is he offers it for sale
on the stipulation of the conditions of the return, or he offers it for sale from
other than the imposition of a condition of the return. He said: If he offered it
for sale, it is on imposing the condition of the return. So it is necessary to
nullify the transaction, and he returns to him his *dirham* if he were upstanding,
or its equivalent if it were absent. And he returns to him also the value of the
commodity, or the equivalent of it, if it were from the identicals of the
equivalents. And as for if he sold it from other than imposing the condition of
the return, and if he returned to him the revenue or the *dirham*, whichever of
the two of them would be found a counterfeit; and the money-changing
destroys a portion; and the merchant sells it by what he made a contract the
commodity. The reimbursement in that is not permitted on the teaching of *ibn
al-qāsim*; and truly, it differed on the teaching of *ibn shahāb*, who permitted it
in the money-changing of the gold and the silver originally.

And as for the fourth part: The relinquishment of the sum by the portion,
like one hands over a *dīnār* and receives two halves. In “al-'atbīyat”\(^w\), the
permission of that is in the *dīnār*; and *ibn rashid*, in “al-bayān”\(^x\), mentioned
that *mālik* abhorred it and *ibn al-qāsim* approved it. If *ibn al-qāsim* permitted
that in the *dīnār*, then it would be more suitable [that] that would be permitted
in the *dirham*.

\(^{w}\) “The Reproof”
\(^{x}\) “The Statement ”
And as for the fifth part: It is one left the revenue upon the sale [until] when he spends it. In the record in the kitāb al-Sarf\(^y\) according to mālik, if whosoever purchased a commodity by a third of a dīnār, then he said for it after the sale: This is a dīnār, then he received from it your third, and he withholds a third upon you, he profits by it. That is permitted, if there were not in that a stipulation as a condition, nor it were a convention (as a common practice), nor a concealment; so on this that is permitted in the dirham.

Whatever was not made a contract over the exchanges is first; and as for if a contractual obligation is over it, then it would not be permitted that it is left behind because of a deferrer exchanged. If he left it on selling it well from (what) he has in what he receives, it was mentioned in al-soleymānia\(^z\) that it was permitted if the merchant has an abundance of commodities. And if he does not have it except a single commodity, then it was not permitted, until a quantity of what he had taken was manifest, like the peace. And he imposed as a condition in it what he imposed as a condition in the peace, except that he does not demand setting an appointed time, because it does not expire from (what) he has; and if he imposed a condition other than it, then it is necessary to set the appointed time, like the peace in his intentions.

The legal scholar abu yaHya bin Hamād, in his writings concerning

\(^y\) Book of Exchange
\(^z\) From the decrees of a judge by that name
sales, said: The exchange of a *dirham* by carat is not permitted, nor is the
exchange of a carat in return for a *dirham*; nor is the exchange of the lesser
*dirham* by the heavier (weight) permitted. And truly, that in three *dirāham* is
permitted, and so less; or in three *dinānīr*, and so less; and it is not permitted in
greater than that, and that is from the one variety, and the loss is a sixth, and so
less. He said: The exchange of a *dirham* by two carats is not permitted, nor is
a bigger *dīnār* by two smaller *dinānīr* except by weight. *ibn al-qāsim*
promised that from other than weight, and his opinion is well known like the
exchange of the lesser by the weightier. And it is not permitted that one return
a lesser carat for a heavier *dirham*, nor a lesser fourth for a heavier *dirham*.

And a heavier carat does not return for for a lesser *dirham*, nor a heavier
fourth for a lesser *dirham*, nor is it permitted that a lesser return for a lesser.

He said: If one bought from it a commodity by a twenty-five *dirāham*
condition, then he would take possession of the commodity, and for what was
from the following day, he produced it by a *dīnār* and returned on it a
remainder of *dirāham* allowable. He said: It is not permitted that one buys by
half a *dīnār*, then the merchant rejects a *dīnār* and returns on it a smaller *dīnār*.

He said: If a commodity were sold by a gold *dīnār* or *dirāham*, and then he
would reject for you the lesser *dīnār*, so it is not permitted that you take from it
or other than that, a substitution, for the lesser; apart from what, if you
purchased a piece of jewelry and then you found in it a defect, it was permitted

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*aa* The doubled word appears in the text and was kept in this transcription and translation.
that you take from it dirāham in compensation for the defect from the type of your dirāham. He said: Whosoever rejects for a man a dīnār, he exchanges it for him(self), and he rejects for him other dirāham exchanging it for him(self), it is permitted that he exchanges it from this-to-this and the two of them are not present. And if one desired that the dīnār exchanges for himself, it is not permitted.

The judge ʿabd al-wahāb, in “talqīnahu”bb, said: The requirement of paper from the gold is permitted, and the gold from the paper, and the exchange of the two of them is money-changing. ʿabu ʿamr bin al-Hājib said: The money-changing on the certification in the weight or the description prevented a dispute for asshab.

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bb “His Teaching”
Chapter Eight

What could be used from it for jewelry and possessions and other things
and (for) selling the copy of the Qur’ān and the sword
and the ornamented ring by the two of them (gold and silver)
and its permission for the purpose of the owner

Ibn shās translated/transmitted: Vessels of gold and silver are forbidden to be used by men and women by the True Hadīth. Judge abū al-walīd said: What makes it forbidden is (what in its uses are) among the wasteful excesses and the alloy of it by the foreigners.

As for having it from other than using (it), Shiekh abū qāsam bin al-jalāb said: Keeping the two of them is forbidden. Judge abū muHammad said: Rather keep it, unless you are sober in its use. abū al-walīd said: If it were not meant to be kept, then that should negate its sale. And he licensed it in more than one subject/case among the official record.

abū bakr bin sābiq said: This is not true, because the possession of it
permits a consensus, in contrast with its passing out. Truly, the focus of the
conflict appears by our not passing it out for the renting/leasing on its function,
and by our not obligating the security (collateral) on whosoever depreciated it.
If its intrinsic or instrumental value were not to be damaged a bit, the
inconsistency would be in obligating the leasing and obligating the security.
He said: If someone were to craft the vessel from gold and debased it (by
adding) lead, or other (baser metals) that are legally permissible to be used in
the making of (a) vessel, or from among that he made it (with the baser
metal), a he would be misrepresenting it by the gold. Ibn sābiq commented on
those two statements and he minimized the two of them on the conflict of
creating the problem (in that) it is the decoration and the glory or the essence
of gold. He said: If the vessel were joined to gold or silver, it would be in
portion, or coated. And the judge abū bakr said that that is not forbidden
among its uses. He said: Because it was observed/copied, it is not in
accordance with the intended rule.

The judge abū al-walīd said: The use of a vessel coated in gold or silver
is forbidden. b

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a lines 25-28: This section refers to the craftsman giving the vessel, or was selling the vessel
by, the appearance of gold, through alloying it or plating it.
b lines 36-37: See also Chapter 2, “Mentions of Metals: sūra al-Hadīd -- The Iron”
39 In “al-‘utibīya”\textsuperscript{c}, mālik said: I do not like to drink from it (the vessel) if it was in its ring\textsuperscript{d} silver or coated a portion in it, and also the mirror is in it, the ring from the silver, I do not like that I see in it the face.\textsuperscript{e}

40 Sheikh abū al-Hasan al-maṭītī transmitted that what is permitted the adornment of it, similar to the sword and the copy of the Qur‘ān. If the sale of it is permitted among a type of what was an ornament in it from gold or silver, if it were one-third or less money-wise, it would not be permitted to be deferred. And if it were sold otherwise, it would invalidate the sale at the onset -- unless it were accompanied by a detailed statement of its adornment, (in which case) it (the sale) could be executed and not stopped. This ibn al-qāsim

49 and mālik said in the record and other than it.

52 And āshhab said in kitāb muḤammad\textsuperscript{f}: It is offensive at the start, and so if one fell into taking, (it should be used) and not stopped.

55 And rabīy‘a wasaḤnūn permitted at the start that one sells by the type of its adornment, and its reproach is a coin\textsuperscript{g} or (it is) to be put aside. He said: If the adornment merited what was for it that one returned on it something

\textsuperscript{c} A book
\textsuperscript{d} Meaning, the lip of the glass
\textsuperscript{e} Meaning, he does not like looking into the silvered mirror
\textsuperscript{f} Book of Muhammed, a book
\textsuperscript{g} The phrase “its reproach is a coin” either means “its price to ensure future guarantee-of-sale is a coin”, or “its measurement to the caliber/standard of gold and silver is a coin”.
because there is not allotment for it among the price, it is like the money of the slave. faDl said: This is contrary to the teaching of ibn al-qāsim.

And muHammad bin ‘abd al-Hakim said: It is not permitted, in my opinion, that one buys a sword (that) in it is silver by means of silver coin, even if it were a copy. The same was said, and he who said it was ibn ‘amr.

The license for women to use the jewelry is the same license for men to use the sword.

As for the ring, it is among what was revealed to make use of it for women and men, except that it is not for men except among silver, because gold is forbidden upon them, and it (gold) is for women among the two sexes. h

And ibn Habīyb appended to (the comments concerning) the sword and the copy of the qur’ān and the ring for the men of the manāTiq i and weapons, all of it which they benefit by it in war and its fashion.

For mālik in “mukhataSir mālīys fī al- mukhataSir”j concerning the

minTaqa (singular of manāTiq): If the jewelry were to exceed in what we

h lines 68-70: This statement comes from the Hadīth expressing that men are forbidden to adorn themselves with gold, and women only are permitted to wear gold (rings). See also Hadīth, SaHīH al-bukhāri 7.72.754-756, 7.72.759, 7.72.762, and 9.92.401
i Meaning, the sheaths for the swords(?)
mentioned is the third, it would be in the valuation greater, and it is not offered
in sale except in the contrast of its body from gold or silver coin, or buy means
of the tendering of currency, or by credit. And truly one-third is considered in
that by the weight, not by the worth, and if the smithing elevated it, the
ornamentation would be considered in the worth. And in al-muwāTa’ k by
mālik, he mentioned the jewelry and the worth, and that, when it is a tolerance,
in a phrase: Truly it sells, which in its gold and its silver it sells for what is in
it, by that body. If it were not able, it would be in violation except in its
removal and its undermining, like the crown and the qadūwn l and the rings
and the pots [etc.] and its fashion. And as for what was in it, from the gold and
the silver, the two are eliminated for what was with it from the jewel, like the
necklace and the gems and the adornments and the karats m, and it is not sold
except by its difference or it is in violation, and the jewel is sold on one
standpoint and the gold by the murāTla (weight) or muSārifa (change).

If there was in jewelry there is both gold and silver, the two of them
would be in judgment of the subordinate. And in that, mālik had two stories
about them. ibn al-qāsim narrated these two stories. The first of the two of
them: It is sold by the lesser of the two of them, if it were one-third, it would
be approximately hand-by-hand, and if the two of them were near in quality,

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k The Foothold, a book
l Meaning, a form of clothing
m Meaning, here, the earring
the sale of the two of them is near in rate. And by it *ibn 'abd al-Hakim* said of
the other (story): If it is not sold by the *wariq*, it is not of gold. And to this
replied *mālik*, and *ibn al-qāsim* took that and it was said it in (his) book and in
others.

What is not permitted should be taken from the silver-plated pots and
knives, and the saddles and bridle and boot star, and the vases, and the hair
comb. Nothing from that should be bought in silver. If it were partially in it,
unless it were something not important to it, like a ring of a cup or sheetplate
or a trivial amount at the outermost parts of the saddle and the bridle, one does
not count that in it. From a story from *ibn al-faraj* from *mālik* the valuation on
the saddle and bridle is the same valuation on the sword and *qur‘ān* and ring.
He said: the valuation of the ring is in two characteristics: the first of the two
of them is the return from it by the eye when it strikes it\(^a\), and this is by the
degree of the jewelry. The second is that does not return from it a thing\(^o\). And
some later writers said: This is deception. *abu al-Hasan al-lukhmy* hesitated
in his judgement: Is the rule cancelled because the eye is dissociated, or it is
considered because the aim of it is at the gold? *al-lukhmy* recounted two
sayings by later writers and fails to mention the above-mentioned sayings. He
said: *abu al-maTraf bin salama* was asked about selling the removed,

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\(^{a}\) Meaning, the first visceral impact one gets upon seeing it
\(^{o}\) Meaning, the loss of one's money toward the purchase
transportable gold on the skin, is it permissible to sell it by gold, and he said:
It is not permitted, because in it there is a preference between the two golds, and its sale is permitted by the silver, hand-by-hand. *abu al-āSabagh* [said]:
(In this) I have a voice.

He said: The renting of jewelry, if known by its value, it is permissible. It is characterized by the increase on what it is worth, and the weight of the gold should be registered and the number of the jewels should be counted. By all means, you should designate the renting and the time frame and amount (of money). He said: (As for) the loan of the jewelry -- as for a favor, it is permissible. And God is the accord for the voice, there is no lord other than Him.

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p Meaning, "I, *abu al-āSabagh*, will speak of the right way."

q lines 123-127: Regarding the recording of future transactions, see *qur’ān* 002.282
Chapter Nine

Concerning what God promised as the reward [for spending the two of them] and arranged as punishment for hoarding the two of them and the quantity/scope of what should be taken from jewelry, metal, and ore each from the two of them

God Almighty said: “Take from their money alms to cleanse them and to purify them in it”\(^a\) and He said: “Indeed those who are secure and work good deeds and perform ritual prayers and give alms ...”\(^b\) the verse.

In *al-bukhāri* \(^c\), ibn ‘abās said, God’s approval on him, *abū Sufyān* told me, and he mentioned the Hadīth of the Prophet, God’s blessings and peace be upon him, said: He was directing us in prayer and almsgiving and relationships and virtue\(^d\). And in [*sunan*] *abi dāwūd*\(^e\) said, peace be upon him: What God decreed is almsgiving solely for the purpose of blessing your money, and if it were not disbursed, it would be corrupted.\(^f\)

[God\(^*\)] said concerning hoarding the two of them and resisting

\(^a\) lines 8-9: *qur’ān* 009:103
\(^b\) lines 9-10: *qur’ān* 002:277 and 021:073
\(^c\) *al-bukhāri* refers to the text of Hadīth, *SaHīH al-bukhāri*
\(^d\) lines 14-15: Hadīth, *SaHīH al-bukhāri* 8.73.010
\(^e\) *abi dāwūd* Sulaiman bin al-āsh’ath al-azdi al-Sijistāni was born in 202 A.H. and died in A.H. 275 and traveled widely to amass his collection of *aHādīth*, *sunan abi dāwūd*
\(^f\) lines 16-18: *sunan abi dāwūd* 09.1660
almmsgiving of the two of them: “For those who hoard gold and silver and do not spend it in the way of God, He portends for them an excruciating punishment.”

To it He said: “They relish what you all were hoarding”. And in *al-bukhārī*: The Messenger of God, blessings and peace be upon him, said:

Whomever God granted money and did not spend his alms was like a brave person on the Day of Judgment choosing two raisins for himself, gripping them on the Day of Judgment and so preparing his own defeat, that is to say due to what is in his jaw. Then He says: I am your money, I am your treasure, and then He continued, “Those who are stingy/greedy that which God gave them by His Grace are not counted”. The Righteous *abū bakr*, God’s approval on him, said: Give to God what is his, and God condemns those who distinguish between prayer and almsgiving.

And as for the amount of what should be taken from it, if gold and silver were earmarked, or adornments of the two of them taken for the purpose of trade were a possession for the free Muslim, then all of what is lawful upon it with reference to tradition is to take from it four-tenths. And like it he takes from all among possessions among the metal something, if he was linked to his acquisition from other than ability.

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\(^{g}\) lines 21-23: *qur’ān* 009:034

\(^{h}\) Referring to the poor

\(^{i}\) Referring to Hadīth, *SahīH al-bukhārī*
The minimum amount$^j$ of gold in all of that is seventeen and one-seventh danānīr from our danānīr now. And in silver, it is from eighteen 'āwqīya from our 'āwqīya now.

The change of that is the change of almsgiving. And ore is a concealment of the Age of Ignorance that one finds in other expense and it is not formidable to work, and in five days He took a little of it and a lot of it and He changed it as the reconciler of the Muslims.$^k$

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$^j$ Referring to the property liable to payment as alms-tax

$^k$ lines 45-48: Referring to how God gave gold and silver to humankind as a means to use in His benefit. See also Chapter 2, “The aHādīth Relating to Metal” and Chapter 5, “Chapter One” of this translation.
Chapter Ten

Concerning the naming of what produced the corruption from the debasement of the minting and its loans, and what is found among the punishment(s) on the perpetrator of these prohibitions or some of them

It was known, by the transmission and the general deduction from the writings of the jurisprudence and the historical chronicles, that in the olden times, one did not engage in the money-changing of the danānīr and the dirāham except from trust by it among the people of Islam; and that did not include the non-Arabs, nor the people of conscience from the Jews and other than them, of whom one is mistaken about acquiring (profit) or was not knowing how by his reasoning. In particular ʿamr, the satisfaction of God upon him, had said: The non-Arabs are not included in our marketplace until they apply themselves in the study of the religion; He desires – and God is all knowing – the comprehension of what is indispensible in the characteristics of His nature.

Some of the learned wise men said: It is not permitted for the people of conscience that they are money-changers, nor meat butchers: (but) they are

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\(^a\) The phrase “people of conscience” could also refer to the free non-Muslim under Muslim rule.
situated among the marketplaces, all of them; and if God the Almighty 
enriches them, it is by means of the Muslims.

mālik, God’s mercy on him, abhorred that the people of conscience were 
money-changing in the marketplaces of the Muslims, for the work of them is 
by fraud and usury, and he observed that they were situated (there).

Frequently the emirs^b of al-andalus^c took possession of the money-
changing in the gold and the silver and struck the jewelry from it, and (took 
possession of) the examination in the gem stones, like the corundum^d, and the 
emerald^e, and the jewel/gem, and what is akin to that [by the Muslims]; and 
one did not engage himself in what they had except whosoever was 
trustworthy in it, and (in) his confidence, and his knowledge, and his faith.

The marketplace of money-changing is among the most necessary of the 
marketplaces in what one finds among the operations of examination and 
deliberate rigorousness − for the authorization of usury in it − and the 
precautions. And the money-exchange is great; numerous are the circulations 
in it. And the dealings/conduct among (those) maintaining it were lesser of

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^b Meaning, commanders
^c Meaning, the Iberian peninsula
^d The corundum family includes gems such as the ruby (red corundum), sapphire (blue corundum), and “Oriental topaz” (yellow corundum).
^e Meaning, the emerald specifically, but perhaps also the aquamarine, both of which are in the beryl family.
what is educated on what the *sharī’a* obligates, and the examination requires. And one comes to it – for their needs to it – the men and the women, and one takes advantage of the opportunity in the defrauding for themselves, the cheaters; and the wickedness became in it great; and it came to pass in it, by reason that the slightings were reprehensible, [not] retaining respect.

And it was written, by an author of the time period for one of the emirs, immediately to us [a letter] scolding/censuring in it the debasing of the coinage, and prompting the taking of it by the customary right, and its text (follows):

[In the name of God, the most gracious and merciful] If the magnificent emir, the extension of God is his eternal life and the perpetuation of his confirmation and his grace, regarded that he takes steps to prevent us by means of the service of his examination, then he would dispatch us to it, and (to) the arrival of our expectations, and he would reveal to us the objective of our state of affairs, and he would subjoin to us a person of our expectations on his interest, and we were raised up by the verdance of his magnanimity, for he examined thoroughly for us. The people had become entirely money-changing, and the currency was counterfeit, and the trades were halted, and we were humiliated towards it in that this completeness was diminished in

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*Meaning, the law of Islam*
connection with the people of the religion, and this burden was heightened in connection with the appearance of the Muslims. So if the emir proceeds, may God perpetuate his confirmation, in its destruction, on accordance with our expectations in it, (then) it was a sign inserted by means of dabs of the inkwells, the procedures of the books lashed/whipped by it, and the appearance of the manābir\(^g\) thumped for it, and the issuance of the speaker imposed for it, if it were a thing of God.

So the emir became in that to the best of his abilities, and the aide to the times, and the advantage of the sultan; there was not one of the two of them thriving unless by means of the other, because the two of them were brothers.

\(\text{‘abd allah bin al-mubārik}\) said:

God defends by means of the sultan [His wrath], By his preference, from Him a mercy and we were satisfied, Lest for the caliphate it was not safe for us a path, And it was (that) we were debilitated, a despoiling, for we were forsaken.

And another said:

\(^g\) manābir is the plural of minbar (singular), meaning the pulpits from which the imām (the religious authority and pray leader of the community) preaches.
If the caliphates and the kings are an assembly,

It undertakes by them the support of Muhammed’s religion,

Lest for them, and the blades of swords for them,

And for these, like the lightning, the very same that ignites,

Truly, the marks of our religion were virtuous, and they diminished

This power, and they eradicated by means of disbanding.

And the messenger of God, blessings of God upon him and peace, said:

If God restrains by the sultan, what is not restrained by the Qur’an (?)

And if the minting were erected, then the original condition of the

\(\text{zakat}\) and assessments of commutative contracts and voluntary donations

would be firmly established, and the consumables would be valuated, and the

disputes would be eliminated.

Then the examination was neglected in it, and the people of conscience

and whosoever was not artful to it among the Muslims adopted it, and there

was not an observance by the religion [until] the usury was great, and the

agreements were duplicitous, and the disputes in the commutative contracts

and the agreements became greater.

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\(h\) Specifically meaning, mandatory almsgiving.

\(i\) Meaning, exchangeable or replaceable contracts, especially on the basis of reciprocity, the Latin of “\text{do ut des}” or “I give so that you may give”
The messenger of God, blessings of God upon him and peace, cursed the practice of usury and its consumption and its erosion, and he corresponded (about) it and he witnessed it (happening with his own eyes). And the known from the jurisprudence is that whosoever legitimized usury was a legitimate infidel of the blood. And truly he repented, or else he would be killed.

As for whosoever sold a sale and augmented in it other than the legitimate of the usury, over him was the agonizing punishment if he were not pardoned by ignorance. Ibn Habīyb said: If the victor over them is the usury, and if that were in that manner, then his dealings would be forbidden, and dealings of whosoever is the victor over his property would be the unlawful.

The wisdom in it was recalled by Abu al-walīyd bin rashid, and he put together words and acted expertly (in) arranging (them); and he organized it, the jurisprudence taught of Abu 'abd allah muhammad bin 'abd al-karīm al-aghaSāwy al-mushāwir of Fès, God’s mercy on him, and he said:

The dealings of a person among most of his possessions,

Lawful, permissible, there is not in it a sin,

And the saying of Ibn wahab was in disgust, and he concluded,

For is a character circumspect? For is the majority the forbidden?

1 Meaning, corrupt to his core
If there were a lot of possessions, then report (what is) illegal,

Then forbid! And if he were disgusted, then the saying of ibn qāsim,

If there were not in the possessions much, and if it

Were a sin on what he said, each is steadfast,

And it was said it is permissible that one deals by a value

Other than a bias on a consideration of knowledge,

And it was said one deemed lawful what is an acquisition by the inheritance

and the gift,

And what I purchase and I abstain from, free from censure of a critic,

And one permits it the flourish and the offspring of their embellishment,

And take and safeguard each secret conversation from each despot,

And he mentioned that those of (what) we said in the organization, all of it

Descended from ibn rashid who is the exalted and the noble.

And the reason for the entrance of the people of conscience into
goldsmithing and money-changing was why the range of the king of the
Maghrib expanded. And the earnest effort of his princes was poisoned that he
excelled their place by means of personal possessions, and the finely-wrought
(decorated parts of) weapons from the gold and the silver, and plating in the
two of them; and the (female) crowned by means of the exquisite, precious
stones, an ostentation for Islam and a vexation for the (female) slave of the
idols. The goldsmiths were summoned from the distant regions and the
localities, and it was united from them an abundant body, and the superb, wondrous industries achieved unique, excellent results. And it befell them (doubt and suspicion) if those people of conscience were among the Jews, and they (the Jews) deceived/cheated them by means of the obvious and the hidden work. And they (the Jews) stole for themselves their (the Muslims) professions and their goldsmithing. And it was assessed by the gradual dying out of the ones arriving\(^k\), and the Muslims were not crushed that their sons were [working for the people of conscience]. And the people of conscience from the Jews were without parallel in the industry of goldsmithing, and they quarreled about it. And they established for themselves a marketplace for their more precious (things) after they were in the professional fringe, like the dyer’s trade, and the tanner’s trade, and the taxidermy trade, and the provisions trade; and the greatest of them were the porters, and the tailors, and the measurers of grain.

And for what they appropriated over the goldsmithery, they required on account of the purchasing of the gold and the silver. And they incorporated their most valuable in the money-changing and the circulation for the house of striking. And he dispatched them with those owners and workers for the purpose of taking possession of the revenue/taxes and the properties in all the businesses. And their evil in the religion and their loss for the Muslims

\(^k\) Meaning, the Jews were displacing the Muslims in these industries
became great, until their non-Muslim religious authorities divulged for them the corruption; and they lied for them on their prophets in the face of its disclosure, — and it is a sin in their old belief — and they said for them in assemblies and their sermons: They were advised that 
\textit{abu al-qāsim}, prophet of the Arabs said, for his people: Whosoever deceived us is not from us; and if you deceived, then you are not from them; and if you did not deceive, then you are among them. And in this, from the openness of the ill-will and the lie, is what is not kept secret.

When it was the year 736, the people had misgivings by their impairment concerning that, on account of our chief, the emir of the Muslims, God honored his face and he was chilled to his grave. And he held his ground upon it [their debasement charged by striking] their first indications and the intensification in their exemplary punishment. And he carried out his noble order by means that he supports whosoever became aware of it — among the ones involved in the operations, and the workers, and the patriarchs of the township, and the rest of the rulers in each community under his provinces — on that they remove the hands of the Jews on the operations by the goldsmithing, and the disbursement, and the collection, and all of what in it is a debasement for the Muslims, removing all of it. And there was no path for them among the goldsmithery except what was free from the fault and the adherence among what was reconciled among the defrauding and the
debasement; and there was no path for them to other than that, like what is not the path for them towards that they encumber a loss, nor was there an obligation, nor did they demand a thing from the duties and the encumbrances, with the exception of the tax and the obligatory tithes legitimate for the people of conscience. And whosoever traded among them in the marketplace among the marketplaces of the Muslims, and deviated by means of a corruption from the distortion, he was obliged of it by what he obliged the Muslims in that from other than unfairness, and he did not demand by means of increase.

“... And so that one is aware, the regions which require in them the tithe from our countries are five:

The settled populations of Fès, and whatever else of it among the communities from sala\(^1\) to taza\(^m\), is Region One.

\(n\) Referring to present day city of Sebta, Morocco

\(o\) Perhaps referring to the Rif Mountains of Morocco

\(p\) The modern day referent to this city name is not known but, based on context, would be in found in the north of Morocco.
and whatever else of it among the communities to the government, is Region Three.

dar‘at⁷ and sijilmāsa⁸, and whatever else of the two of them among the communities, is Region Four.

And tlamsān¹, and whatever else of it and what is beyond it among the communities to al-jazā‘ir², is Region Five.

And whosoever desires [payment of] the tithe in a region among them, he would not hesitate it in the other. And that, concerning the sixth of the unauthorized tithe, (is from) the year 736.”

So it came to a stop by the mark of the hand of our good and venerable late chief, the emir of the Muslims, God’s mercy on him.

They did not hesitate except somewhat and they abandoned what they were ordered, and the corruption in the danānīr and the dirāham returned. The foreign and the money-lenders were not found except by their hands. And

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⁷ Referring to the present day city of Marrakech, Morocco
⁸ Referring to the present day city of Sijilmasa, Morocco
¹ Referring to the present day city of Tlemcen, east of Morocco
² Referring to Algeria
those were removed on account of our venerable chief Abu 'anān, God’s mercy on him. He did not permit that whosoever among the counterfeiters and the money-lenders sanctions anything, nor whosoever of the foreign, and he was filled with concern by the start of the striking in the house of minting. And they executed it immediately by means that they took it upon themselves, lest they sold anything from the trinkets among the jewelry and other than it, except after handing it over to the supervisor of the house of minting. And he stamped what he received from that, and lest it was raised up for the money-changing except from his trust in it, nor did he debase the Muslims, nor did he reject them, nor did he do business with them by usury, lest they did business with a Muslim by what they sanctioned for their more valuable among the financial claims by the investigations, nor by what they withheld for themselves. And there did not enter amongst them a one from whom was accused by drinking alcohol and other than that from the forbidden repugnancies legitimized, and they did not sell alcohol to whosoever was a Muslim, nor were they made known by it. And to it, if it became acquainted with them something from that, or it were raised up for what they took upon themselves from the operations from not confirming in it in that, then they would be the ones held accountable and the punished, on it the [intensified] infliction of punishment. And their sheikhs maintained that, and all of the people maintained their part, and they were called as witnesses to it for their more valuable (things) turning away from the Muslims in fees, in the fourth of
zū al-Hija\textsuperscript{v} from the year 756.

It came to pass by their fears of the slightings on behalf of them, and it was hastened by their hands for what they prevented and they hesitated in what they maintained of it. And the loans in the dirham became exorbitant until the dealings became by the dirāham, which in the 'āwqiya \textsuperscript{w} from it is eleven danānīr. And the business transactions and the commercial trades became corrupt until God had mercy on the Muslims by what was executed by the judgment order from our chief, the caliph\textsuperscript{x}, emir of the Muslims and the protector of the religion, ābu fāris ʿabd al-ʿazīyz, may God lengthen his days and support his banners and his flags among the installation of the religion and the discontinuation of the hands of the wrongdoers. And he forbid from the business transactions by means of the diminished counterfeit dirāham, and he did not deal except by means of the pure weighted (minted) coin; and he bore down upon whosoever dealt by the diminished among them for the circulation of usury and the corruption of the resulting coinage from it.

As for the penalty of whosoever committed the illegal in its corruption, the imām\textsuperscript{y} ʿabu bakr muHammad bin ʿabd allah bin al-ʿaraby al-muʿāfiry,  

\textsuperscript{v} The last month of the Islamic calendar  
\textsuperscript{w} The 'āwqiya is a monetary unit. See Chapter 5, “Chapter Six” of this translation for a detail of its exchange rate.  
\textsuperscript{x} The title of the secular and religious ruler  
\textsuperscript{y} The title of a religious leader
God’s mercy on him, said in “āHkām al-qur’ān”\textsuperscript{z}, for it was said by the Almighty: “They said: O shuṭybu! Does thy (religion of) prayer command us that we leave off the worship which our fathers practiced, and that we do in our property what we like? Truly, thou art the one that forbears with faults and is right-minded!”\textsuperscript{aa}: And ibn wahab said: mālik said: They were breaking the danānīr and the dirāham. And like that a group from the foremost and elucidating jurists said [if one broke it] it is a great sin, because it is the means in assessing the value of things and the paths to knowing the quantity of the properties and its deduction in the compensations; until some of the high learned scholars gave expression to it, saying: If the judgment between the (two) properties is upon the differences of the amounts or the ignorance of it, if whosoever retained custody of it and did not change it, then like that he would retain custody of the judgment and hide it from sight away from the people.

The danānīr and the dirāham, if they were sound, he would endorse them for us, and their worth would be evident; and if they were broken and became a commodity, the worth in them would become invalid. So that was compelled by the people, and not even one committed (the) offense, it was forbidden. ibn al-musīyb said: The pieces of the danānīr and the dirāham are among the perversions of the earth; and like that (was what) zaīyd bin āslam said concerning this warning, and it was explained by him. And yaHīya bin

\textsuperscript{z} Meaning, “The Stipulations of the qur’ān”

\textsuperscript{aa} qur’ān 011:87
sīyād compared it among the narrations of mālik concerning them, all of them.

‘āmr bin ‘abd al-‘azīyz said truly that was an explanation of the saying of (God) the Almighty: “Do no mischief on the earth, after it hath been set in order.” And he was saying concerning the saying of the Almighty: “There were in the city nine kinsfolk, corrupting in the land, and they did not reform.” zaīyd bin āslam said: They were breaking the danānīr and the dirāham. āSbagh said, ‘abd al-raḤman bin al-qāsim bin khâlid al-‘utaqy said: Whosoever broke them, he did not take his shahāda, because it bestows a great sin, and the greatest sins corrupt the justice before the trivialities. And as for the saying of it, one’s excuse is not accepted by the ignorance, and because it was ordered clearly, it does not remain a secret to anybody; on the contrary, the excuse is accepted if sincerity appeared in it or if the face of sincerity were hidden in it. And God knew best in it from the servant like what mālik said.

And it was different concerning punishment on three sayings. mālik said: The sultan punishes whoever does that, moreover unrestricted from other than the limitation for the punishment. The second: ibn al-musīyāb said, It was mentioned by a man who is immortal: What is this? He said: Man was divided from the dirāham; and ibn al-musīyāb said: This is from the corruption

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bb Qurʾān 007:56
cc Qurʾān 027:48
dd The shahāda is the first pillar of Islam is the Muslim’s proclamation faith, witnessing the belief that, “There is no god but God and Muhammed is the messenger of God.”
of the earth. And his immortality was not denied. And safyān was removed from it. abu ‘abd al-rāHman al-tamāymy said: I was keeping company with ‘amr bin ‘abd al-‘azīyz, while he was emir of the city. He brought forward a man who cuts the dirāham, and he was witness to it, and he struck him and shaved him, and he instructed by it and then circulated by it, and he ordered by it, saying: “This is a part from his cutting the dirāham”; then he ordered by it that he returns it and he said [for it]: If it were not prohibited of me that I cut your hand, except that I could not proceed in that before today, then I would have proceeded in that, and whosoever wants, so for he is cut.

ibn al-‘araby said: As for his punishment, it is by the whip and there are no words in it, and as for shaving his beard. ‘amr did it like what had preceded; I was the days of authority separating the people, striking and shaving. And truly I was doing that for whosoever adds a final ‘nūn’ (a letter) to the poetry to help the wicked is aiding wrongdoing and on the path to adorning it in the marketplace. And this is the duty in each [who demeaned himself] the path of the wrongdoing: That he cuts that which is not effective in the body. As for cutting his hand, truly ‘amr took that, and God knows best, from the part of the thievery, and that, that he cut off the dirāham rather than break them. If the breaking were undermining the description, and the cutting diminished the worth, then he would take property on the disappearance. Truly he says: It is not from a portion, and the portion was established in the
cutting; I said: One tolerates that ‘amr was of the opinion to accommodate it for the work between the people and a dīnār, or a dirham proportional, and a portion of each thing on the worth of its condition. And ibn al-zubāyr executed that, and he cut the hand of a man in who cut the danānīr and the dirāham. And our high learned scholars of the kingdom said truly the danānīr are the seals of God, on them is the name of God, and if it were cut, (it is) on this explanation, whosoever broke a seal for the king, for a people it was for that, in view of the fact that whosoever broke the seal of the sultan, on his (the sultan’s) name, he would be educated. And I was doing that in the days of my government installment, except that I was other than [ruinous] by the ignorant, and whosoever has power over it is a day from the people of the truth, and for his doing it, it is a satisfaction, God praises him.

What was mentioned was that marwān cut the hand of a man who cut a dirham from dirāham, and he was fixed firmly. al-māwarady, God’s mercy on him, said concerning what marwān did from cutting the hand, if it were a wrongdoing [and] significant injustice, there is not for it in the explanation, a permission.

al-wāqady mentions that ābān bin ‘uthmān was in the city and he punished whosoever cut the dirāham, and he struck him thirty lashes. al-wāqady said: This we have concerning whosoever cut them and introduced
into them the moldings and the counterfeits. And if the order was over what
al-wāqady said, then what ābān did was no by means of a wrongdoing,
because he disagreed with the limit of the censure, and the censure over the
fraud is due a payment.

al-māwarady said: As for the related news concerning the proscription
on breaking them for offending gold, others were convinced that one takes
from them weights and embellishments. And others were convinced to take
limits of it on loan by the money lenders. So if the cash and the paper were
pure from debasement, it was the consideration of the entitled coinage. And
the stamped from it by means of the sultan’s minting, and the credibility by the
faultlessness of its faithful stamp from its transformation, is the entitled
without the inscription of the silver and the ingots of gold; because there is no
credibility in it except by the casting and the screening, and the stamped is
credible by it, for that it was unchangeable in the rejection in what is not free
from the costs of the (things) sold and the values of the damages. And if the
stamped (metals) were different in the values with their accord in the quality,
then the worker of the taxes would demand by their increase an equal value.
And if they were from the strike of the sultan of the time, one would answer
for it, because in the deviation from their strike are indicators for it, in the
compliance. And if they were from striking other than an equal? If they were,
it would the blame previously written in response to them.
And as for the broken of the *danānīr* and the *dirāham*, its seizure is not necessary for its uncertainty and the license of its mixing, and in consequence of that, its value diminished with respect to the rightly agreed (value).

And the *danānīr* and the *dirāham* would not ignorant of that which is sacrosanct of the two of them, if they were a safeguard for the appetites/desires. And except for that which is sacrosanct of them for what cut the hand of the thief, in what of its value is of one-fourth of a *dīnār* or three *dirāham*, and the hand of their blood money \(^{ee}\) is 500 *danānīr*.

\(^{al-mu‘ary\text{ said}: \ The judge ‘abd al-wahāb asked us, in his two lines of poetry, and truly I answered by three; then I composed from it, and truly I answered by the two lines; and it is perfect, and truly I answered by a line, so he composed poetry from me, and I wrote to him these two lines:}

A hand, by five hundreds of gold it was cut,

What of its condition was cut in one-fourth of a *dīnār*?

The contradiction is our property, except the silence (is) for it,

And we made ourselves proof of our Creator from the hellfire.

\(^{ee}\) Meaning, the monetary exchange for killing someone
And ‘abd al-wahāb responded to it by his saying:

The safeguard of the desire is its greatest value, and one holds in low esteem
The cheating of property, and I understand the wisdom of the Creator.

* * *

And here the saying -- in what I mentioned of it and I transmitted of it
from the words of the high learned scholars and the wise ones -- comes to an
end; and God is served by whatever is his determination. And God scrutinizes
and forgives, and He notices and is magnanimous, praise Him the prospering
for that which is proper. The Benefactor, the Beneficent, the Provider, there is
no god other that Him and there is no deity save Him. And He is the Succor to
the good, and the good deed is in what He executes; and from Him, the
Almighty, you request a gift, the assistance on what in it (is) His satisfaction,
and the guidance to the establishment of the right and the work by His
requirements. In the beginning all of it was God, and there is not an ability and
there is not a strength except by God. And praise be to God who guides us for
this, and what we were for we were rightly-guided if that God guided us. The
intercessory prayers, the almsgivings, and the prosperous blessings on our lord
and our chief muHammad the chosen and over a deity, and his Companion
chose human beings and a great honorable peace to Judgment Day, and praise
be to God, the Lord of the world.
The conclusion of *The Intricate Tree in the Realm of the House of Minting*

and praise be to God, the truth of His praise

and God’s blessings upon our lord muHammad

His messenger and His servant
CHAPTER 6: Early Islamic Metal Production in al-Basra, Morocco

6.1 Introduction

The previous chapters have outlined the various roles of metals in Islam -- as elements in religious doctrine, as currency for the state, and as a parallel to the inner transcendent experiences. The notations of the occurrence of metals in travelogues and the translated text of *The Intricate Tree* further describe these roles. However, the data that enables us to develop a Social/Cultural Construction of Technology framework is not limited to the written record. Archaeology provides us with another view. This chapter presents the metal archaeological evidence of one early Islamic Maghribi site: al-Basra.

Archaeological excavations of the large urban site of al-Basra in northern Morocco, conducted under the direction of the Al-Basra, Morocco Project headed by Dr. Nancy L. Benco (2004), have revealed abundant evidence of iron and copper smelting and metals processing. The discovery of a large magnetic anomaly in one sector during a magnetometer survey in 1990 led to a focus on the site’s metals technology during the following field seasons. This chapter describes Islamic craft production and labor organization, gives an overview of al-Basra based on historical documents, and presents the archaeological data of the artifacts associated with metallurgy recovered from the urban site. While it is difficult to relate al-Basra’s archaeological finds to the rest of this dissertation, I present them here as evidence of early Islamic Maghribi metals technology in practice.
6.2 Islamic Craft Production

The Cairo Geniza Papers

Benco’s presentation of *The Early Medieval Pottery Industry at al-Basra, Morocco* (1987) nicely outlines the general information to date on Islamic craft production and is the source for much of the discussion that follows. The bulk of her argument is based on the Cairo Geniza papers, a collection of tenth to twelfth century correspondence of official, business, and private matters written by merchants and artisans from areas all over the Mediterranean. These correspondence papers, because of their retrieval from a ritual disposal space, or *geniza*, in Old Cairo, Fustat, Egypt, are known as the Cairo Geniza Papers. The Cairo Geniza Papers are of importance to this dissertation because they present a North African view of Islamic craft production from the observations their authors, the majority of whom were Jewish businessmen located along the Mediterranean. They further give us insight into the cultural attitudes of Jews and their interactions with Muslims and Christians in the arena of craft production. The interactions of these three relevant social groups are best known through Goitein’s five-volume series *A Mediterranean Society* (1993), which synthesizes these Cairo Geniza Papers.

Within the Islamic world, perhaps the most involved industry was textile craft production. Because of the labor intensiveness and interconnectedness of stages involved in the construction of a textile, such as the acquisition and application of dyes and mordants to fibers and the spinning and weaving of them into fabrics, Goitein (1993:101) speculates that over half of the working population along the Mediterranean was involved
in this industry. The variety of products created and their multiple uses -- for clothing and furnishing, adorning both person and household interiors -- made textiles a prized commodity. The labor invested in their construction made them costly, and so textiles could be readily converted to cash (Goitein 1993:101). The production of metals was second only to this textile industry. The Cairo Geniza Papers present the view that gold, silver and, to a lesser extent, copper objects, served as a form of investments and savings, often used for barter in commercial and marriage transactions (Goitein 1993:108).

**Labor Organization**

The Cairo Geniza Papers identify four forms of labor organization within Islamic Mediterranean craft production. Benco (1987:8) outlines these as: 1) the small independent workshop, 2) the nucleated industry, 3) the large commercial workshop, and 4) the state-operated factory. The small independent workshop was a labor organization form owned and operated by a single artisan, a family, or a handful of partners. All partners shared in the investments and profits equally or some presented capital while others presented labor. The goods produced were sold to consumers directly or locally via wholesalers. The nucleated industry grouped together individual workshops to form an artisan complex. Often situated near raw material sources, the nucleated industry’s products were sold to middlemen for distribution in far away markets. Less widespread of the four forms were the large commercial workshops owned by a group of partners who were primarily investors who employed large numbers of unskilled laborers, and the state-operated factories that produced goods for government consumption.
While the tenth to twelfth century Cairo Geniza Papers describe gold-, silver-, and copper-smiths as belonging to the small independent workshops who sold to local audiences (Benco 1987:8), the state-operated factory of the government-run mints produced goods for government consumption (Goitein 1993:267). Though the coins produced went out into the Islamic communities for use as currency, the government’s use of the coins as identity marker of political and religious affiliation made the heads-of-state the ultimate consumers of the technology. The minting industry produced currency from reused and recycled gold and silver bar, vessel, coin, and scrap; the state obtained these metal items from suppliers and returned a fair exchange to the suppliers in coinage, minus labor costs and government fees (Goitein 1993:267). As described here in Chapter 3’s *Bimetallism* discussion, this “curious mechanism” of practice was also used widely in Europe (Sargent and Smith 1997:197). The fourteenth century *The Intricate Tree* presented in Chapter 5 describes a minting industry of this “state-operated factory” form. *The Intricate Tree*’s detailed descriptions and instructions regulating the handling and treatment of the metals indicates a form of craft production that most likely employed large numbers of unskilled, though well-trained labor.

Based on the forms of labor organization, Benco (1987:13) presents an alternative model of specialized craft production: the free-enterprise model. This model holds that a large part of specialized craft production takes place in small, independent workshops operated by a few skilled artisans often of the same family, with little division of labor, who sell directly to customers in shop or locally. Because of the close relationship between artisan and consumer, shifts in the population’s size, ethnicity or socioeconomic
status may be answered immediately by changes in the number of workshops operating, the manufacturing techniques employed, or the types of products made (Benco 1987:14).

In this free-enterprise model, only a small degree of craft production takes place in large-scale workshops or nucleated industries of clustered small- and/or large-scale workshops. These types of workshops are located near their source of raw materials to allay the cost of transport, and their products are sold to retailers who then distribute the goods abroad. These workshops rely greatly on the retailers to set a fair market value for their goods, and on the retailers’ interactions with, and assessment of, the consumers needs. Further, these workshops, whose wares are usually sold to non-local consumers, are vulnerable to regional political or economic changes that may have nothing to do with the industry itself (Benco 1987:14).

Benco’s model applies to the Islamic pottery production as seen in al-Basra, Morocco, during the city’s height from the eighth through eleventh century. It may also apply to the city’s metals production. While it seems more likely that private enterprises involving metallurgy would be occupied with the manufacture of household wares, agricultural tools, and perhaps weapons, the “curious mechanism” presented by Sargent and Smith (1997:197) and the Cairo Geniza Papers as synthesized by Goitein (1993:267) make application of Benco’s free enterprise model to the metals industry, or at least the minting industry, a possibility. The mint has not yet been located at the archaeological site, so we cannot test this hypothesis for gold and silver production. However, we can examine the copper and iron production at the site. Further, as is discussed in Chapter 7
of this dissertation, the free enterprise model may also apply for the traditional metal industry in modern-day Fès, Morocco.

6.3 The Metals Industry at al-Basra Morocco

Historic Site of al-Basra, Morocco

Chapter 4’s discussion noted that little is mentioned about North African mining and metallurgy within the rihalat, the chronicles of the early Islamic world. The sphere of ma’din -- mine, ore, mineral, and metal -- was better described for the Islamic Middle East and Spain. The role of the North African region in the flow of metals and ore is, however, clear. During the Abbasid dynasty (A.D. 758-1258), Andalusian Spain was a rich source of gold, silver, lead, and iron (El madin:964). Later, when trade routes had been solidified through the Western Sahara, gold and other precious minerals from the ancient state of Ghana (now the region of Senegal) and later, of Mali, were traded north through the Maghrib and into the Mediterranean world (Martin and O’Meara 1995:102-106). Chapter 3’s discussion noted that Gondonneau and Guerra’s (1999; 2002) coinage studies have chemically identified that the flow of gold was on a route from the Western Sahara through Sijilmasa north. In the area within a 200 Km radius of Fès, mineral deposits for antimony, copper, gold, iron, lead, salt, silver, tin, and zinc have been found (Saadi 1975). Figure 6.1 shows a map of the ancient and modern mines surrounding Fès and their exploited substances.

Chapter 3 of this dissertation used coinage to relate a history of the Idrisid dynasty in northern Morocco. In the first half of the tenth century, the Idrisids were overthrown
Figure 6.1: Map of the Ancient and Modern Mines Surrounding Fès, Their Exploited Substances, and Trade Routes
(after Saadi 1975)
by the Fatimids, possibly for control over this long distance gold/slave trade that had been established with Subsaharan West Africa, going through Sijilmasa and Tudgha (Eustache 1970:103) by known Berber trade routes. In response to the Fatimid expansion in the Maghrib, the Umayyad dynasty of al-Andalus took control of the port towns of Ceuta, Tanger and Melilla, and battled ensued over the territory. The Fatimids eventually moved eastward, establishing their capital in Cairo, Egypt, in 974, and the Umayyads gained control of the territory. In short, the Umayyads retained control until the Almoravids entered in the late eleventh century, taking over the region and establishing their capital in Marrakech.

Coinage and travelogues are the historic documents that form our view of al-Basra. The site of al-Basra was first established by the Idrisids as a state mint. Although many old sources indicate that al-Basra was founded during the reign of “Mahumet the sonne of Idris [Muhammed, son of Idris II]” (Leo Africanus 1956:503), the earliest indications of al-Basra’s industry come to us through coins minted at the site, dating earlier to the reign of the Idris II in A.D. 803 (Benco 1987:17; Benco et al. 2004; Cribb et al. 1990:229; Eustache 1970).

Al-Bakri’s second-hand accounts speak of a city in its heyday during the middle of the eleventh century. This walled city with “sweet gardens” was known as “Basrat el-Debban,” “Basrat el-Katan,” and “El-Hamra” (al-Bakri 1965:216-217) which translates to “Basra of the Flies,” in reference to its great dairy production, “Basra of the Flax,” in reference to flax being used as an exchange medium, and “The Red,” in reference to the distinctive red iron-rich soil upon which the city was founded. Presumably it is because
of these great industries, and its proximity to Fès, that al-Basra became a summer destination for the Idrisids’ elites, and perhaps for later dynasties (Eustache 1955). Al-Bakri (1965:217) further relates that the city was enclosed by a stone wall with ten gates and contained a mosque with seven aisles and two baths, from which we can deduce that the city was able to hold approximately 10,000 people. Because of brackish water in the city, the water supply for these inhabitants came from a well situated outside its principle gate (Al-Bakri 1965:217). Leo Africanus’s fifteenth-century descriptions of al-Basra, however, indicate a city past its prime, known mostly from memory, and well in decay (Leo Africanus 1956:503-504). The reasons for the city’s decline are not known.

Excavations at al-Basra

Al-Basra, Morocco, is located at 34 degrees 48’ 18” N and 5 degrees 52’ 14” or, according to Leo Africanus (1956:503) “upon a certaine plaine betweene two mountaines, being distant from Fès [Fès] about fowerscore, and from Casar [Ksar el-Kbir] southward almost twentie miles.” Figure 6.2 depicts al-Basra and its surroundings. Today, al-Basra is a small farming village of fewer than 500 people who, only in the twenty-first century, gained access to the modern technologies of running water and electricity. The current occupants of al-Basra built their houses in the northern half of the area and farm wheat in the southern portion, south of the P23 Highway which cuts through the archaeological site. Modern industry is digging the earth west of the site, and east of the close-by forested area, to obtain mineral and clay deposits. The only above-ground evidence of the old city remaining is the ruins in the northwest corner of the city.
Figure 6.2: al-Basra and Its Surroundings
wall and a cistern along the western limits. Remote sensing survey and excavations south of the dwellings and north of the highway, have unearthed more evidence (Benco 1987, 1994, 1995 and 2007; Benco and Ettahiri 1998; Benco et al. 2004).

During the earlier seasons of excavations, small concentrations of a glassy-metallic matrix were found in virtually all units excavated. With the increasing amounts of this matrix and of metals recovered, magnetometer surveys were conducted to identify regions of interest for excavation. The areas of intense magnetic signal were in a region where, in previous excavations, evidence of ceramic firing was discovered. Based upon the 1990 magnetometer survey, the areas available for excavation were divided into two sections – the Industrial Zone (F) and the Residential Zone (G). Test units placed outside these zones were given different labels (A, B, C, D, E, H, I, K, and M). Within the Residential Zone, the northern area contained house compounds while south of this area excavations revealed a cluster of structures with considerable amounts of worked and partially worked objects. This area was dubbed the metal “enclave” (Benco 2007).

Ceramic production and the ceramic kilns were located in the Industrial Zone early on, and so excavations focusing on metal production proceeded in this area. Unit E2, located just west of the city wall, was chosen based on magnetometer survey; excavations here revealed a small stone structure with associated artifacts that suggest a late occupation metal working area. These artifacts included slag and hammerscale, suggesting a forging facility. Human burials facing east were also found along the excavated eastern wall of this small metal workshop area, interred there after the facility ceased operation. Figure 6.3 identifies the locations of these excavation units.
Figure 6.3: Plan View of the al-Basra, Morocco, Excavation Site
(after Benco 2007:11)
Excavations at al-Basra from 1990 through 1999 had, as one of the objectives, the systematic collection of all metal objects from the site. These metal objects were divided into three categories: (1) metal artifacts, excluding nails but including any other object of iron, and all objects of gold, silver, lead, copper, tin, and aluminum; (2) slag; and (3) iron nails. The first category of metal objects was designated “special objects”. Each item of these “special objects” was cataloged, described in word, drawing, and metric attribute, and curated. To date these “special objects” are being maintained by the Institut National des Sciences de l’Archéologie et du Patrimoine (INSAP), in Rabat, Morocco. The second and third of these categories were counted and measured by weight. Due to space limitations for curation, samples were taken of the slag and iron nails for later study, and the remaining material was redeposited away from the excavated areas in al-Basra.

6.4 Metallurgical Facilities

Test areas within the Industrial Zone “F” were opened first by unit then expanded by area survey. In 1998, one metallurgical area was excavated; evidence of iron hammering was found in the area of F10. Small, well-defined areas with high concentrations of hammerscale (the 1 to 3 mm plate-like and spherical byproducts from hammering) were discovered, in proximity of large stones about 50 cm wide and deposits of ash. This evidence suggest that iron forging was occurring on a repeated basis in the area.

In 1999, magnetometer surveys conducted in this area indicated large anomalies to be considered for excavation (Benco 2007:4). These magnetometer anomalies
corresponded to high concentrations of metallurgical debris. The Industrial Zone “F” metal production facility was located about “50 m north and uphill of a ceramic production area, which consisted of two brick, rectangular, updraft kilns that produced pottery and possibly rooftiles” (Benco 2007:8). Metal production features in this area were excavated in 1999.

Excavation of units F12 through F16 revealed a 56 square meter area with two large stone structures about one meter apart and a stone-lined and limed basin. My fieldnotes plan view of these units and their revealed features is reproduced in Figure 6.4. One of the large stone structures had a curved (semi-circular?) side, and both were at least 4 m by 2 m in length and width. Their full sizes, however, are unknown. These excavated structures are believed to be dedicated to iron smelting, and possibly metal quenching and sediment collecting, iron hammering.

Structure 11, the one with the curved side, was possibly the iron smelting furnace. The curved corner was covered with burned red clay and the area was defined by the presence of dark, greyish earth. The second structure was only partially present; it appears that some of the stones used in its construction were later removed. Structure 11 was associated with fill, including extremely large three-fists size pieces of slag, the largest found on the archaeological site, weighing up to 2 Kg. Burned animal bone and horn, and ash and charcoal also composed the fill. Worked bone tools, discussed later in this chapter, were also recovered from the fill. Some deposits of hammerscale were also found in the area. This form of furnace is similar in style to the updraft furnace. This
Figure 6.4: Plan View of al-Basra Excavation Units F12-F16
style furnace is charged with ore, flux, and fuel, and takes in air from prevailing winds. The stronger the winds, the higher the temperature achieved, and the cleaner the smelt. The production of such large slags indicates a very efficient smelt.

The same occupation area contained a 1.6 m by 1 m square meter area, at least 20-30 cm deep, lined with large flat stoned and sealed on all four sides and bottom with lime plaster. Such a structure constructed of this material is able to contain large quantities of water. Within it, the structure also contained a small square catch basin, about 35 cm by 35 cm with sloped sides, in its northeastern corner, at a slightly lower elevation, presumably so sediment could be collected and removed. No drain was apparent. This catch basin’s ability to hold water suggests its use as a quenching pool for iron forging activities; however, its direct association with the iron furnace features, and its remove by several meters from the iron hammering evidence found in F10 in 1998, makes its use as a quenching pool seem unlikely.

6.5 The Metal Evidence

The metals evidence is separated into five classes: the metal artifacts themselves, unprocessed minerals, slag, non-metal tools associated with the metal production, and metallurgical facilities. It does not include the 114 silver, copper and copper-alloy, and iron ancient coins found at al-Basra, which are well-worn and were unable to be identified while on-site in the lab. The metal material type data recorded include descriptions of each object’s material subtype (gold, silver, iron, lead, copper and copper alloy); object size (length, width, thickness, diameter); object description, motif, and
color (when heavily corroded); examples of other objects to which it is similar; and
information on the excavation year, unit, level, locus, and feature in which it was found;
and, if a number of identical objects were found in the same excavation locality, the
count of those identical objects. The slag and nail data include slag and nail counts and
weights, comments about unusual pieces recovered, and information on the excavation
year, unit, level, locus, and feature in which they were found.

More than 1,300 metal artifacts, excluding the nails and 470.1 Kg of slags, have
been recorded as “special objects” recovered from excavations at al-Basra. The data
presented here includes data from the excavations from 1990 through 1999 and data
collected during the 1980 excavations at al-Basra by Redman (1982). Of the metal
artifacts represented, more than one thousand pieces were recovered during the last two
field seasons (1998 and 1999), when a large area of the residential sector (G) was
excavated. Although these figures may appear small compared to the hundreds-of-
thousands of potsherds found at the site, the bulk of the metal objects represent single,
intact artifacts. In addition to “special objects”, some 4,927 iron nails and nail fragments,
along with more than 15,200 pieces of slag, have been recorded at the urban center.

The metals represented in the excavations of the multiple occupations of al-Basra
are predominately iron, copper and copper alloys; silver, lead, and miniscule amounts of
worked gold are also present. Table 6.1 shows the distribution of metal artifacts by
functional category, excluding nails. These functional categories, excluding coins, are
discussed in this section. Table 6.2 presents the counts of the metal “special artifacts” by
type and composition determined by visual inspection.
Table 6.1: Distribution of Metal Artifacts by Major Functional Category, Excluding Nails

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Copper and Copper Alloy Artifact, and Silver Artifacts

Copper and copper-alloy artifacts represent the greatest number of metal artifacts recovered from al-Basra. The sorting of the copper artifacts into the four functional categories resulted in the following: 1) preforms -- in the form of band, foil, ribbon, and other sheeting, and wire; 2) personal adornments -- in the form of bracelets, buckle, earrings, feather-like ornament, necklaces, and rings, 3) probes -- in the form of awl, blades, points, rod, and spatula/scoopula; and 4) unidentifiable objects. The first three categories are classified as partially or fully worked materials. The last category of unidentifiable objects, which includes small globules of copper metal that have no use as yet determined, is classified as unworked material.

Copper preform sheet comes in three forms. They include plain sheet which is less than 0.5 mm thick and a thicker plate form which is approximately 1 mm thick or greater; both vary in length and width. The third form of sheet, ribbon, is identified by its consistent regularity; it is approximately 0.5 mm thickness and uniformly 9 mm in width.
Table 6.2: Counts of the Metal “Special Artifacts” by Type and Composition Recorded for All al-Basra Excavations

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<td></td>
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<td></td>
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</tr>
<tr>
<td>spike</td>
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<td></td>
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<td>stirrup</td>
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<td>6</td>
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<tr>
<td>tube</td>
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<td></td>
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<tr>
<td>tweezer</td>
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<td>wire</td>
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<td>161</td>
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<td></td>
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<td></td>
<td>166</td>
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<td><strong>TOTAL</strong></td>
<td>5</td>
<td>29</td>
<td>180</td>
<td>29</td>
<td>1045</td>
<td>6</td>
<td>3</td>
<td>16</td>
<td>1</td>
<td></td>
<td>1329</td>
</tr>
</tbody>
</table>
None of these forms explicitly appears in the archaeological record as a worked artifact, but manipulations of these forms are apparent in the finished forms of other artifacts. These forms of sheet, then, appear to be the precursors to a final working.

Copper earrings and rings are the personal adornments found most frequently among the recovered artifacts. Earrings appear in two styles: one, which is self clasping, is seen exclusively in copper and is constructed by rolling copper sheet; the other, which has a balled or squared-off end that rests against the earlobe, counterbalancing the weight of the earring, is found in both copper and silver. This counterbalancing form was constructed by casting. Some bracelets are of wire formed from rolled copper sheet. One example is of rolled copper sheet rolled again at the ends to for further embellishment; another is formed of cast and shaped wire embellished by crosshatched impressions.

Copper probes, many found in the early years of excavation, were a classification given to the range of thin, flat triangular-shaped lengths of copper, with raised and impressed decoration, and the unembellished rods of copper that have a pointed, spatula-shaped or scoopula end, or squared-off end. The uses of these items have not been determined, but their consistency in size and shape suggests that they were in their final form. These probes could have been used as applicators for kohl (as eyeliner), or henna (as a cosmetic). Modern analogies to these decorated probes are found in the souks today, but are constructed of wood.

Another possibility is that these probes, particularly the less embellished ones, were used as medical or apothecary instruments. One of the performance characteristics of copper is that is does not promote bacterial growth and, thus, would be an ideal choice
for such implements. Further, the healing properties of copper were well recorded in ancient Arabic texts. Preparations with a copper alloy known as *talikun* were said to “[drive] flies off and [prevent] eyelashes from growing again after they have been depilated with a pair of tweezers” (EI nuhas:111). A special preparation of “burnt copper” was said to possess “astringent, dehydrating, diluting, and purifying properties” for scars and sores (EI nuhas:112).

While individually the rod-like shape and flattened -end style of probe is not remarkable, in collection they present a distinctive form. This same form is found in use several centuries later on the other side of the Islamic empire. The *larin*, an Indian Ocean trade coin that in circulation mainly from the sixteenth to eighteenth centuries, was a popular form of currency (Williams 1997:106). Named after the city of Lar, Iran, though no evidence exists it was ever made there, it was made of a “length of silver wire bent in two and struck with circular or rectangular dies” (Williams 1997:106). Larin were first struck in Hormus under the Safavid Shah Tahmasp (1524-1576) and also produced in Arabia by the Ottomans and the Indian subcontinent. While no direct links can be shown between the al-Basra copper probes and the eastern silver larin, the resemblance is uncanny.

The distribution of copper “special objects” (excluding coins) recovered from the units excavated between 1990 and 1999 was first presented by Benco (2007) and is reproduced below in Table 6.3. This table highlights that the highest concentrations of copper objects are found in the Residential Zone (approximately 68%), and within that zone they are found predominantly in the metal “enclave”, the area immediately south of
the house compounds. The density of preforms and personal adornments found in this area suggests that the copper was worked in this region.

Table 6.3: Density of Copper Objects by Area from al-Basra Excavations 1990-1999 (after Benco 2007)

<table>
<thead>
<tr>
<th>Area</th>
<th>All copper objects</th>
<th>All copper objects</th>
<th>Preforms /m³</th>
<th>Personal Adornments /m³</th>
<th>Probes /m³</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial Zone (F units)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>metal production</td>
<td>267</td>
<td>1.82</td>
<td>0.56</td>
<td>0.12</td>
<td>0.19</td>
</tr>
<tr>
<td>ceramic production</td>
<td>5</td>
<td>0.06</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Residential Zone (E units)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House compounds</td>
<td>449</td>
<td>0.81</td>
<td>0.29</td>
<td>0.24</td>
<td>0.11</td>
</tr>
<tr>
<td>metal “enclave”</td>
<td>176</td>
<td>3.02</td>
<td>1.49</td>
<td>0.36</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Outside City Wall (E)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>small metal workshop</td>
<td>16</td>
<td>0.53</td>
<td>0.23</td>
<td>0.00</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>All other units</strong></td>
<td>11</td>
<td>0.22</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>924</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lead Artifacts**

The few lead artifacts recovered from the site, are all of indeterminate use. Because of the soft and malleable nature of relatively pure lead, it is understandable that the original form of these objects would not survive prolonged and compacted internment.

**Gold Beads**

In 1999, a small cache of five gold beads was unearthed in association with 10 silver coins (Benco, Ettahiri, and Meftah 2004) and dozens of shell, glass, and stone beads. Identical in appearance, each gold bead was constructed a flattened square of gold measuring 4.5 mm on each side and embellished with a series of three gold granulation
grains along each of the four sides of the perimeter. These beads are the only evidence of gold recovered at the site by archaeological excavation.

Iron Artifacts

The iron “special artifacts” consist mostly of unidentified objects and fragments, possibly of agricultural or household implements and nails used for construction and door furniture. Door furniture consists of metal bands or straps that surround the door horizontally and at intervals, and decorative nails with nail heads typically rounded and at a minimum of 3 cm in diameter. Examination of nail body fragments, nails without their heads, reveals that they were forged and hammered to work harden. Examples of this type of iron door furniture can be seen today adorning the entrances of houses in the Maghrib, in Spain and it previously occupied territories, and throughout the Arab world. The decorative door furniture nails were considered “special objects” and so are not considered in the discussion of iron nails that follows.

Only two possible weapons were recovered from the site; objects identified as spear points are noted, though they do not appear to have been used as such.

Many iron nails and nail fragments were recovered from the site. Their counts, percentages of distribution across the site, and densities as a function of the cubic meter volume of excavated earth are found in Table 6.4 below. The numbers, and their corresponding percentages, of nails are about equal for both the Industrial and Residential Zones, suggesting they were both made and consumed at the site in the metal production area (through smelting and forging) and the house compounds (through use as
construction material and door furniture), respectively. However, the densities of iron nails show that the highest concentrations were found in the metal production and metal “enclave” areas, suggesting that production of metal objects was more pronounced across the al-Basra site as a whole.

**Table 6.4: Number, Percentages, and Densities of Iron Nails by Area from al-Basra Excavations 1990-1999** (after Benco 2007)

<table>
<thead>
<tr>
<th>Area</th>
<th>Iron Nails</th>
<th>#</th>
<th>%</th>
<th>#/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Zone (F units)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>metal production</td>
<td></td>
<td>2082</td>
<td>42.3</td>
<td>14.2</td>
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<tr>
<td>ceramic production</td>
<td></td>
<td>27</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Residential Zone (G units)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>house compounds</td>
<td></td>
<td>1945</td>
<td>39.5</td>
<td>3.5</td>
</tr>
<tr>
<td>metal “enclave”</td>
<td></td>
<td>706</td>
<td>14.3</td>
<td>12.1</td>
</tr>
<tr>
<td>Outside City Wall (E)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>small metal workshop</td>
<td></td>
<td>85</td>
<td>1.7</td>
<td>2.8</td>
</tr>
<tr>
<td>All Other Areas</td>
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<td>82</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>4927</td>
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<td></td>
</tr>
</tbody>
</table>

**6.6 Associated Metal Evidence**

*Unprocessed Minerals*

In addition to kohl (antimony sulfide), excavations have recovered the unprocessed mineral galena, and the copper carbonates malachite and azurite, in small quantities. Potential sources nearby for the kohl include Beni Mezala, approximately 115 Km due north of al-Basra 25 Km south of the coastal modern-day city of Sebta, and Sidi M’barek, approximately 160 Km southwest of Fes along the route to Marrakech. Multiple sources for lead and copper are found throughout this region. Small quantities of these minerals, often associated with worked shell and stone beads, were found during
excavations, which suggests the possibly that they were used for the making of other forms of jewelry.

In addition to the uses of kohl and copper mentioned above, these minerals also possessed alchemical properties. Though instructions are unclear, historical sources indicate that copper metal, when prepared using pulverized antimony sulfide and bee honey, and dipped in the blood of a billy goat, can cause incurable wounds or prevents cut herbs from growing (EI *nuhas*:111). Burnt copper, presumably copper carbonate, when taken with honey, is said to be an emetic (EI *nuhas*:112). The last sections of *The Intricate Tree*’s Chapter Three refer to various medicinal preparations using kohl and metal carbonates.

*Worked Bone Tools*

Approximately 186 quadrilaterally shaped and worked bone tools fashioned from the metapodials of domesticated cattle were recovered from the site and were documented by Benco et al. (2002). These bones were shaped by planing or whittling and then impressed with a tool to produce rows of small, triangular indentations. The largest concentration of these bones, 91% was recovered from Industrial Zone. My examination of three of these bones under scanning electron microscope reveals evidence to suggest that they were used for smoothing or burnishing metal objects (Benco et al. 2002). Also of note is that once excavated, some of these bones, in particular those left unwashed and bagged, emitted a curious fragrance that I observed during artifact processing; though the odor was indescribable, I would deem it pleasant-smelling.
As well as unprocessed minerals and metal artifacts, large quantities of slag are present at the site. During the smelting process, ore, flux, and fuel heated to high temperatures are reduced to metal and gangue. The gangue in the ore is converted during smelting to slag, a glassy phase or mixture of phases which is a by-product of the processed metal, and contains the waste products of the smelt. Depending upon the conditions of the smelt, including the physical properties of the ore and the fuel, and their interactive chemistries and thermodynamics, the composition of the slag can vary greatly.

On site, visual inspection was done on all slags in order to roughly differentiate between the copper slaggy matrices and iron slag. Copper slag was labeled such based upon its glassiness which had areas of greenish-yellow tinge, and its areas of greenish, yellow surface corrosion. Iron slag was labeled such based upon the overall greyish color of the mass, which usually also had reddish corrosion product at the surface and subsurface. Interestingly, what was differentiated as iron slag based on surface and core color also differed from copper slag based on size. Copper slag were usually between 3 and 5 cm in length and up to the 3 cm in diameter, whereas iron slag ranged from about 7 to 10 cm in thickness and were gauged in the field as “fist size”, with the largest examples being as large as the combined volume of three large fists.

Slag and its corresponding metal are typically not found in close association. Whereas slag is usually discarded at the smelt site, once a metal is smelted, it is then further worked to produce an object. This object is then used or traded, reused or recycled, and eventually discarded. While there are distributions of metal artifacts found
throughout the areas excavated, it is interesting, too, to examine the distribution of slag across the site.

A total of more than 15,200 pieces of iron and copper slags, weighing approximately 470 kg were recovered at al-Basra. The majority -- 12,820 pieces, or 84% -- were recovered from the industrial sectors metal production area and represent, by weight, about 88% of all the slag recovered from the site. Only about 10% of the total slag was recovered from the residential sector, some of it from the metal “enclave” south of the house compounds. The number, weights, percentages and densities of slag by area are found in Table 6.5 below.

### Table 6.5: Number, Weights, Percentages and Densities of Slag by Area from al-Basra Excavations 1990-1999 (after Benco 2007:11)

<table>
<thead>
<tr>
<th>Area</th>
<th>#</th>
<th>%(#)</th>
<th>Kg</th>
<th>%(Kg)</th>
<th>#/m³</th>
<th>Kg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial Zone (F units)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>metal production</td>
<td>12 820</td>
<td>84.2</td>
<td>413.5</td>
<td>87.8</td>
<td>87.2</td>
<td>2.81</td>
</tr>
<tr>
<td>ceramic production</td>
<td>81</td>
<td>0.5</td>
<td>4.9</td>
<td>1.0</td>
<td>1.0</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Residential Zone (G units)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>house compounds</td>
<td>1 066</td>
<td>7.0</td>
<td>19.8</td>
<td>4.2</td>
<td>1.9</td>
<td>0.04</td>
</tr>
<tr>
<td>metal “enclave”</td>
<td>783</td>
<td>*5.1</td>
<td>9.7</td>
<td>2.1</td>
<td>13.5</td>
<td>0.17</td>
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<tr>
<td><strong>Outside City Wall (E)</strong></td>
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<td></td>
</tr>
<tr>
<td>small metal workshop</td>
<td>420</td>
<td>2.8</td>
<td>21.8</td>
<td>4.6</td>
<td>14.5</td>
<td>0.73</td>
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<tr>
<td><strong>All Other Areas</strong></td>
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<td>0.4</td>
<td>0.1</td>
<td>1.0</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>15 221</td>
<td>0.3</td>
<td>470.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* The number previously reported by Benco (2007:11) was in error and is corrected here.
6.7 Conclusions Drawn from the al-Basra Excavated Evidence

Copper and Iron Production at al-Basra

Being able to visually discerned two slag types, it was then possible to look at the spatial distribution of iron and copper slags across the site. What was macroscopically identified as copper slag is found more or less all over the entire site, but in greater quantities within the designated Residential Zone “G”. In contrast, what was identified as iron slag, is found in smatterings across the site, with moderate quantities found in the metal “enclave” in the southern region of the “G” area, and in the “E” areas located close to what may have been the entrance to the city. However, considerably larger quantities of iron slag were found in the designated Industrial Zone “F”.

Examining the copper artifacts and slag, in concert with the basic facts of extractive metallurgy, the following hypothesis can be made. Copper requires a less reducing atmosphere than iron, given identical temperatures. Because the copper artifacts found at the site are quite small and largely ornamental in use, it is possible that a much broader range of compositions would make a satisfactory copper artifact. Only a loose mental template was required to understand how to produce copper. Thus, a tight control of the technology was not required for the manufacture of copper objects. The distribution of copper slag and artifacts across the site, especially within the Residential Zone, urges one to conclude that copper metallurgy at al-Basra was a household industry, or at best an organization of small independent workshops.

In contrast, the iron slag found at the site is located in discrete pockets, with the largest concentrations being clustered in a single area. It is notable, by comparison, that
very little copper is found within these pockets or concentrations. As is evident from the large amounts of slag recovered in high concentrations, the iron industry was a large scale production. As large scale production, a more rigorous mental template was required to understand how to consistently and replicatively smelt iron ore. This rigorous mental template, in turn, is closely tied to a unifying theme, and the archaeological evidence supports this. The lack of any appreciable quantities of iron recovered during excavation that would be commensurate with these amounts of slag, indicates that consumption of the iron was done elsewhere.

The Larger View of al-Basra

Metal production in ancient al-Basra was extensive. While copper appears to have been manufactured on a household level or small independent workshop level for local consumption, iron production appears more extensive. The presence of collective iron production facilities and the seeming absence of a consumer base on site suggests an industry in raw iron trade. The reference to al-Basra as “El-Hamra” (the Red) by al-Bakri (1965:216-217), as well as the commercial excavations of the red earth occurring just outside the village of al-Basra for mineral and clay deposits today, give added emphasis to the suggestion of large scale production through a nucleated industry.

It appears that the metal industries at al-Basra spanned at least two forms of labor organization -- the small independent workshop for copper production, and the nucleated industry for iron production. It then should be considered that the gold and silver production for minting could have been on the scale of the nucleated industry as well.
Based upon other ancient Islamic cities in North Africa, the more intrusive industries -- those interfering with the daily existence either through smell or sound -- were typically placed outside the city walls. One example of this intrusiveness would be the tanning industry in Fès, which endures to this day. The industry was originally built outside the city walls and located at the bottom of the medina, in order to have full access to the sun and utilize natural water resources, but also to be situated well downwind. However, over the past 1000 years, the medina has grown up around the odiferous industry, and has thus encompassed it with shops and markets to meet the demands of the area. Though many of us would find the smell prohibitively offensive, the merchants located close by welcome its presence, as it draws many tourists to the region.

It is believed that al-Basra’s iron production industry was located close to the city’s main gate, which can be identified from the historical documents and the above-ground ruins of the stone wall and cistern. Though smelting or forging with charcoal is not odiferous, it is noisy and sooty, and the by-products numerous. Perhaps the iron production of al-Basra was held in such high regard that the early community felt the need to protect the industry, and so situated it near the house compounds, possibly of the skilled workers who operated the facilities. Perhaps its location was an advertising strategy. If a merchant or trader journeyed this great distance to deal in raw smelted iron, he would perhaps be enticed to examine the city’s lesser known wares, to stay awhile and take in its gardens, to visit a local establishment to partake in some buttermilk, to have some new flax garments made, and perhaps to purchase a nice pair of copper earrings as a gift upon his return home. Or, perhaps the metal production area was simply situated...
there because it is the shortest distance from the neighboring woods and red earth, which could supply fuel and material for the smelt.

By examining the material culture of a society, we are able to reconstruct a picture of what that society found important. As an addition to the technological frame on the meaning of metals, the al-Basra archaeological evidence gives us concrete examples of how producers and consumers viewed the industry. The al-Basra consumers adorned themselves with copper jewelry, perhaps in adherence with the prescriptions and prohibitions of the *qur‘ān* and the *aHādīth*, the first two sources of Islamic law. Raw iron was an exportable commodity from that region; as such, the community safeguarded its production and maintained a group of specialized workers. The scale of production and the connection between the metal industry and the Idrisid elite, and al-Basra’s location along the major trade route from Sijilmasa and Fès to Tanger, suggests that the exchange and trade of in metal was necessary for the dynasty’s and the empire’s functions.

While al-Basra informs us on the community meaning of metals, what did the metals mean to the workers? *The Intricate Tree* gives us information on the social organization of gold and silver minting process, while the spatial organization of the al-Basra metallurgical facilities gives us information on the spatial organization of the workers. But what of the individuals who work with metals? What are their roles and how do they view their craft? To answer these questions, I present my ethnographic study of modern-day metal artisans in Medina Fès, Morocco.
CHAPTER 7: The Loss of Tradition

By their fruits ye shall know them.
(But only as long as they can produce.)

7.1 Introduction

French writer, critic, and Officer of the Legion of Honor André Chevrillon published his account of Morocco in 1920. The following is an excerpt from his memoirs.

Without a doubt, Morocco, with one or two of the Kingdoms of Asia, represents the last surviving example of a civilization of the ancient world. A civilization rich in types and models unchanged for centuries similar in some of its essential features to the type of culture that used to exist in Europe, in many features older than even Islam and Christianity. One finds here customs, morals and physical aspects of mankind that are eternal, simply because they have never changed. … If such a world which so deeply shares the spirit of the past had disappeared two thousand years ago, we would have lost a certain understanding of the past and ourselves, for we would never have recreated it. How many learned tomes would have been written on the subject! But that is as survived until our times, that we can see it, touch it, mix with its people, is a miracle that never ceases to astonish.

In 1981, the Medina Fès was designated a World Heritage Site (WHS) by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Cultural heritage, as defined by UNESCO, consisted of monuments, buildings and sites “which are of outstanding universal value from the historical, aesthetic, or anthropological point of view”; Medina Fès, home to an “urban fabric and the principle monuments in the medina - madrasas [religious schools], fondouks [shops], palaces, residences, mosques and fountains” and the oldest university in the world, certainly meets the criteria (UNESCO World Heritage Centre 2006). By its designation as a WHS, Fès was
considered to be of outstanding value to humanity and identified for protection and preservation of its cultural heritage.

Fès was the first of UNESCO-designated WHSs in Morocco. Over the next 25 years, seven more Moroccan sites have been awarded that designation, including the medinas of Marrakech, Tetouan, and Essaouira. These medinas, or old Arab cities, are the activity centers of the modern cities that have grown up around them. The medinas contain the souks, open air marketplaces, where anything and everything is sold. The souks of Morocco are an interesting amalgam of familial organizations, traditional technologies, and consumer goods. Within the families, technologies, and marketing strategies is an interplay of values that have origins in Islamic religion and culture. These values are evident in the metalworking industry, and are expressed in the organizational structure and production of metal artisan guilds. Globalization has begun to affect the balance of these values in interesting ways.

This chapter presents a look at the metal artisans in the modern-day Old Medina Fès souk. Today, the daily operations of the souk are crucial to the livelihoods of the workers who craft using traditional technology and to the vendors who sell both traditional and machine-made wares. Many of its familial and organizational links to past traditions -- the very essence of what makes a souk and the experience of it unique -- are being broken because of the souk’s increased connectivity with the global economy. The ethnographic research presented here sought to record the traditions maintained by the Fès metal artisans in light of these changes toward a global economy. The information gathered helps add to this reconstruction of early Islamic Maghribi metallurgy by
documenting what the metals mean to the artisans and by exploring how their community responds to external and internal changes.

### 7.2 Structure of a Souk

**The Souk**

The souks of today are interesting and complex marketplaces in the Middle East. Virtually any commodity can be found for sale in the souk; and if it cannot be found there, it usually can be obtained quickly, for a price. While Western-style retailing exists in the newer sections of cities, in the older medinas, souks are the open-air manufacturing and shopping centers that still endure since preindustrial times. Similar to “shopping malls” of the West, souks are social centers where people amass to discuss the events of the day or simply congregate. While containing a variety of objects for sale, there are also food stands and cafés in which to take a break from the bustle of shopping. Different from the Western mall, souks also contain mosques for assembly, worship and devotion. The businesses are family-owned and operated, and similar commodities are located in the same area. Whereas the concern in the mall is about competition and similar shops are located in far remove from one another, in the souks, social and economic factors have historically located shops vending similar commodities in close proximity to one another (Fernea 1993:183).

This aggregation of similar commodities traces back to cultural and religious beliefs. The importance of family, the abhorrence of usury, and the concept of strength in numbers as protection are valued concepts in the Middle East (Fernea 1993). Keeping
shop sizes small enables families to own outright their wares and not seek investors. Locating shops of similar commodities in close proximity enables the shopkeepers to keep an eye on those to whom credit was extended. Because close personal relationships are built up between shopkeeper and consumer, levels of trust in both craftsmanship and credit are built up and extend over generations. Knowing your neighboring vendors limits artificial inflation of prices. Everyone -- shopkeeper and customer alike -- keeps everyone else in check. This self-policing further extends to protecting one’s assets. Knowing your neighbors, and stocking and vending similar commodities in one area, are advantageous to deterring theft. Similarly, if a catastrophe, such as a fire, befalls one guildsman in the neighborhood, chances are it will befall all in the area and each will work cooperatively to ensure the success of both himself and his neighbor.

The Guild

The guild was, until recently, a fundamental part in Islamic life. Bernard Lewis details the importance of guilds, presenting the idea that “the very topography of the Muslim city, which was built essentially on the idea of a market, was determined by the needs of the guildsmen” (1937:20). He suggests that every Muslim city, from those in the western periphery of Morocco to Southeast Asia, were constructed around three or four central, necessary points: 1) the exchange, 2) the *qusūraya*, 3) the thread market, and 4) the university (Lewis 1937:20). The exchange was the most important fixed point to the market, “always an important centre in a bimetallist economy such as that of medieval Islam” (Lewis 1937:20). The next most important was the *qusūraya*, a fortified
building where foreign goods were stored, followed by the thread market, where household commodities (butchered meats, bakeries, vegetable markets, etc.) were located, and then the university, usually attached to a mosque (Lewis 1937:20).

Surrounding this fixed, central structure, the guildsmen and their souks are located.

Lewis hypothesizes the development of the souk based upon textual references, the first dating to A.D. 770 and the next several dating to ninth century. He believes the first marketplaces were mapped onto the structure of the Byzantine organizations. The eleventh century encyclopedia *Rasa’il Ikhwan us-Safa*, the *Epistles of the Pure Brethren*, “devoted to a consideration of the manual crafts, their classification, and their essential nobility” (Lewis 1937:25), hinted at the later organization of the guilds. From this text, we learn of “societies of ‘pure brethren’ from all over the empire, working for the dissemination of their ideas among all classes of the population and especially among the artisans” (Lewis 1937:24-25).

Another theory is that the eleventh-century Qarmati movement of extraordinary liberalism which held appeal for Sunnis, Shi’is, Christians, Jews and Zoroastrians alike on the basis of intellectual liberty and social justice, gave new meaning to the forms of organization already existing (Lewis 1937:26). Prior to this movement under Sunni rule, the guilds were persecuted, restrictions were harsh, and independent action was quashed; later, the guilds appeared to have a great number of privileges and appear to have played a large part in the commercial revival under the Fatimid state (Lewis 1937:25). The movement appears to have organized the Islamic guilds as a way to motivate the working classes into “unionized” force.
One central figure of the Islamic souks that has endured throughout their history is that of the *muHtasib*. The muHtasib, the market inspector who inspects weights and measures and the quality of goods in the marketplace, regulated public observation of the *shari’a* in the souks (Irwin 1997:85-88; Lewis 1937:25) as they still do today. As legal functionaries, working under the religious judge’s supervision, they derived their authority from the *qur’ān* (Irwin 1997:85), *qur’ān* 7:157, which states,

> Those who follow the messenger, the unlettered Prophet, whom they find mentioned in their own (scriptures),- in the law and the Gospel;- for he commands them what is just and forbids them what is evil; he allows them as lawful what is good (and pure) and prohibits them from what is bad (and impure); He releases them from their heavy burdens and from the yokes that are upon them. So it is those who believe in him, honour him, help him, and follow the light which is sent down with him,- it is they who will prosper.

To ensure that *bid’a*, reprehensible or un-Islamic innovations, were not practiced the muHtasib produced treatises to control and regulate the crafts, and included detailed information of the perception of the arts of the time, as well as treatises on *hisba*, or market inspection, to guide the functionary in the exercises under his consideration (Irwin 1997:85-86). Perhaps the production of *al-dawHa al-mushtabika fī DawābiT dār al-sika* was the work of, or for, a muHtasib, or an entry in the *Rasa‘il Ikhwan us-Safa*.

### 7.3 The Past and Present Fès

The medina of Fès has metallurgy at its roots. Upon the breaking of ground in A.D. 803 to construct the capital city of Fès for the Idrisid state, legend has it that a gold axe was unearthed. Little evidence is available today to give credence to this story, but a putative etymology may yield some insight. Both the Arabic “Fès” and “axe” are similar
in pronunciation. However, according to Arabic linguist Hans Wehr (Cowan 1994), the sources of “fâs” the city and “fâ’ṣ” the axe are distinctly different. In either case, the links between metallurgy and the ninth century northern Maghribi capital of Fès are rumored to trace back to its founding.

Today, Fès holds the position of the Maghribi metallurgy capital, according to the popular word. Through the twentieth century, aspiring metal artisans came to Fès to apprentice, vend and trade in metals. The smiths of Fès who specialize in copper- and silver-work are among the most renowned for their expertise (Jereb 1995:104). My first introduction to Fèsi metallurgy was during the Summer of 1999 when I lived in Fès in order to study Arabic. My home was with a family in the mallaH -- the old Jewish Quarter along the outer edge of the medina; my school was in the Ville Nouvelle -- the modern, planned city, built during the French colonial occupation, which grew up around the medina. But the souks of Medina Fès, with their “neighborhoods” of manufacture and retail, presented a colorful, aromatic, lively, and interactive atmosphere in which to practice my new vocabulary. Figure 7.1 depicts the major features of Medina Fès, Morocco.

The tal’a kabīra and tal’a Saghīyra (literally the Big Stream and the Small Stream) -- the two, narrow main streets in the souk -- contain the majority of the shops for both the local Fès and the international tourists. The side streets off of the tal’a kabira and tal’a Saghīyra are even narrower; at times, one can even touch the houses on either side simply by outstretching each arm. Because the medina dates back to the ninth century, and the shops are family-based, real estate in the area was (and is) at a prime.
Figure 7.1: Medina Fès and Its Major Features
(after Berrada 2002:7-8. Scale not noted.)
Homes were built on top of the shops, and with increases in family size over the
generations, the medina literally grew “up.” The homes, the insides of many which are
now turned into apartments, create two-, three-, four-or-more-story caverns which permit
glimpses of light. With few visual reference points in the skyline, it is easy to get lost in
space and time.

Over the next four summers, I explored the Fès souks. My casual observations of
the metal artisans were undertaken during that time. In 2003, with permission from the
Moroccan government’s Ministry of Culture and the University of Arizona’s Human
Subjects Protection Program, and partial funding from the University of Arizona’s
Graduate College, I conducted a formal study to discern whether metallurgical traditions
from the distant past still exist today. The study involved formal survey and
documentation of the metal artisans’ livelihoods, through interview and photographs. The
survey of Fèsi metal workers and metal vendors revealed that while many of the beliefs
about metallurgy are still known, few of the early metallurgical practices remain. The
result of this research is an ethnographic sketch of the Fèsi metal artisans which describes
the loss of tradition.

The mallaH, The Gold and Silver Area

Because of the historical structure of the souk, one frequently finds areas of
similar metalworking and vending located together. In Fès today, the goldsmiths and
silversmiths and their shops are located in a walled section outside of the medina called
the mallaH, or old Jewish Quarter. Jews were traditionally the ones to work gold and
silver, due to prohibitions outlined in the *aHādīth*. The Qarmati system of guilds enabled Muslim, Jew, and Christian to be admitted on equal terms, with some guilds even being predominantly non-Muslim, such as dealers in precious metals (Lewis 1937:26). With the great relocation of Spanish Jewish artisans after the Reconquista in 1492, many settled in Morocco, undoubtedly bringing their technology and design aesthetic with them (Jereb 1995:74-75). As the Jews lived together in communities in the mallaH, their shops were also located there. The Jewish occupants of the mallaH could close the doors to this walled section of the Medina Fès. Today, both Jews and Muslims live in the mallaH, but the doors are still closed every night.

Similarly, the coppersmiths and the blacksmiths have occupied distinct sections of the Medina Fès. **Figure 7.2** depicts these copper and iron metal working areas in relationship to al-Qarawiyyin. These metallurgical industries were centered around three distinct areas. The copper areas were located next to al-Qarawiyyin, one of the world’s oldest universities in the largest mosque in Africa. The two iron areas are located in Ain-Aloo and at Bab Sidi al-Awaad. While the iron smelting facilities at Bab Sidi al-Awaad were originally on the outskirts of the medina because of their fumes, the medina has since grown up around them.

*Al-Seffarene, The Copper Areas*

The copper area is known as al-Seffarene, named from the Arabic *sefr* meaning yellow. In reality, the yellow describes the color of the brass and bronze objects produced there. The copper area is divided into two sections: Saha al-Seffarene (the
Figure 7.2: Metal Areas in Relationship to al-Qarawiyyin
(after Berrada 2002:insert)

Metal Areas in Relationship to al-Qarawiyyin

1. Saha al-Seffarene
2. Hay al-Seffarene
3. al-Hadidene Tahta
4. al-Hadidene Ain-Aloo
5. Tanneries

[Map showing metal areas in relationship to al-Qarawiyyin]
Yellow Square) and Hay al-Seffarene, (the Yellow Neighborhood). The Saha, actually triangular in shape, has four artisans left, down from ten from the first half of the twentieth century. It is the site of the oldest copper working shops and the largest copper-based products, such as pots, kettledrums, and ceremonial (usually wedding) accoutrement. Alongside al-Qarawiyyin, copper sheeting imported from Europe is stored, for use by the coppersmiths. The Saha was also the site of the former Friday morning metal souk. No vending of metals occurs on Friday mornings nowadays; the artisans spend time with their families and set up shop in the afternoon.

The Hay used to house some 60 copper-working families, but now employs mostly vendors, the majority without familial ties. I was told that there are many people working for the individuals who own the shop fronts in the Hay, but they have no strong dedication to the craft. The workers and vendors here are skilled in forming objects from plate and embellishing through embossing, stamping, and cutting. Today the Hay is a tourist sale area where the vendors work on small-scale copper finishing of items such as teapots, serving trays, censors, and lanterns.

One week prior to my formal interviews, the coppersmith elder of al-Seffarene, a key source of information, passed away. When discussing his passing with the four artisans of the Saha, they all referred to him as family, and made a point to me that when one of them dies, they all attend the funeral and mourn.
Al-Hadidene, The Iron Areas

The iron areas are known by the name al-Hadidene, from the Arabic hadid meaning iron. Al-Hadidene Tahta (the Iron Below) at Bab Sidi al-Awaad has two shops left, down from sixteen, and six mature (above 60-years-old) adult workers. The bulk of the workers aged out of the practice or died, and did not leave the businesses to their sons. The great changes here, the workers told me, occurred between 1960 and 1975, the former date coinciding with the large migration of Jews to the newly-formed Israel, and the later date coinciding with the Green March, the Moroccan-government coordinated mass demonstration in November 1975 to force Spain to hand over Spanish Sahara, now Western Sahara, to Morocco. It was during these two movements that many Moroccans relocated, either because of religious reasons or due to government incentives. The relocation of Jews opened up opportunities to Muslims in the lucrative trades of gold- and silver-smithing; none in the mallaH’s precious metal souk knew of a neighboring Jewish merchant. The government incentives of the Green March amassed some 300,000 Moroccans to its southern border; over half of them crossed over to occupy the disputed region. It is unknown how many of them came from the souks of Fès.

Ain-Aloo, at the heart of the medina along the tal‘a kabira, has five workers and five shops. These workers consider themselves middle-aged at around 50-years-old. There used to be far more workers but in the last decade, much of the noisy, smelly work of iron working has been moved outside the city to al-Hadidene Jadid in Bin Souda, some 10 kilometers outside the Ville Nouvelle. This “New Iron Place” is called La Ferraille, which is French for “scrap metal”. Here there are six shops with seven adult workers
between 30- and 40-years-old, and many children. Though al-Hadidene Jadid is a partial
government relocation of Ain-Aloo meant to improve the standards of working
conditions for the artisans, it appears to have lax safety standards and flourishes on child
labor.

The iron artisans mostly specialize in large, wrought iron such as grills -- open
metalwork structures, used in windows, gate frames, or room partitions, to delineate
separate spaces. Lamps, and straight or curved daggers and flintlocks or pistols are also
the work of the iron artisan (Jereb 1995:103).

7.4 Ethnographic Research

The bulk of this ethnographic research took place in the Old Medina Fès. During
the summer of 2003, with the assistance of a male interpreter, I interviewed metal
workers and vendors in Fès, compiling their stories. While the hope of every
ethnographer is to confirm her suspicions that prompted the study, that is not always the
case. While trying to reveal beliefs embedded in the transformation of metals from raw
material to craft to product in extant technologies, a greater issue was revealed – the state
of traditional metal technology today. I conducted formal interviews with 15 metal
workers and group discussions with members from each of the metal areas. Voice
recorded interviews were conducted in a mixture of fus’ha, or Modern Standard Arabic,
and Moroccan dareeja, or colloquial Arabic, and observations were recorded through
photography. The following provides a composite of direct translations of stories told to
me relating to how metal artisans feel about their craft, and images of those crafts. In
these stories are descriptions of how the artisans perceive their past and present in the context of *sinaʿa al-taqlidia*, or traditional industry, in the major centers of iron and copper manufacture in Old Medina Fès, and highlights how the loss of traditional technology is the greatest concern among today’s Fèsi metal workers and vendors.

Information was obtained through interview with metal workers and vendors within the Medina Fès, as delineated by the University of Arizona Human Subjects Protection Program. A series of forty-six questions, divided into the following eight categories: 1) occupation, 2) history of involvement in metal-related activities, 3) location of metal-related activities, 4) family history, 5) craft specialization, 6) apprenticeship and influences, 7) beliefs, and 8) additional information, were asked. A list of these questions is found in Appendix E. Not all of these questions were answered.

The older metal artisans in the main areas were consistently busy and preferred to schedule time for an interview; along the side streets, vendors were more open to being interviewed on the spot, perhaps thinking that they could draw in more business. But it was the older group whose artisans were more forthcoming in their responses; the younger artisans were reluctant to discuss particulars concerning their family, apprenticeship-relations, and specialities in craft production. The recent relocations of metal artisans to La Ferraille may have been a factor in the degree of information they were willing to divulge; the younger metal artisans had yet to established themselves in an area and perhaps felt that revealing personal information could be detrimental to their careers.
Much of the information that I did obtain, however, was consistent among the metal artisans. The metal artisans of Medina Fès all entered their trade because their fathers were metal artisans. The elders in the group trace their trade back several generations, to the time immemorial. One older artisan of al-Seffarene, who has worked for forty years there, as did his father and his father before him, said he “worked from [his] eyes to [his] hands.” As one younger (under 30) Hay al-Seffarene interviewee put it, the work of metal “was in his blood, the same as cigarettes.”

However, virtually all the metal artisans related that the tradition of metallurgy as a family industry was dying out. Some were proud that their sons were going to college and gaining an education when the industry was in a downswing with no signs of recovery. They hoped that their children would have more opportunities that they, and perhaps travel to Europe to seek other work. Others bemoaned the fact that their children were not apprenticing with them, thereby ensuring the demise of the trade.

They all believe that Friday morning was to be devoted to family, without the demands of manufacturing and vending. The work is typically six days a week, ten hours a day, from 8AM to 12:30PM and from 3 to 7:30PM, times that coinciding with those of Islam’s five daily prayers. However, the same Hay interviewee who had his work in his blood said that if he goes more than one day without seeing his shop, he gets a “little crazy.” When inspiration hits him, he “throws off the blanket” and goes to [his] manufacturing shop and produces it. For this reason, the majority of metal artisans live in the medina. Those few exceptions cited family members who had recently been able
to purchase or rent a home in the mallaH or the Ville Nouvelle, with whom they occasionally stayed.

The metal craft takes motivation and drive. Another artisan of the Hay has aspirations to produce a trade with America and Europe and have it known that the wares are produced in the old Medina Fès. His pride in work and industry is obvious. He says that when he sees foreigners in the souk looking at his wares, they are amazed at the quality of work; he does not make the objects he sells, but he instructs his worker to collect the scraps of metal cut from plate and then he asks that the bulk scrap be made into handles, feet and spouts for teapots.

The beliefs surrounding metallurgy were mixed. One middle-aged iron artisan in Ain-Aloo was able to quote me sūra and ayāt (chapter and verse) of passages in the qur’ān that dealt with metallurgy. This artisan also informed me of a belief he held that was practiced by many metal artisans, as well as a practice that he opposed out of his interpretation of the aHādīth. The former dealt with the operations of work: He believed that if you are engrossed in your trade working your metal, and the call to prayer sounds, the artisan, even in upswing with his hammer, must drop his hammer immediately and prepare for worship. The latter dealt with the design of metals: He believed that since some aHādīth forbade representations of animate objects, no metal artisan should ever produce the khumaysa, or “Hand of Fatima” (referring to Fatima Zahra, daughter of Muhammed), the charm of which is supposed to ward off the Evil Eye. He was much concerned that many artisans made them and even other, more pronounced
representations of animate objects. He said that, unfortunately, some will produce anything for a sale, for the right price.

Out of respect for the concerns of all the metal artisans, I asked them to express their ideas about metallurgy not formally addressed by the interview. They told me stories, which were part of their identity as metal artisans. These stories presented to me served a dual purpose -- they were interwoven with the morals of the metal artisans and revealed their concerns for their changing environment in light of an ever-increasingly networked world.

One of the story themes told to me first by many of the Fès metal artisans was “The Iron from Heaven”, that describes the story of Dawd of the Qur’an. The theme is that metals can be put to use can tell a lot about one’s moral character. With its basis in sūra al-Hadīd, it is “the test to separate evil from good”, or “you are what you make.” Virtually every metal artisan related this theme to me. [It is interesting to note that this Dawd of the Qur’an is said to be the same David of the Bible; recall that his reference in metallurgical treatises goes back to Theophilus’s Third Book, which was dedicated to him.] The other stories, some also centuries old, follow. Their meanings are explained in light of the modern world.

7.5 The Stories

“Haruun al-Rashid”

In the time of Haruun Al-Rashid, a royalty of Morocco who lived in Fès, many people were poor and would steal donkeys and cows at night to take them for butcher. These animal parts would be ground to produce kefta (ground meat) to sell the next day. Haruun Al-Rashid heard of this and wanted to go out at night among his people
and give money to the poor to reduce poverty and theft. But the very same night he went out, the streets were empty, and the thieves stole the king to put to slaughter. Haruun Al-Rashid, who was disguised in clothes of the ordinary working, begged for compassion and said, “If you bring me cloth, I will sew beautiful things for you to sell in the souk.” And so it was done, and the garments sold for much more than kefta. And the king was with them a while.

At this time, the palace folk wondered where the king had gone and began to worry. The king, in his condition, was also at a loss, but told his guardian, “Take this garment to sell to one of the big citizens. You will get much for it.” And so it was done. The citizen saw the writing in the cloth that said that the king was being held hostage, and the royal militia lay siege and freed him. And so the saying goes, “It is better to have industry in your hand than money in your pocket.”

The story of Haruun al-Rashid describes the value of a trade. In the summer of 2003, the Moroccan government touted the values of tradesmanship by sponsoring print- and television-ad campaigns supporting sina'a al-taqlidia, traditional industry, along with a separate ad campaign extolling the benefits of education for women. Over the previous five summers, there was little or no detectible discussion in the media about support for either cause, but the reasons for the appearance of the both made rest in the recent changes of government in Morocco. It is only speculation, but the new-found interest in traditional industry may be from the transition of kings and the leadership of newly throned Muhammed VI after the passing of his father King Hassan II in 1999. King Muhammed VI’s marriage to Lalla Salma in 2002 was undoubtedly an influence. Born and rooted in Fès, Lalla Salma is in the position to provide her husband first-hand accounts of the economic, social, and political trends from that region. The declines in sales and tourist economy in the Medina and its surrounding areas, which includes a population of about 1 million, would be an area of interest to the new monarchy.
Knowledge of the trade is key to maintaining traditional industry, but it is also key to maintaining the operations and structure of the souk. However, the illusion of autonomy of the artisans from outside influences and the reality of their interconnectedness is also key. The story of supply and demand, which anyone who deals in a market economy can relate to, was told by several of the coppersmiths within the Saha al-Seffarene.

“The Jew and the Donkey”

When there was a souk in Saha Al-Seffarene, there was one Jew who, each Friday, would bring copper to the souk and sell to the metal craftsmen there for a high price. And one time he brought a lot of copper, about a ton, to sell. All the workers gathered around and agreed amongst themselves that they would not buy from the Jew until the price of copper was lowered to 10 dirham/kilo. The metal craftsmen told their resolution to him and the Jew said that he would not sell for such a low price. And when the time for souk was near done, the Jew told them to come, that 10 dirham was an acceptable price per kilo. Why? Because the weight of the copper was a lot and he did not want to return with such a weight. But from that time on, that Jew never returned to the Saha Al-Seffarene.

In this tale of old the antagonist is the Jewish merchant. An analogous situation of today would highlight the foreign traveler. This issue of supply and demand extends to goods supplied to the tourists. Globalization has made travel and tourism more accessible to those of moderate incomes. The culture of haggling for price is no longer a mystery, and the savvy tourists now have a say in how their monies are spent.

Similarly, globalization has opened up new markets. Items traditionally crafted and sold in the souk to the Fès, can now be manufactured abroad en masse and sold in the Medina for far less. While everyday items are easily replaced with machined goods, ceremonial items are more difficult to come by. The solution devised for those whose
desire to maintain tradition outweighs their means is the rental of service accoutrement for marriage and circumcision rites and celebrations. With rentals now being fashionable for entertaining, the larger, worked ceremonial services are only being produced by a few copper artisans.

Just as the sale of worked copper has been in decline, the iron smelting and iron working centers are in decline. This decline is a result of travel and European contact. The following story highlights these interactions.

“*The Brit*”

A long time ago (maybe 150 years ago) a man from Britain came to the Maghrib in search of people to construct a factory to produce pistols and other metalworks for the arts of war, for sale in the Maghrib. The Brit stopped in Old Medina Fès and proposed to make his factory there. Many of the people in the Old Medina Fès wanted and needed the work. The Brit pulled out a needle (of the style used to sew) and said, “If you can construct a needle exactly the same as this, I shall establish the company here.”

Upon his return the next morning, the Brit was presented with his needle, but said, “Where is your product?” And the Fèsi responded, “Do you not see your needle? Open it.” And the Fès needle fit neatly within the other and could pass through the eye of the original. The Brit thought, “This is excellent; work much better than our machines of war can be made here, and much stronger. But if we establish a company here, the Fèsi industry will be stronger and greater than the British industry. We cannot build here.”

The Brit wanted to find a path (not direct to the solution) that would be to the advantage of the British. And so he told the Fèsi, “Perhaps we will not make industry here. It may be better if we sell you the instruments of war and simply produce them in Britain.” “But we need work in Fès”, said the Fèsi. The Brit responded, “Why do you want that? We can sell you pistols for 5 Dh a piece. That is not expensive.” After some calculation, the Fèsi came to consider the proposition as a good one. It would be much less expensive to buy the pistols than to produce them. The Fèsi agreed to purchase direct for resale. But while the people weren’t working, the craft specialty of Fès dropped off and people began to move away. And after one month, the Brit was again in Fès and saw that the craftsmen were in decline and thus increased the price of each pistol to 25 Dh each, much too expensive for the Fès to buy.
This issue of displacement of artisans due to lack of work holds true today. Al-Hadidene Jadid in Bin Souda is a modern-day example. Figure 7.3 depicts the working conditions and space for these guildsmen in al-Hadidene Jadid at La Ferraille. Note that there are seven people in this workspace.

The stories told by the metal artisans illustrate the concerns of the traditional metal industry today. The affects of tourism have resulted in the relocation of metalworking sites, and the increased production of smaller, more portable objects for tourism. The global market has made less-costly, machine-made items more readily available for Moroccans, and fewer high-quality time consuming crafts are constructed, resulting in a loss of metal-crafting skills.

The observed loss of skill is apparent in the comparison between the fineness and delicateness of detail between older metal objects and today’s tourist goods. Also the fact that sons are not following in their fathers’ footsteps means that traditional skills are not being passed down.

"The Father and The Son"

There was a man who had a shop in the Saha al-Seffarene, around there about one of the corners near al-Qarawiyyin, and he had a small son who studied how to work the traditional techniques of copper. And when that child grew up, he knew how to work copper well. One day, the child, now a young man, wanted money from his father. His father told him, “You shall no longer sleep here or eat in this house. You can look for money in another place.” Without a home, the young man solicited his friends, and also from their own generosity, and each of his friends in the Saha al-Seffarene gave him 20 dirham. With this collected money, he bought some sheet copper and made a large copper pot. And when there was a souk on Friday, he sold the large pot. With the money he gained, he bought more copper and fashioned it and
Figure 7.3: Guildsmen at Work in *al-Hadidene Jadid* in Bin Souda at La Ferraille
sold it, and continued until his profits were great. Then his father said, “Come. Now this, my shop, is yours.”

7.6 Modern Sociotechnical Change

The roots underlying the metal traditional industry remain the same. Moral values remain the same as evidenced through the stories gathered, which contain elements of an enduring influence of Islamic values, as interpreted by individual metal artisans. Travel, tourism, and a global market influence the methods of manufacture and the crafts produced. They reveal, to the metal artisan and the consumer both, concerns and potential previously unrealized. A global knowledge culture provides opportunities for self reliance, as opposed to familial reliance, as well as opportunities outside of traditional technologies. Knowledge cultures, indeed, change and are influenced by outside forces. How these influences affect traditional Islamic Maghribi metallurgy, is another story in the making.
CHAPTER 8: Conclusion

8.1 Final Remarks

The social constructivist viewpoint holds that for any given task there are multiple technologies that could satisfy its basic requirements, and that the choice of a particular technology from a group of alternatives is influenced by social or cultural concerns. In order to fully explain a technology or technological change, we must relate stages of that technology to the choices made by the individuals or groups employing it. The ethnographic study in Chapter 7, for example, tried to elucidate some of the choices made by today’s metal artisans in Islamic North Africa. However, particularly for technological studies of societies and cultures long past, the choices made by the individuals or groups are often difficult to tease out because the decisions for a certain technology, rather than against the group of alternatives, are often the only traces of evidence that remain. This dissertation has made an effort to present those traces of evidence -- historical, archaeological and ethnographic -- in an interpretation of the decisions of the relevant social groups; it also has made an effort to describe the social relationships between the relevant groups, as technologies are embedded within their social interactions. By exploring different knowledge cultures surrounding North African metallurgy spanning from the seventh century to the present, I have developed a technological framework of the meanings of metals in early Islamic Maghribi society.

Each stage of a reconstruction of a technology focuses on a problem as perceived by a relevant social group. The meanings of the artifacts involved change with each new
problem as the nature of each artifact is seen to worsen, ameliorate, or solve the perceived problem. These problems, and the solutions to them that were either employed or rejected, demonstrate how the knowledge cultures surrounding the technology have both an ever-changing and a fixed character.

The literature within the knowledge culture of metallurgy has described relationships between technological practices and systems of belief. The works of Herbert (1993) on rituals and gender roles in early 20th century sub-Saharan iron smelting, Nash (1979) on contemporary Bolivian tin mining, and Reichel-Dolmatoff (1981) on the meaning of minerals and metals to Colombian Indians are just a few examples of how belief systems influence metallurgical practices. Through their research, these authors discovered that metallurgical understanding is an interpretation of the meaning and process of the technology, as filtered through the unifying themes embedded within the society in which the technology is practiced. These systems, however, are not codified, and as such are subject to change based upon the contextual situations of the practitioners of the beliefs. Each of the above examples has been affected by the problem of globalization; the context in which the belief system was practiced is changing, making the practices, and in some cases the belief system, superfluous to the changing society. But because change was introduced into these belief systems, we are able to gain insight into the hidden properties and processes that either helped or hindered maintaining the system. By focusing on disturbances to the systems when studying them, Herbert, Nash, and Reichel-Dolmatoff each yielded insight into the meanings attributed by the relevant social groups to the technology or artifact or knowledge culture under their study.
The study presented here incorporates a belief system -- Islam -- that is codified and yet is part of a changing society. In this case, the belief system encouraged a paradigm shift in the views and use of metals, which in turn provided a grounding for the religion and the culture. My research demonstrates these links between metallurgical use and these unifying themes of Islam. As a formal religion, its basic tenets in the forms of the Qurʾān and aHādīth are fixed. Simultaneously, the religion allows flexibility in its observation and practice; the innovations of our modern, global society necessitate this. However, the amount of variability is always in check by the ‘ulamā’, the high Islamic religious scholars, to ensure that bid’a, reprehensible or un-Islamic innovations, are not adopted. That a portion of this study is fixed, or maintains meta-static equilibrium, simply presents a different level of complexity.

All studies involving religion are complex: “It is a matter of discovering just what sorts of beliefs and practices support what sorts of faith under what sorts of conditions” (Geertz 1968:1). But if religion is viewed as a knowledge culture and studied in context with other knowledge cultures, some of the layers of complexity fall away. The Social/Cultural Construction of Technology (SCOT) model allows for such a study, by examining the relevant social groups that effect and affect the design of the knowledge culture and by studying the interpretive flexibility of these social groups on the knowledge culture.

The SCOT model’s “technological frame” is a theoretical concept “used by the analyst to order data and to facilitate the interpretation of the interactions within a relevant social group” (Bijker 1997:124). Like other abstract concepts, the technological
frame is “most effectively used when the analyst focuses on situation of instability, controversy, and change”; by doing so, the problems, and the solutions which are devised to answer them, can be interpreted (Bijker 1997:124). The requirements to be met by these problems’ solutions involve examination of the current theories of the time, the tacit knowledge held by the relevant social groups, and the procedures used to test the effectiveness of these solutions. Each stage of the technological frame seeks to examine the design methods and the criteria of the solutions to answer these problems, and the practices of the relevant social groups in implementing the solution. Through such an examination, the SCOT model enables the analyst to gauge the degree of technological change. Simultaneously, the SCOT model allows for the analyst to account for the technology’s stability, and it makes possible for the resulting technological frame “to show how constancy and continuity exist in history, and under what conditions they exist” (Bijker 1997:14).

Each stage of this dissertation focused on a problem as perceived by a relevant social group. The restructuring of the increasingly polarized society of the wealthy and the disenfranchised was a problem for the community as a whole. Maintaining money in circulation and effectively incorporating newly opened regions into the faith was a dilemma for the governing bodies. Relating the diversity of the Islamic experiences to those masses who as yet had not participated in the pilgrimage was a difficulty taken on by the intellectual travellers, while creating an experiential expression of Islam through Sufism to make more charismatic and popular the formal and prescribed religious knowledge was, perhaps, one of the issues the alchemist wanted to resolve. And trying to
hold on to traditional values in an increasingly globalized community is the crisis of the Fèsī metal artisan of today.

As artifact and technology, the metals and the processes through which they had been manipulated were the indicators used to gauge reaction to these perceived problems. The answer to a self-serving society was the implementation of a new body of law that reoriented how metals were supposed to be used. The response to hoarding was the implementation of a new monetary system, while the exchange and flow of money was a means of spreading the ideals of the faith. The divide between the ‘ulamā’ and the mystics was met with the expressions of works and faith toward perfection of both self and metal. The reaction to the cultural clash of tradition and modernity is expressed in the forms of metal produced, the decline in the local demand and the increased market for tourists, and the stories related by those who work and vend those metals.

Each of these solutions either respected the current beliefs of the time or altered them, and thus altered the trajectory of subsequent ways of thinking. The understanding of the meaning of metals was expressed by the relevant social groups in how they were used, and the effectiveness of these solutions was measured through the cohesiveness of the Islamic communities. In this reconstruction, each part of the technological frame brought to light the objectives of the relevant social groups and the reasoning they employed towards creating, increasing, and maintaining a new social order. The solutions employed by the relevant social groups illustrate the fixed and variable nature of metallurgical knowledge cultures in the Islamic Maghrib and serve as the basis for developing the technological frame of the meaning of metals in the region.
8.2 Social/Cultural Construction of Technology (SCOT) Revisited

The previous chapters have presented different ways of knowing by examining the interactions of culture, science, and metallurgical technology within the early Islamic Maghrib. The development of our argument follows a staircase-like structure. The prehistory of Islam sets the stage. Prior to the advent of Islam in A.D. 610, the focus in the Arabian Peninsula was on the accumulation of wealth, through trade and interest on exchanges. The increasingly mercantile-oriented society in Mecca was drawing away from the tribal values that supported the disenfranchised in the community: the orphaned and the widowed. Muhammed, through his personal experience and interactions, understood and could sympathize with the marginalized. The message revealed to him, that he brought forth to the Meccan society, was one that strove to reorient the focus of the community from the immediate physical gains of the Here-and-Now to the rewards of the Afterlife. The perceived problem of an overly-materialistic society misusing precious metals for the purposes of financial and personal gain was answered with an absolute directive from God, the Qur’ān. To further this directive, the prophet Muhammed embodied, through action and word, God’s law.

The instances of metals in the Qur’ān served to shape practices surrounding social welfare and the economy, and were useful in illustrating the rewards of a life in the faith and practice of Islam and the consequences to those Nonbelievers. Zakāt, the third Pillar of Islam, recognizes that almsgiving is essential in the purification of both money and self; it allows the giver to restrain himself from greed and recognize others’ suffering, and allows the receiver to purify himself from the debasement of jealousy towards others
of more comfortable financial means. The consequences of those who denied the faith were clearly spelled out; the graphic details of the use of iron implements of punishment and torture present a dire picture for those to whom the message had been revealed but were led astray by the secular world. For those who embraced Islam, God’s behest of gifts of gold and silver in the Afterlife are to be greater than they could imagine. The compilation of these mentions of metals in the Qur’ān established the basis of our knowledge culture, the elements of our technological frame.

After the revelation of the Qur’ān, the ‘āmma, the Community of Believers who broke with the old familial ties and developed a new tribe based on faith, opened up new areas to Islam through various means. The initial warning and promise of the Hereafter took hold to varying degrees in the areas far removed from the Arabian Peninsula, in part because the rapid expansion of the Islamic empire, to the Far East and to the west in the Maghrib and Andalusia by the end of the seventh century, did not offer the inhabitants of these areas much incentive to alter their existing lifestyles. The problem of how to form a unified body politic in the Islamic western periphery needed to be addressed.

With the development of the shari‘a, the body of Islamic law, by the eighth century, the utility of Islam increased, especially in the arena of trade. The sunna, the recorded actions and sayings of the prophet Muhammed, especially the aHādīth, narrations of the life of the Muslim prophet and what he approved, empowered the followers of Islam with a relatively consistent framework for use in interactions with others. The spread of Islam from the urban areas of trade to the countryside was enhanced with this normative structure. The implementation of uniform exchange rates
and a code of law prohibiting usury perhaps increased the receptiveness to Islam among those Berber traders who previously had no use for the religion. Indeed, it possibly solved the universally-difficult problem of whether or not to adopt a new religion or to maintain one’s current belief structure.

Metals, in the form of currency, were employed as political and economic markers in the efforts to solve the problem of a unified Islamic state; in the eighth and ninth centuries, the Idrisid dynasty established a permanent Islamic presence in the Maghrib’s western periphery through this strategy. Currency was the material culture through which the empire could express its mining interests; the issues surrounding the need for a bimetal system of gold and silver were dogmatically-motivated and were expressed through the need to acquire both gold and silver. The relevant social groups that exercised control over these enterprises were the heads-of-state who, through their efforts to maintain the exchange rates between gold and silver, could simultaneously uphold and lawfully circumvent the tenets of the Qur’ān and the aHādīth. Further, through their desire to establish control over the trade networks of these metals, the government established mints in areas in order to solve problems of currency distribution and in order to establish a physically permanent government presence in the region. The coins produced from these mints further addressed the problem of a unified polity by acting as written documents identifying the mints established by the state, and addressing the expected degrees of affiliation to the religion for the particular region in which they were struck. The restrictiveness in the legends in the gold dinār from the East compared
to the inclusiveness of those minted in the western periphery during the first half of the eighth century attest to the efforts of the newly established region to form a unified state.

By the tenth and eleventh centuries, other social groups were making decisions which would ultimately shape the meaning of metals. Among them were the ‘ulamā’, the high Islamic religious scholars, and those who developed *riHalāt*, chronicles of travels. The problem of change was inevitable in the expansionist Islamic state. The variability in regional schools of thought is evident in the records of the different ways of how aHādīth relating to metals were being applied throughout the regions of Islam. The Persian dining experience related by Ibn Battūta confirms this regional variability.

While the *riHalāt* introduced societies to the knowledge cultures and innovations of other communities far removed from their experiences, the ‘ulamā’ addressed these innovations, interpreted them within the context of the sharī‘a, and ensured that bid‘a would not be practiced. By the tenth century, the consensus of the ‘ulamā’ was that principles and details of the sharī‘a had been fully addressed and that *ijtihād*, the exercise of applying informed human reasoning to particulars not addressed in the qur‘ān, was no longer desirable nor necessary. The problem of the rigidity of the ‘ulamā’ religious knowledge, ‘ilm, was countered by the growing popularity of Sufi experiential knowledge, *ma‘rifa*. This Islamic mysticism was a response to the problem of worldliness and materialism near the core of power of the Islamic empire in Damascus.

Instead of one worldview of Islam, the previous application of which served to ultimately unite the empire, Sufism addressed the individual’s problem of how to relate to God and encouraged an understanding of Islam on a personal level. Linking the unification of self
with God to the arts of material “purification” enabled many to see and incorporate works and faith toward perfection in their lives.

The interpretive flexibility of metals within Islam, is no better evidenced than in the resulting (re)encoding of alchemy. Alchemy was the embodiment of the metallurgical transcendent experience. Foremost, it was a search to unearth the mysteries of life; its secondary goal, contingent upon the first, was a pursuit to understand the formation of inanimate, often metal, substances. The transformation of self in an effort to achieve union and communion with God was reflected in the efforts to transform lead into gold. The application of a science was, in part, the solution to the problem of the separation between individual and God. The compilation of metallurgical texts was, perhaps, also a means of uniting scientific, technological, and religious knowledge.

The connections between God and metals from the viewpoints of many different authors are compiled in *al-dawHa al-mushtabika fī DawābiT dār al-sika*, The Intricate Tree in the Realm of the House of Minting. This document, printed in the fourteenth century, presents a collection of articles written at different periods in the Islamic state and represents the ideas concerning metallurgy, held by social groups of various eras, which endured over time. The document also represents the fourteenth-century perspective of the technologies of mining, refining, and purifying certain metals and the minting of gold and silver coinage – the stabilization of the meaning of metals at that point in Maghribi history. The text includes not only descriptions of these technologies, but also instructions on how relevant social groups -- merchants and consumers, chemists and assayers, mint supervisors and workers -- should use, treat, and handle
metals appropriately. The text also addresses the problem of metals and coinage debasement and points out possible and potential relevant social groups involved in this illegal practice. The original publication of *The Intricate Tree* represents ideals for a body of knowledge concerning metals for that time.

While the textual sources of Qur’an and aHādīth, the travelogues, and *The Intricate Tree* allowed us to reconstruct the ideas surrounding metallurgy in theory, the excavated metal evidence allows us to examine the ideas concerning metallurgy in practice. The archaeological survey of the eighth- to eleventh-century site of al-Basra, Morocco, provided a sampling of concrete evidence of the ways and means that metals were employed during the early Islamic Maghrib. While the archaeological record is biased towards those metals that survived centuries of internment, the information made available by the remaining artifacts and the metallurgical facilities afford us a glimpse of the technologies known to metal artisans, the spatial organization of their industry, and the stylistic aesthetic which the artisans and their consumers desired. The artifact can represent an example of the closure and stabilization of the technology in the context of the relevant social group that created it. For example, the ratio of 2 silver:110 copper earrings suggests that at least a localized interpretation of the aHādīth concerning conspicuous consumption may have been exercised.

The ethnographic study of the Fèsī metal artisans allowed us a condensed view of the meanings of these metal objects produced in Islamic society. The stories the metal artisans related not only encapsulated their concerns about the longevity of their art’s practice in a society on the verge of globalization, but also revealed the enduring themes
founded in at the onset of Islamic culture. Through these modern-day views, we can reflect on the fixity and flexibility of the Maghribi metallurgy knowledge culture and directly see links between the metal actors who craft and vend goods, supervise and strike coins, seek gold and self-purification, and record knowledge; and the metal arenas of the souk, the minting house, the government; and the schools of thought and experience. These relevant social groups examined in this dissertation were concerned with the problems of social malaise and redemption, commodity exchange and economic standards, political presence and religious inclusion and exclusivity, job security and family cohesion, and tourism. The symmetry and continuity among these knowledge cultures form the vectors which create the seamless web in this reconstruction of early Islamic Maghribi metallurgy.

The requirements for a theory of technological development incorporate change and continuity, symmetry, actors and structure, and a seamless web (Bijker 1997:13). The history of technology developed here meets these requirements in presenting a conceptual framework based on the reconstruction of metallurgical technology within the context of early Islam in the Maghrib that allows for the technical continuity and stability of the meanings of metals, while presenting the modes by which technical change took place. By explaining the useful function of a metal as a result of its socio-technical development and not its cause, i.e., through changes in its use and meaning in response to a social problem rather than it being the root of social change, the SCOT model enabled an examination of the social group-oriented and -contingent aspects of metallurgical change, as well as those aspects which are structurally-constrained, through religious
doctrine, or otherwise. By utilizing the SCOT model to develop a technological frame that recognizes the connections between the social, the technical, the political, and other knowledge cultures, this reconstruction provides a basis for further expansion of the seamless web of early Islamic Maghribi metallurgy, addressing a variety of questions concerning incentives for the development of this technology.

8.3 Future Research

The previous chapters have led to other vectors of interest in the range of literature and material culture which have yet to be explored.

Archaeometric examination of Maghribi metals can reveal more information. The case study of coinage presented in Chapter 3 yielded information based upon the external characteristics of the coins. By obtaining quantitative information on the material composition of Maghribi coins, and the consistencies of these characteristics between individual coins, in light of our knowledge of dynasty and mint, we could further examine the influence (or dependence) of a dynasty on a particular region. Archaeometric study of the coins recovered during the al-Basra, Morocco excavations could, potentially, add to this body of knowledge.

Archaeometric study of the other archaeological materials can also help in developing a reconstruction of early Islamic Maghribi metallurgy. Chapter 6 presented a descriptive study of the excavated materials. By examining the metal’s material composition, with the knowledge of the material composition of the known mining sources, we can perhaps trace the materials used to their sources. Examination of cross
sections of the metal artifacts by scanning electron microscopy can reveal construction techniques employed by the metal artisans.

Finally, an analogy of forming an *isnād*, or chain of construction, of *Hadīth* can be used to form *asānīd* (plural of *isnād*) for the written knowledge culture of metals in Islam. By examining the written works, in their temporal and spatial contexts, we can understand the motives for certain works to be produced. We can also determine contemporaries of metallurgical literature, through which we can backwards trace the disseminators of metallurgical information. This work can only be facilitated through the translation of other metallurgical documents from Arabic (and possibly Greek and Latin) into the modern languages used by the researchers. Indeed, the fourteenth-century Maghribi Arabic used in *The Intricate Tree* posed a high degree of difficulty in developing an accurate translation for some passages. The rewards of translating and developing *asānīd* for metallurgical treatises, however, could add significantly to our knowledge cultures of other technologies in numerous ways, and add to the development of past and future reconstructions.
APPENDIX A: Glossary of Arabic Terms Used

‘āmma عامة Literally, “general public”; Community of Believers; The first Community of Believers is significant in that they broke with familial ties and developed a tribe based on faith.

ָaya آية (pl. ayāt آيات) A verse within the qur’ān, literally, “miracle”

bāb باب Door or gateway, especially into a walled city

bid‘a بذعة Reprehensible or un-Islamic innovations

Da‘īf ضعيف Weak; used in reference to a Hadīth to denote the confirmation of the isnād

darīja درجة The form of colloquial Arabic spoken in Morocco, which incorporates Modern Standard Arabic with words and aspects from French and Berber languages

dīnār دينار (pl. danānīr دنانير) Gold coinage minted in the Maghrib and the Middle East

dirham درهم (pl. darāhim دراهام) Silver coinage minted in the Maghrib and the Middle East

fils فلس (pl. fulūs فلوس) Copper coinage minted in the Maghrib and the Middle East

Ferraille A French word meaning “scrap metal”; now used as the name of the New Iron-Working Place outside of Fès, Morocco
FiSāH حفصاء Formal written Arabic, used in the Qur`ān and other formal addresses, especially governmental

Hadīd حديد Iron; sometimes used as a catchphrase for all metals (see ma`ādin)

Hadīth حديث (pl. aHādīth الحدائط) A narration of the life of the prophet Muhammed and what he approved; the words of the prophet Muhammed; The compilation of this narration formed after confirmation of matn and isnād (for example, the Hadīth, SaHiH al-bukhāri)

Haj حج Fifth Pillar of Islam; a pilgrimage to Mecca, Saudi Arabia. A Haji (masculine) or Hajia (feminine) is a person who is or has partaken in a Haj.

Hasan حسن Fair and/or acceptable; used in reference to a Hadīth to denote the confirmation of the isnād

Hisba حسبة Market inspection; reckoning

‘ilm علم Knowledge, especially religious knowledge

ijtihād اجتهاد The exercise of applying informed human reasoning to particulars not addressed in the Qur`ān

imām إمام imam; prayer leader; leader, chief, master; yardstick

isnād استناد (pl. asānīd الاستنادات) Chain of construction; frequently used to describe the accounting of the chain of reporters of a Hadīth

jāhilīya جاهلية The time before Islam was revealed; literally, “the Age of Ignorance”
jihād  جهاد  Literally, “struggle”

kabīr  كبير  Large; major

khumaysa  خميسة  “Hand of Fatima” (referring to Fatima Zahra, daughter of Muhammed), the charm of which is supposed to ward off the Evil Eye

maʿdin  معدن  (pl. maʿādin  معدان)  Mine, ore, mineral, and/or metal; frequently used in reference to iron; from the root meaning Eden or Paradise

madrasa  مدرسة  (pl. madāris  مدارس)  A religious boarding school associated with a mosque; a school; also, a school of thought

maʿrifah  معرفة  Experiential knowledge, especially that of mystics (see also Sūfiya)

matn  متن  The text of a Hadīth

mallaH  ملاح  Ghetto of Moroccan cities; the Jewish Quarter in the Medina Fès, which traditionally housed the homes and businesses of Jews

mithqāl  مثقال  (pl. mathāqīyl  مثاقيل)  Unit of measure; one mithqāl = 60-70 grains of medium sized barley whose husks are intact

muHtasib  محتسب  The market inspector; a legal functionary who inspects weights and measures and the quality of goods in the marketplace

nafaqa  نفقة  (pl. nifāq  نفاق)  Expense, disbursement, maintainence, support

qusāraya  قصارية  A fortified building where foreign goods were stored; a key feature in a medina
**qur‘ān**  The Qur’an; The irrefutable word of God delivered to the Arabic-speaking peoples via the angel Gabriel to Muhammed; literally “recitation”

**rabaT**  fortress

**rashīdun**  رشيدون Literature, “the Right Guided”; the first four successors to the head of the Islamic community after the death of Muhammed

**ribH**  ربح Excessive interest or usury

**riHla**  رحلة (pl. riHalāt) Travel or journey; a chronicle or other record made by a traveler

**Sadaqa**  صدقة Voluntary alms-giving

**Saghīyra**  صغيرة Small; minor

**saHa**  ساحة Small neighborhood gathering place, town square; The saHa Seffarene, or Yellow Square, is one of the copper artisan areas

**SaHiH**  صحيح Sound, true, genuine, authentic; used in reference to Bukhari’s Hadīth to denote the confirmation of the isnād

**shahāda**  شهادة First Pillar of Islam; the proclamation of the faith that there is no god but God and that Muhammed is the messenger of God

**sharī’a**  الشريعة Literally, “straight path to God”; the Sharia Law; the body of Islamic law based on the five main sources of the qur‘ān, the Sunnah, the aHādīth, legal analogies based the qur‘ān and the aHādīth, and legal decisions that arise from a consensus of the ‘ulamā’
ٍ

*Sifa صفة (pl. Sifāت صفات) Features; physical appearance

Sinā‘a al-taqlīdiya صناعة التقليدية Traditional industry

Sūfiya الصوفية Sufism, Islamic Mysticism

Sufr صفر To be yellow in color; brass

Sunna سنة Oral history of the prophet Muhammed; Recorded actions and sayings of the prophet Muhammed later established as legally binding precedents (see sharī‘a)

Sūra سورة (pl. suwar سور) A chapter of the qur‘ān

taHta تحت Below

tal‘a تلعة Literally, “stream” or “extension”; used in the names tal‘a kabīra (Major Stream) and tal‘a Saghīra (Minor Stream) to describe the two largest streets through the Medina Fès

‘ulamā’ علماء Literally “those who know”; high Islamic religious scholars, theologians, and experts in canonical law

Zakāt زكاة Third Pillar of Islam; compulsory almsgiving (see also Sadaqa); charity
APPENDIX B: Mentions of Metals in the *qur'ān*

<table>
<thead>
<tr>
<th>sura,āya</th>
<th>Au</th>
<th>Ag</th>
<th>Fe</th>
<th>Pb</th>
<th>Cu</th>
<th>Context</th>
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</thead>
<tbody>
<tr>
<td>003.014</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td>hoards of gold and silver as among the things coveted by men</td>
</tr>
<tr>
<td>003.075</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td>hoards of gold and a silver coin as goods put in trust and the readiness in their repayment by Believers</td>
</tr>
<tr>
<td>003.091</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>as much gold as the earth contains as ransom from non-Believers</td>
</tr>
<tr>
<td>004.020</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>heap of gold as payment to one wife for replacing her with another</td>
</tr>
<tr>
<td>009.034</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td>those who hoard up gold and silver will have announced to them a grievous penalty</td>
</tr>
<tr>
<td>012.020</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>the selling of Joseph for the low price of a few silver coins/dirhams</td>
</tr>
<tr>
<td>017.050</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>stones or iron, God can raise up anything</td>
</tr>
<tr>
<td>017.093</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a house adorned with gold requested by Nonbelievers as a sign of God's authority</td>
</tr>
<tr>
<td>018.019</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a silver coin for the purchase of food</td>
</tr>
<tr>
<td>018.029</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td>molten lead/brass as metaphor for boiling water</td>
</tr>
<tr>
<td>018.031</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>gold bracelets as adornments for those who achieve Gardens of Eternity</td>
</tr>
<tr>
<td>018.096</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td></td>
<td>blocks of iron used as a barrier with lead/copper/brass poured over it to make the mass impenetrable</td>
</tr>
<tr>
<td>022.021</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>for those who disbelieve, there will be maces of iron (to punish) them</td>
</tr>
<tr>
<td>022.023</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Believers shall be adorned therein with bracelets of gold in the Afterlife</td>
</tr>
<tr>
<td>034.010</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>God made the iron pliant for David</td>
</tr>
<tr>
<td>034.012</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>God made a font of molten brass to flow for Solomon</td>
</tr>
<tr>
<td>035.033</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Believers shall be adorned with bracelets of gold in the Afterlife</td>
</tr>
<tr>
<td>043.033</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>of the things assigned, in this world's life, to those who disbelieve in God are silver roofs for their houses and silver stairways</td>
</tr>
<tr>
<td>043.034</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(see previous) and silver doors to their houses and thrones of silver</td>
</tr>
<tr>
<td>043.035</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(see previous) and adornments of gold</td>
</tr>
<tr>
<td>043.033</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The Pharaoh of Egypt asks of Moses, &quot;why are not gold bracelets bestowed on him?&quot;</td>
</tr>
<tr>
<td>043.071</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To those who enter the Garden of Eden, and their wives, will be passed round dishes and goblets of gold</td>
</tr>
<tr>
<td>044.045</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The Zaqqum tree fruit will be the food of the sinful and like molten brass; it will boil in their insides.</td>
</tr>
<tr>
<td>055.035</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In denying the favors of the Lord, heat of fire and flash of brass will be sent and ye will not escape.</td>
</tr>
<tr>
<td>056.015</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The companions on the right hand of God (will be) on Thrones encrusted (with gold and precious stones)</td>
</tr>
<tr>
<td>057.025</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>We have (God) made the iron in order to determine if men have conducted themselves in equity</td>
</tr>
<tr>
<td>070.008</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On The Day of Judgment, the sky will be like molten brass/copper</td>
</tr>
<tr>
<td>076.015</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>for the Believers, in the Afterlife, vessels of silver will be brought round to them</td>
</tr>
<tr>
<td>076.016</td>
<td>■</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(see previous) and goblets, bright as glass, but made of silver</td>
</tr>
<tr>
<td>076.021</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td></td>
<td>(see previous) and they will wear raiment of fine green silk and gold embroidery and bracelets of silver</td>
</tr>
</tbody>
</table>
APPENDIX C: Mentions of Metals and Alloy in *Hadīth, SahīH al-bukhāri* [by volume, book, and number (V.B.N)]

<table>
<thead>
<tr>
<th>V.B.N</th>
<th>Au</th>
<th>Ag</th>
<th>Fe</th>
<th>Cu</th>
<th>Narrator</th>
<th>Hadith (Schmidt 2004)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.03.065</td>
<td></td>
<td>■</td>
<td></td>
<td></td>
<td>Anas bin Malik</td>
<td>Once the Prophet wrote a letter or had an idea of writing a letter. The Prophet was told that they (rulers) would not read letters unless they were sealed. So the Prophet got a <strong>silver</strong> ring made with &quot;Muhammad Allah's Apostle&quot; engraved on it. As if I were just observing its white glitter in the hand of the Prophet.</td>
</tr>
<tr>
<td>01.04.196</td>
<td></td>
<td>■</td>
<td></td>
<td></td>
<td>'Abdullah bin Zaid</td>
<td>Once Allah's Apostle came to us and we brought out water for him in a <strong>brass</strong> pot. He performed ablution thus: He washed his face thrice, and his forearms to the elbows twice, then passed his wet hands lightly over the head from front to rear and brought them to front again and washed his feet (up to the ankles).</td>
</tr>
<tr>
<td>01.04.197</td>
<td></td>
<td>■</td>
<td></td>
<td></td>
<td>'Aisha</td>
<td>When the ailment of the Prophet became aggravated and his disease became severe, he asked his wives to permit him to be nursed (treated) in my house. So they gave him the permission. Then the Prophet came (to my house) with the support of two men, and his legs were dragging on the ground, between 'Abbas, and another man.&quot; 'Ubayd-Ullah (the sub narrator) said, &quot;I informed 'Abdullah bin 'Abbas of what 'Aisha said. Ibn 'Abbas said: 'Do you know who was the other man?' I replied in the negative. Ibn 'Abbas said, &quot;He was 'Ali (bin Abi Talib).&quot; 'Aisha further said, &quot;When the Prophet came to my house and his sickness became aggravated he ordered us to pour seven skins full of water on him, so that he might give some advice to the people. So he was seated in a Mikhdab (<strong>brass</strong> tub) belonging to Hafsa, the wife of the Prophet. Then, all of us started pouring water on him from the water skins till he beckoned to us to stop and that we have done (what he wanted us to do). After that he went out to the people.&quot;</td>
</tr>
<tr>
<td>01.04.234</td>
<td></td>
<td>■</td>
<td></td>
<td></td>
<td>Abu Qilaba</td>
<td>Anas said, &quot;Some people of 'Ukl or 'Uraina tribe came to Medina and its climate did not suit them. So the Prophet ordered them to go to the herd of (Milch) camels and to drink their milk and urine (as a medicine). So they went as directed and after they became healthy, they killed the shepherd of the Prophet and drove away all the camels. The news reached the Prophet early in the morning and he sent (men) in their pursuit and they were captured and brought at noon. He then ordered to cut their hands and feet (and it was done), and their eyes were branded with heated pieces of <strong>iron</strong>, They were put in 'Al-Harra' and when they asked for water, no water was given to them.&quot; Abu Qilaba said, &quot;Those people committed theft and murder, became infidels after embracing Islam and fought against Allah and His Apostle.&quot;</td>
</tr>
</tbody>
</table>
| 01.10.532 |    | ■  |    |    | Salim bin 'Abdullah | My father said, "I heard Allah's Apostle saying, 'The period of your stay as compared to the previous nations is like the period equal to the time between the 'Asr prayer and sunset. The people of the Torah were given the Torah and they acted (upon it) till mid-
day then they were exhausted and were given one Qirat (of gold) each. And then the people of the Gospel were given the Gospel and they acted (upon it) till the 'Asr prayer then they were exhausted and were given one Qirat each. And then we were given the Qur'an and we acted (upon it) till sunset and we were given two Qirats each. On that the people of both the scriptures said, 'O our Lord! You have given them two Qirats and given us one Qirat, though we have worked more than they.' Allah said, 'Have I usurped some of your right?' They said, 'No.' Allah said: "That is my blessing I bestow upon whomsoever I wish."

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Source</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.12.810</td>
<td>I offered the 'Asr prayer behind the Prophet at Medina. When he had finished the prayer with Taslim, he got up hurriedly and went out by crossing the rows of the people to one of the dwellings of his wives. The people got scared at his speed. The Prophet came back and found the people surprised at his haste and said to them, &quot;I remembered a piece of gold lying in my house and I did not like it to divert my attention from Allah's worship, so I have ordered it to be distributed (in charity).&quot;</td>
<td>'Uqba</td>
<td>-</td>
</tr>
<tr>
<td>02.22.312</td>
<td>I offered the 'Asr prayer with the Prophet and after finishing the prayer with Taslim he got up quickly and went to some of his wives and then came out. He noticed the signs of astonishment on the faces of the people caused by his speed. He then said, &quot;I remembered while I was in my prayer that a piece of gold was lying in my house and I disliked that it should remain with us throughout the night, and so I have ordered it to be distributed.</td>
<td>'Uqba bin Al-Harith</td>
<td>-</td>
</tr>
<tr>
<td>02.23.331</td>
<td>Allah's Apostle ordered us to do seven things and forbade us to do other seven. He ordered us: to follow the funeral procession, to visit the sick, to accept invitations, to help the oppressed, to fulfill the oaths, to return the greeting and to reply to the sneezer: (saying, &quot;May Allah be merciful on you,&quot; provided the sneezer says, &quot;All the praises are for Allah,&quot;). He forbade us to use silver utensils and dishes and to wear golden rings, silk (clothes), Dibaj (pure silk cloth), Qissi and Istabraq (two kinds of silk cloths).</td>
<td>Al-Bara' bin 'Azib</td>
<td>-</td>
</tr>
<tr>
<td>02.23.422</td>
<td>The Prophet said, &quot;When a human being is laid in his grave and his companions return and he even hears their foot steps, two angels come to him and make him sit and ask him: What did you use to say about this man, Muhammad? He will say: I testify that he is Allah's slave and His Apostle. Then it will be said to him, 'Look at your place in the Hell-Fire. Allah has given you a place in Paradise instead of it.' &quot; The Prophet added, &quot;The dead person will see both his places. But a non-believer or a hypocrite will say to the angels, 'I do not know, but I used to say what the people used to say! It will be said to him, 'Neither did you know nor did you take the guidance (by reciting the Quran).' Then he will be hit with an iron hammer between his two ears, and he will cry and that cry will be heard by whatever approaches him except human beings and jinns.&quot;</td>
<td>Anas</td>
<td>-</td>
</tr>
<tr>
<td>Date</td>
<td>Author</td>
<td>Text</td>
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<tr>
<td>02.23.445</td>
<td>Thabit bin Ad-Dahk</td>
<td>The Prophet (p.b.u.h) said, &quot;Whoever intentionally swears falsely by a religion other than Islam, then he is what he has said, (e.g. if he says, 'If such thing is not true then I am a Jew,' he is really a Jew). And whoever commits suicide with piece of iron will be punished with the same piece of iron in the Hell Fire.&quot; Narrated Jundab the Prophet said, &quot;A man was inflicted with wounds and he committed suicide, and so Allah said: My slave has caused death on himself hurriedly, so I forbid Paradise for him.&quot;</td>
<td></td>
</tr>
<tr>
<td>02.23.456</td>
<td>Anas bin Malik</td>
<td>Allah's Apostle said, &quot;When (Allah's) slave is put in his grave and his companions return and he even hears their footsteps, two angels come to him and make him sit and ask, 'What did you use to say about this man (i.e. Muhammad)?&quot; The faithful Believer will say, 'I testify that he is Allah's slave and His Apostle.' Then they will say to him, 'Look at your place in the Hell Fire; Allah has given you a place in Paradise instead of it.' So he will see both his places.&quot; (Qatada said, &quot;We were informed that his grave would be made spacious.&quot; Then Qatada went back to the narration of Anas who said;) Whereas a hypocrite or a non-believer will be asked, &quot;What did you use to say about this man.&quot; He will reply, &quot;I do not know; but I used to say what the people used to say.&quot; So they will say to him, &quot;Neither did you know nor did you take the guidance (by reciting the Quran).&quot; Then he will be hit with iron hammers once, that he will send such a cry as everything near to him will hear, except Jinns and human beings. (See Hadith No. 422).</td>
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<tr>
<td>02.23.468</td>
<td>Samura bin Jundab</td>
<td>Whenever the Prophet finished the (morning) prayer, he would face us and ask, &quot;Who amongst you had a dream last night?&quot; So if anyone had seen a dream he would narrate it. The Prophet would say: &quot;Ma sha'a-llah&quot; (An Arabic maxim meaning literally, 'What Allah wished,' and it indicates a good omen.) One day, he asked us whether anyone of us had seen a dream. We replied in the negative. The Prophet said, &quot;But I had seen (a dream) last night that two men came to me, caught hold of my hands, and took me to the Sacred Land (Jerusalem). There, I saw a person sitting and another standing with an iron hook in his hand pushing it inside the mouth of the former till it reached the jaw-bone, and then tore off one side of his cheek, and then did the same with the other side; in the mean-time the first side of his cheek became normal again and then he repeated the same operation again. I said, 'What is this?' They told me to proceed on and we went on till we came to a man lying flat on his back, and another man standing at his head carrying a stone or a piece of rock, and crushing the head of the lying man, with that stone. Whenever he struck him, the stone rolled away. The man went to pick it up and by the time he returned to him, the crushed head had returned to its normal state and the man came back and struck him again (and so on). I said, 'Who is this?' They told me to proceed on; so we proceeded on and passed by a</td>
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</tbody>
</table>
hole like an oven; with a narrow top and wide bottom, and the fire was kindling underneath that hole. Whenever the fire-flame went up, the people were lifted up to such an extent that they about to get out of it, and whenever the fire got quieter, the people went down into it, and there were naked men and women in it. I said, 'Who is this?' They told me to proceed on. So we proceeded on till we reached a river of blood and a man was in it, and another man was standing at its bank with stones in front of him, facing the man standing in the river. Whenever the man in the river wanted to come out, the other one threw a stone in his mouth and caused him to retreat to his original position; and so whenever he wanted to come out the other would throw a stone in his mouth, and he would retreat to his original position. I asked, 'What is this?' They told me to proceed on and we did so till we reached a well-flourished green garden having a huge tree and near its root was sitting an old man with some children. (I saw) Another man near the tree with fire in front of him and he was kindling it up. Then they (i.e. my two companions) made me climb up the tree and made me enter a house, better than which I have ever seen. In it were some old men and young men, women and children.

Then they took me out of this house and made me climb up the tree and made me enter another house that was better and superior (to the first) containing old and young people. I said to them (i.e. my two companions), 'You have made me ramble all the night. Tell me all about that I have seen.' They said, 'Yes. As for the one whose cheek you saw being torn away, he was a liar and he used to tell lies, and the people would report those lies on his authority till they spread all over the world. So, he will be punished like that till the Day of Resurrection. The one whose head you saw being crushed is the one whom Allah had given the knowledge of Quran (i.e. knowing it by heart) but he used to sleep at night (i.e. he did not recite it then) and did not use to act upon it (i.e. upon its orders etc.) by day; and so this punishment will go on till the Day of Resurrection. And those you saw in the hole (like oven) were adulterers (those men and women who commit illegal sexual intercourse). And those you saw in the river of blood were those dealing in Riba (usury). And the old man who was sitting at the base of the tree was Abraham and the little children around him were the offspring of the people. And the one who was kindling the fire was Malik, the gate-keeper of the Hell-fire. And the first house in which you have gone was the house of the common believers, and the second house was of the martyrs. I am Gabriel and this is Michael. Raise your head.' I raised my head and saw a thing like a cloud over me. They said, 'That is your place.' I said, 'Let me
enter my place.' They said, 'You still have some life which you have not yet completed, and when you complete (that remaining portion of your life) you will then enter your place.' 

<table>
<thead>
<tr>
<th>02.24.487</th>
<th></th>
<th>Abu Said</th>
<th>Allah’s Apostle (p.b.u.h) said, &quot;No Zakat is due on property mounting to less than five Uqiyas (of silver), and no Zakat is due on less than five camels, and there is no Zakat on less than five Wasqs.&quot; (A Wasqs equals 60 Sa's) &amp; (1 Sa=3 K gms App.)</th>
</tr>
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<tbody>
<tr>
<td>02.24.488</td>
<td></td>
<td>Zaid bin Wahab</td>
<td>I passed by a place called Ar-Rabadha and by chance I met Abu Dhar and asked him, &quot;What has brought you to this place?&quot; He said, &quot;I was in Sham and differed with Muawiya on the meaning of (the following verses of the Quran): 'They who hoard up gold and silver and spend them not in the way of Allah.' (9.34). Muawiya said, 'This verse is revealed regarding the people of the scriptures.&quot; I said, It was revealed regarding us and also the people of the scriptures.&quot; So we had a quarrel and Mu'awiya sent a complaint against me to 'Uthman. 'Uthman wrote to me to come to Medina, and I came to Medina. Many people came to me as if they had not seen me before. So I told this to 'Uthman who said to me, &quot;You may depart and live nearby if you wish.&quot; That was the reason for my being here for even if an Ethiopian had been nominated as my ruler, I would have obeyed him .</td>
</tr>
<tr>
<td>02.24.489</td>
<td></td>
<td>Al-Ahnaf bin Qais</td>
<td>While I was sitting with some people from Quraish, a man with very rough hair, clothes, and appearance came and stood in front of us, greeted us and said, &quot;Inform those who hoard wealth, that a stone will be heated in the Hell-fire and will be put on the nipples of their breasts till it comes out from the bones of their shoulders and then put on the bones of their shoulders till it comes through the nipples of their breasts the stone will be moving and hitting.&quot; After saying that, the person retreated and sat by the side of the pillar, I followed him and sat beside him, and I did not know who he was. I said to him, &quot;I think the people disliked what you had said.&quot; He said, &quot;These people do not understand anything, although my friend told me.&quot; I asked, &quot;Who is your friend?&quot; He said, &quot;The Prophet said (to me), 'O Abu Dhar! Do you see the mountain of Uhud?' And on that I (Abu Dhar) started looking towards the sun to judge how much remained of the day as I thought that Allah's Apostle wanted to send me to do something for him and I said, 'Yes!' He said, 'I do not love to have gold equal to the mountain of Uhud unless I spend it all (in Allah's cause) except three Dinars (pounds). These people do not understand and collect worldly wealth. No, by Allah, Neither I ask them for worldly benefits nor am I in need of their religious advice till I meet Allah, The Honorable, The Majestic.' &quot;</td>
</tr>
<tr>
<td>02.24.495</td>
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<td>Abu Musa</td>
<td>Thy Prophet (p.b.u.h) said, &quot;A time will come upon the people when a person will wander about with gold as Zakat and will not find anybody to accept it, and one man will be seen followed by forty women to be their guardian because of scarcity of men</td>
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and great number of women."

| 02.24.503 | ■ | Ma'n bin Yazid | My grandfather, my father and I gave the pledge of allegiance to Allah's Apostle. The Prophet got me engaged and then got me married. One day I went to the Prophet with a complaint. My father Yazid had taken some gold coins for charity and kept them with a man in the mosque (to give them to the poor) But I went and took them and brought them to him (my father). My father said, "By Allah! I did not intend to give them to you. " I took (the case) to Allah's Apostle On that Allah's Apostle said, "O Yazid! You will be rewarded for what you intended. O Man! Whatever you have taken is yours."

| 02.24.510 | ■ | 'Uqba bin Al-Harith | Once the Prophet offered the 'Asr prayer and then hurriedly went to his house and returned immediately. I (or somebody else) asked him (as to what was the matter) and he said, "I left at home a piece of gold which was from the charity and I disliked to let it remain a night in my house, so I got it distributed . "

| 02.24.523 | ■ | Abu Huraira | The Prophet said, "The example of a miser and an alms-giver is like the example of two persons wearing iron cloaks." Allah's Apostle also said, "The example of an alms-giver and a miser is like the example of two persons who have two iron cloaks on them from their breasts to their collar bones, and when the alms-giver wants to give in charity, the cloak becomes capacious till it covers his whole body to such an extent that it hides his fingertips and covers his footprints (obliterates his tracks). (1) And when the miser wants to spend, it (the iron cloak) sticks and every ring gets stuck to its place and he tries to widen it, but it did not become wide.

| 02.24.526 | ■ | Abu Sa'id Al-Khudri | Allah's Apostle said, "There is no Zakat on less than five camels and also there is no Zakat on less than five Awaq (of silver). (5 Awaq = 22 Fransa Riyals of Yamen or 200 Dirhams.) And there is no Zakat on less than five Awsuq. (A special measure of food-grains, and one Wasq equals 60 Sa's.) (For gold 20, Dinars i.e. equal to 12 Guinea English. No Zakat for less than 12 Guinea (English) of gold or for silver less than 22 Fransa Riyals of Yamen.)

| 02.24.534 | ■ | Anas | When Abu Bakr; sent me to (collect the Zakat from) Bahrein, he wrote to me the following:-- (In the name of Allah, the Beneficent, the Merciful). These are the orders for compulsory charity (Zakat) which Allah's Apostle had made obligatory for every Muslim, and which Allah had ordered His Apostle to observe: Whoever amongst the Muslims is asked to pay Zakat accordingly, he should pay it (to the Zakat collector) and whoever is asked more than that (what is specified in this script) he should not pay it; for twenty-four camels or less, sheep are to be paid as Zakat; for every five camels one sheep is to be paid, and if there are between twenty-five to thirty-five camels, one Bint Makhad is to be paid; and if they are between thirty-six to forty-five (camels), one Bint Labun is to be paid; and if they are between forty-six to sixty (camels), one Hiqqa is to be paid; and if the number is between sixty-one to seventy-five (camels), one Jadh'a is
to be paid; and if the number is between seventy-six to ninety (camels), two Bint Labuns are to be paid; and if they are from ninety-one to one-hundred-and-twenty (camels), two Hiqqas are to be paid; and if they are over one-hundred-and-twenty (camels), for every forty (over one-hundred-and-twenty) one Bint Labun is to be paid, and for every fifty camels (over one-hundred-and-twenty) one Hiqqa is to be paid; and who ever has got only four camels, has to pay nothing as Zakat, but if the owner of these four camels wants to give something, he can. If the number of camels increases to five, the owner has to pay one sheep as Zakat. As regards the Zakat for the (flock) of sheep; if they are between forty and one-hundred-and-twenty sheep, one sheep is to be paid; and if they are between one-hundred-and-twenty to two hundred (sheep), two sheep are to be paid; and if they are between two-hundred to three-hundred (sheep), three sheep are to be paid; and for over three-hundred sheep, for every extra hundred sheep, one sheep is to be paid as Zakat. And if somebody has got less than forty sheep, no Zakat is required, but if he wants to give, he can. For silver the Zakat is one-fortieth of the lot (i.e. 2.5%), and if its value is less than two-hundred Dirhams, Zakat is not required, but if the owner wants to pay he can."

02.24.538  ■  Abu Said Al-Khudri  
Allah's Apostle said, "No Zakat is imposed on less than five Awsuq of dates; no Zakat is imposed on less than five Awaq of silver, and no Zakat is imposed on less than five camels."

02.24.561  ■  Abu Said Al-Khudri  
The Prophet said, "There is no Zakat on less than five Awsuq (of dates), or on less than five camels, or on less than five Awaq of silver." (22 Yameni Riyals Faransa).

02.24.577  ■  Anas  
Some people from 'Uraina tribe came to Medina and its climate did not suit them, so Allah's Apostle (p.b.u.h) allowed them to go to the herd of camels (given as Zakat) and they drank their milk and urine (as medicine) but they killed the shepherd and drove away all the camels. So Allah's Apostle sent (men) in their pursuit to catch them, and they were brought, and he had their hands and feet cut, and their eyes were branded with heated pieces of iron and they were left in the Harra (a stony place at Medina) biting the stones. (See Hadith No. 234, Vol. 1)

02.26.664  ■  Abu Wail  
(One day) I sat along with Shaiba on the chair inside the Ka'ba. He (Shaiba) said, "No doubt, Umar sat at this place and said, 'I intended not to leave any yellow (i.e. gold) or white (i.e. silver) (inside the Ka'ba) undistributed.' I said to 'Umar, 'But your two companions (i.e. The Prophet and Abu Bakr) did not do so.' 'Umar said, They are the two persons whom I always follow.'"

03.30.095  ■  Abu Huraira  
Allah's Apostle said, "I was ordered to migrate to a town which will swallow (conquer) other towns and is called Yathrib and that is Medina, and it turns out (bad) persons as a furnace removes the impurities of iron."

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<tr>
<th>Time</th>
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<th>Story</th>
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<tr>
<td>03.30.108</td>
<td>Zaid bin Thabit</td>
<td>When the Prophet went out for (the battle of) Uhud, some of his companions (hypocrites) returned (home). A party of the believers remarked that they would kill those (hypocrites) who had returned, but another party said that they would not kill them. So, this Divine Inspiration was revealed: &quot;Then what is the matter with you that you are divided into two parties concerning the hypocrites.&quot; (4.88) The Prophet said, &quot;Medina expels the bad persons from it, as fire expels the impurities of iron.&quot;</td>
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<td>03.34.264</td>
<td>Ibrahim bin Sad from his father from his grand-father</td>
<td>Abdur Rahman bin Auf said, &quot;When we came to Medina as emigrants, Allah's Apostle established a bond of brotherhood between me and Sad bin Ar-Rabi'. Sad bin Ar-Rabi' said (to me), 'I am the richest among the Ansar, so I will give you half of my wealth and you may look at my two wives and whichever of the two you may choose I will divorce her, and when she has completed the prescribed period (before marriage) you may marry her.' Abdur-Rahman replied, &quot;I am not in need of all that. Is there any market-place where trade is practiced?&quot; He replied, &quot;The market of Qainuqa.&quot; Abdur-Rahman went to that market the following day and brought some dried butter-milk (yogurt) and butter, and then he continued going there regularly. Few days later, 'Abdur-Rahman came having traces of yellow (scent) on his body. Allah's Apostle asked him whether he had got married. He replied in the affirmative. The Prophet said, 'Whom have you married?' He replied, 'A woman from the Ansar.' Then the Prophet asked, 'How much did you pay her?' He replied, '(I gave her) a gold piece equal in weigh to a date stone (or a date stone of gold)! The Prophet said, 'Give a Walima (wedding banquet) even if with one sheep.'&quot;</td>
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| 03.34.265 | Anas                          | When Abdur-Rahman bin Auf came to Medina, the Prophet established a bond of brotherhood between him and Sad bin Ar-Rabi al-Ansari. Sad was a rich man, so he said to 'Abdur-Rahman, "I will give you half of my property and will help you marry." 'Abdur-Rahman said (to him), "May Allah bless you in your family and property. Show me the market." So 'Abdur-Rahman did not return from the market) till he gained some dried buttermilk (yoghurt) and butter (through trading). He brought that to his household. We stayed for some-time (or as long as Allah wished), and then Abdur-Rahman came, scented with yellowish perfume. The Prophet said (to him) "What is this?" He replied, "I got married to an Ansari woman." The Prophet asked, "What did you pay her?" He replied, "A gold stone or gold equal to the weight of a date stone." The Prophet said (to him), "Give a wedding banquet even if with one sheep."

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<th>Time</th>
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<tr>
<td>03.34.270</td>
<td>'Adi bin Hatim</td>
<td>I asked Allah's Apostle about Al Mirad (i.e. a sharp-edged piece of wood or a piece of wood provided with a piece of iron used for hunting). He replied, &quot;If the game is hit by its sharp edge, eat it, and if it is hit by its broad side, do not eat it, for it has been beaten to death.&quot; I asked, &quot;O Allah's Apostle! I release my dog by the name of Allah and find with it at the game, another dog on which I have not mentioned the name of Allah, and...&quot;</td>
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I do not know which one of them caught the game." Allah's Apostle said (to him), 'Don't eat it as you have mentioned the name of Allah on your dog and not on the other dog.'

<table>
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<tr>
<th>03.34.282</th>
<th>'Aisha</th>
<th>The Prophet purchased food grains from a Jew on credit and mortgaged his iron armor to him.</th>
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<tr>
<td>03.34.310</td>
<td>Jabir bin 'Abdullah</td>
<td>I was with the Prophet in a Gha'zwa (Military Expedition) and my camel was slow and exhausted. The Prophet came up to me and said, &quot;O Jabir.&quot; I replied, &quot;Yes?&quot; He said, &quot;What is the matter with you?&quot; I replied, &quot;My camel is slow and tired, so I am left behind.&quot; So, he got down and poked the camel with his stick and then ordered me to ride. I rode the camel and it became so fast that I had to hold it from going ahead of Allah's Apostle. He then asked me, have you got married?&quot; I replied in the affirmative. He asked, &quot;A virgin or a matron?&quot; I replied, &quot;I married a matron.&quot; The Prophet said, &quot;Why have you not married a virgin, so that you may play with her and she may play with you?&quot; Jabir replied, &quot;I have sisters (young in age) so I liked to marry a matron who could collect them all and comb their hair and look after them.&quot; The Prophet said, &quot;You will reach, so when you have arrived (at home), I advise you to associate with your wife (that you may have an intelligent son).&quot; Then he asked me, &quot;Would you like to sell your camel?&quot; I replied in the affirmative and the Prophet purchased it for one Uqiya of gold. Allah's Apostle reached before me and I reached in the morning, and when I went to the mosque, I found him at the door of the mosque. He asked me, &quot;Have you arrived just now?&quot; I replied in the affirmative. He said, &quot;Leave your camel and come into (the mosque) and pray two Rakat.&quot; I entered and offered the prayer. He told Bilal to weigh and give me one Uqiya of gold. So Bilal weighed for me fairly and I went away. The Prophet sent for me and I thought that he would return to me my camel which I hated more than anything else. But the Prophet said to me, &quot;Take your camel as well as its price.&quot;</td>
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<tr>
<td>03.34.344</td>
<td>Az-Zuhri from Malik bin Aus</td>
<td>that the latter said, &quot;Who has change?&quot; Talha said, &quot;I (will have change) when our store-keeper comes from the forest.&quot;</td>
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<td>03.34.377</td>
<td>'Urwa</td>
<td>Aisha said, &quot;Buraira came to me and said, 'I have agreed with my masters to pay them nine Uqiyas (of gold) (in installments) one Uqiya per year; please help me.' I said, 'I am ready to pay the whole amount now provided your masters agree that your Wala will be</td>
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for me.' So, Buraira went to her masters and told them about that offer but they refused to accept it. She returned, and at that time, Allah's Apostle was sitting (present). Buraira said, 'I told them of the offer but they did not accept it and insisted on having the Wala.' The Prophet heard that. 'Aisha narrated the whole story to the Prophet. He said to her, "Buy her and stipulate that her Wala' would be yours as the Wala' is for the manumitted." 'Aisha did so. Then Allah's Apostle stood up in front of the people, and after glorifying Allah he said, "Amma Badu (i.e. then after)! What about the people who impose conditions which are not in Allah's Book (Laws)? Any condition that is not in Allah's Book (Laws) is invalid even if they were one hundred conditions, for Allah's decisions are the right ones and His conditions are the strong ones (firmer) and the Wala' will be for the manumitted."

| 03.34.382 | Ibn Shihab | that Malik bin Aus said, "I was in need of change for one-hundred Dinars. Talha bin 'Ubaid-Ullah called me and we discussed the matter, and he agreed to change (my Dinars). He took the gold pieces in his hands and fidgeted with them, and then said, "Wait till my storekeeper comes from the forest." 'Umar was listening to that and said, "By Allah! You should not separate from Talha till you get the money from him, for Allah's Apostle said, 'The selling of gold for gold is Riba (usury) except if the exchange is from hand to hand and equal in amount, and similarly, the selling of wheat for wheat is Riba (usury) unless it is from hand to hand and equal in amount, and the selling of barley for barley is usury unless it is from hand to hand and equal in amount, and dates for dates, is usury unless it is from hand to hand and equal in amount""

| 03.34.383 | Abu Bakra | Allah's Apostle said, "Don't sell gold for gold unless equal in weight, nor silver for silver unless equal in weight, but you could sell gold for silver or silver for gold as you like.""

| 03.34.384 | Abu Said | (Concerning exchange) that he heard Allah's Apostle saying, "Do not sell gold for gold unless equal in weight, and do not sell silver unless equal in weight."

| 03.34.385 | Abu Said Al-Khudri | Allah's Apostle said, "Do not sell gold for gold unless equivalent in weight, and do not sell less amount for greater amount or vice versa; and do not sell silver for silver unless equivalent in weight, and do not sell less amount for greater amount or vice versa and do not sell gold or silver that is not present at the moment of exchange for gold or silver that is present."

| 03.34.387 | Abdur-Rahman bin Abu Bakra | that his father said, "The Prophet forbade the selling of gold for gold and silver for silver except if they are equivalent in weight, and allowed us to sell gold for silver and vice versa as we wished."

| 03.34.388 | Abdur-Rahman bin Abu Bakra | that his father said, "The Prophet forbade the selling of gold for gold and silver for silver except if they are equivalent in weight, and allowed us to sell gold for silver and vice versa as we wished."
Ibn 'Umar

The Prophet said, "While three persons were walking, rain began to fall and they had to enter a cave in a mountain. A big rock rolled over and blocked the mouth of the cave. They said to each other, 'Invoke Allah with the best deed you have performed (so Allah might remove the rock)'. One of them said, 'O Allah! My parents were old and I used to go out for grazing (my animals). On my return I would milk (the animals) and take the milk in a vessel to my parents to drink. After they had drunk from it, I would give it to my children, family and wife. One day I was delayed and on my return I found my parents sleeping, and I disliked to wake them up. The children were crying at my feet (because of hunger). That state of affairs continued till it was dawn. O Allah! If You regard that I did it for Your sake, then please remove this rock so that we may see the sky.' So, the rock was moved a bit. The second said, 'O Allah! You know that I was in love with a cousin of mine, like the deepest love a man may have for a woman, and she told me that I would not get my desire fulfilled unless I paid her one-hundred Dinars (gold pieces). So, I struggled for it till I gathered the desired amount, and when I sat in between her legs, she told me to be afraid of Allah, and asked me not to deflower her except rightfully (by marriage). So, I got up and left her. O Allah! If You regard that I did if for Your sake, kindly remove this rock.' So, two-thirds of the rock was removed. Then the third man said, 'O Allah! No doubt You know that once I employed a worker for one Faraq (three Sa's) of millet, and when I wanted to pay him, he refused to take it, so I sowed it and from its yield I bought cows and a shepherd. After a time that man came and demanded his money. I said to him: Go to those cows and the shepherd and take them for they are for you. He asked me whether I was joking with him. I told him that I was not joking with him, and all that belonged to him. O Allah! If You regard that I did it sincerely for Your sake, then please remove the rock.' So, the rock was removed completely from the mouth of the cave."

Abu Al-Bakhtari

asked Ibn Umar about Salam (the fruits of) date-palms. He replied, "The Prophet forbade the sale of dates till their benefit becomes evident and fit for eating and also the sale of silver (for gold) on credit." I asked Ibn 'Abbas about Salam for dates and he replied, "The Prophet forbade the sale of dates till they were fit for eating and could be estimated."

Abu Al-Bakhtari

I asked Ibn 'Umar about Salam for dates. Ibn 'Umar replied, "The Prophet forbade the sale (the fruits) of datepalms until they were fit for eating and also forbade the sale of silver for gold on credit." I also asked Ibn 'Abbas about it. Ibn 'Abbas replied, "The Prophet forbade the sale of dates till they were fit for eating, and could be weighed." I asked him, "What is to be weighed (as the dates are on the trees)?" A man sitting by Ibn 'Abbas said, "It means till they are cut and stored."

'Aisha

Allah's Apostle bought some foodstuff (barley) from a Jew on credit and mortgaged his
iron armor to him (the armor stands for a guarantor).

03.35.454

Al-A'mash

We argued at Ibrahim's dwelling place about mortgaging in Salam. He said, "Aisha said, 'The Prophet bought some foodstuff from a Jew on credit and the payment was to be made by a definite period, and he mortgaged his iron armor to him.'"

03.36.472

'Abdullah bin 'Umar

I heard Allah's Apostle saying, 'Three men from among those who were before you, set out together till they reached a cave at night and entered it. A big rock rolled down the mountain and closed the mouth of the cave. They said (to each other), Nothing could save you Tom this rock but to invoke Allah by giving referenda to the righteous deed which you have done (for Allah's sake only).’ So, one of them said, 'O Allah! I had old parents and I never provided my family (wife, children etc.) with milk before them. One day, by chance I was delayed, and I came late (at night) while they had slept. I milked the sheep for them and took the milk to them, but I found them sleeping. I disliked to provide my family with the milk before them. I waited for them and the bowl of milk was in my hand and I kept on waiting for them to get up till the day dawned. Then they got up and drank the milk. O Allah! If I did that for Your Sake only, please relieve us from our critical situation caused by this rock.' So, the rock shifted a little but they could not get out."

The Prophet added, "The second man said, 'O Allah! I had a cousin who was the dearest of all people to me and I wanted to have sexual relations with her but she refused. Later she had a hard time in a famine year and she came to me and I gave her one-hundred-and-twenty Dinars on the condition that she would not resist my desire, and she agreed. When I was about to fulfill my desire, she said: It is illegal for you to outrage my chastity except by legitimate marriage. So, I thought it a sin to have sexual intercourse with her and left her though she was the dearest of all the people to me, and also I left the gold I had given her. O Allah! If I did that for Your Sake only, please relieve us from the present calamity.' So, the rock shifted a little more but still they could not get out."

The Prophet added, "Then the third man said, 'O Allah! I employed few laborers and I paid them their wages with the exception of one man who did not take his wages and went away. I invested his wages and I got much property thereby. (Then after some time) he came and said to me: O Allah's slave! Pay me my wages. I said to him: All the camels, cows, sheep and slaves you see, are yours. He said: O Allah's slave! Don't
mock at me. I said: I am not mocking at you. So, he took all the herd and drove them away and left nothing. O Allah! If I did that for Your Sake only, please relieve us from the present suffering.' So, that rock shifted completely and they got out walking.

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<th>03.38.504</th>
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<th>Jabir bin 'Abdullah</th>
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| I was accompanying the Prophet on a journey and was riding a slow camel that was lagging behind the others. The Prophet passed by me and asked, "Who is this?" I replied, "Jabir bin 'Abdullah." He asked, "What is the matter, (why are you late)?" I replied, "I am riding a slow camel." He asked, "Do you have a stick?" I replied in the affirmative. He said, "Give it to me." When I gave it to him, he beat the camel and rebuked it. Then that camel surpassed the others thenceforth. The Prophet said, "Sell it to me." I replied, "It is (a gift) for you, O Allah's Apostle." He said, "Sell it to me. I have bought it for four Dinars (gold pieces) and you can keep on riding it till Medina." When we approached Medina, I started going (towards my house). The Prophet said, "Where are you going?" I said, "I have married a widow." He said, "Why have you not married a virgin to fondle with each other?" I said, "My father died and left daughters, so I decided to marry a widow (an experienced woman) (to look after them)." He said, "Well done." When we reached Medina, Allah's Apostle said, "O Bilal, pay him (the price of the camel) and give him extra money." Bilal gave me four Dinars and one Qirat extra. (A sub-narrator said): Jabir added, "The extra Qirat of Allah's Apostle never parted from me." The Qirat was always in Jabir bin 'Abdullah's purse.

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<tr>
<th>03.39.520</th>
<th>■</th>
<th>Rafi' bin Khadij</th>
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| We worked on farms more than anybody else in Medina. We used to rent the land at the yield of specific delimited portion of it to be given to the landlord. Sometimes the vegetation of that portion was affected by blights etc., while the rest remained safe and vice versa, so the Prophet forbade this practice. At that time gold or silver were not used (for renting the land). If they provided the seeds, they would get so-and-so much. Al-Hasan said, "There is no harm if the land belongs to one but both spend on it and the yield is divided between them." Az-Zuhri had the same opinion. Al-Hasan said, "There is no harm if cotton is picked on the condition of having half the yield." Ibrahim, Ibn Siain, 'Ata', Al-Hakam, Az-Zuhri and Qatada said, "There is no harm in giving the yarn to the weaver to weave into cloth on the basis that one-third or one-fourth (or any other portion) of the cloth is given to the weaver for his labor." Ma'am said, "There is no harm in hiring animals for a definite (fixed) period on the basis that one-third or one-fourth of the products carried by the animals is given to the owner of the animals."

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<th>03.41.571</th>
<th>■</th>
<th>Al-Amash</th>
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| When we were with Ibrahim, we talked about mortgaging in deals of Salam. Ibrahim narrated from Aswad that 'Aisha had said, "The Prophet bought some foodstuff on credit from a Jew and mortgaged an iron armor to him."
| 03.41.573 | Abu Dhar | Once, while I was in the company of the Prophet, he saw the mountain of Uhud and said, "I would not like to have this mountain turned into **gold** for me unless nothing of it, not even a single Dinar remains of it with me for more than three days (i.e. I will spend all of it in Allah's Cause), except that Dinar which I will keep for repaying debts." Then he said, "Those who are rich in this world would have little reward in the Hereafter except those who spend their money here and there (in Allah's Cause), and they are few in number." Then he ordered me to stay at my place and went not far away. I heard a voice and intended to go to him but I remembered his order, "Stay at your place till I return." On his return I said, "O Allah's Apostle! (What was) that noise which I heard?" He said, "Did you hear anything?" I said, "Yes." He said, "Gabriel came and said to me, 'Whoever amongst your followers dies, worshipping none along with Allah, will enter Paradise.' " I said, "Even if he did such-and-such things (i.e. even if he stole or committed illegal sexual intercourse)" He said, "Yes."

| 03.41.574 | Abu Huraira | Allah's Apostle said, "If I had **gold** equal to the mountain of Uhud, it would not please me that it should remain with me for more than three days, except an amount which I would keep for repaying debts."

| 03.43.662 | Abu Huraira | Allah's Apostle said, "There was an Israeli man called Juraij, while he was praying, his mother came and called him, but he did not respond to her call. He said (to himself) whether he should continue the prayer or reply to his mother. She came to him the second time and called him and said, "O Allah! Do not let him die until he sees the faces of prostitutes." Juraij used to live in a hermitage. A woman said that she would entice Juraij, so she went to him and presented herself (for an evil act) but he refused. She then went to a shepherd and allowed him to commit an illegal sexual intercourse with her and later she gave birth to a boy. She alleged that the baby was from Juraij. The people went to Juraij and broke down his hermitage, pulled him out of it and abused him. He performed ablution and offered the prayer, then he went to the male (baby) and asked him; "O boy! Who is your father?" The baby replied that his father was the shepherd. The people said that they would build for him a hermitage of **gold** but Juraij asked them to make it of mud only."

| 03.46.737 | Aisha | Buraira came (to 'Aisha) and said, "I have made a contract of emancipation with my masters for nine Uqiyas (of **gold**) to be paid in yearly installments. Therefore, I seek your help." 'Aisha said, "If your masters agree, I will pay them the sum at once and free you on condition that your Wala' will be for me." Buraira went to her masters but they refused that offer. She (came back) and said, "I presented to them the offer but they refused, unless the Wala' was for them." Allah's Apostle heard of that and asked me
about it, and I told him about it. On that he said, "Buy and manumit her and stipulate
that the Wala' should be for you, as Wala' is for the liberator." 'Aisha added, "Allah's
Apostle then got up amongst the people, Glorified and Praised Allah, and said, 'Then
after: What about some people who impose conditions which are not present in Allah's
Laws? So, any condition which is not present in Allah's Laws is invalid even if they
were one-hundred conditions. Allah's ordinance is the truth, and Allah's condition is
stronger and more solid. Why do some men from you say, O so-and-so! manumit the
slave but the Wala will be for me? Verily, the Wala is for the liberator.'"

| 03.47.775 | Jabir bin 'Abdullah | sold a camel to the Prophet on one of the journeys. When we reached Medina, he
ordered me to go to the Mosque and offer two Rakat. Then he weighed for me (the
price of the camel in **gold**) and gave an extra amount over it. A part of it remained with
me till it was taken by the army of Sham on the day of Harra." |
| 03.48.848 | Muhammad bin Ali | Jabir bin Abdullah said, "When the Prophet died, Abu Bakr received some property
from Al-Ala bin Al-Hadrami. Abu Bakr said to the people, "Whoever has a money
claim on the Prophet, or was promised something by him, should come to us (so that
we may pay him his right)." Jabir added, "I said (to Abu Bakr), Allah's Apostle
promised me that he would give me this much, and this much, and this much
(scapring his hands three times)." Jabir added, "Abu Bakr counted for me and handed
me five-hundred (**gold** pieces), and then five-hundred, and then five-hundred." |
| 03.50.879 | Jabir | While I was riding a (slow) and tired camel, the Prophet passed by and beat it and
prayed for Allah's Blessings for it. The camel became so fast as it had never been
before. The Prophet then said, "Sell it to me for one Uqiyya (of **gold**)." I said, "No." He
again said, "Sell it to me for one Uqiyya (of **gold**)." I sold it and stipulated that I should
ride it to my house. When we reached (Medina) I took that camel to the Prophet and he
gave me its price. I returned home but he sent for me (and when I went to him) he said,
"I will not take your camel. Take your camel as a gift for you." (Various narrations are
mentioned here with slight variations in expressions relating the condition that Jabir
had the right to ride the sold camel up to Medina). |
| 03.50.889 | Urwa | Aisha said, "Buraira came to me and said, 'My people (masters) have written the
contract for my emancipation for nine Awaq ) of **gold** to be paid in yearly
installments, one Uqiyya per year; so help me." Aisha said (to her), "If your masters
agree, I will pay them the whole sum provided the Wala will be for me." Buraira went
to her masters and told them about it, but they refused the offer and she returned from
them while Allah's Apostles was sitting. She said, "I presented the offer to them, but
they refused unless the Wala' would be for them." When the Prophet heard that and
'Aisha told him about it, he said to her, "Buy Buraira and let them stipulate that her Wala' will be for them, as the Wala' is for the manumitted." 'Aisha did so. After that Allah's Apostle got up amidst the people, Glorified and Praised Allah and said, "What is wrong with some people who stipulate things which are not in Allah's Laws? Any condition which is not in Allah's Laws is invalid even if there were a hundred such conditions. Allah's Rules are the most valid and Allah's Conditions are the most solid. The Wala' is for the manumitted."

04.52.063  ■  Al-Bara  A man whose face was covered with an iron mask (i.e. clad in armor) came to the Prophet and said, "O Allah's Apostle! Shall I fight or embrace Islam first?" The Prophet said, "Embrace Islam first and then fight." So he embraced Islam, and was martyred. Allah's Apostle said, A Little work, but a great reward. "(He did very little (after embracing Islam), but he will be rewarded in abundance)."

04.52.113  ■  Muslim from Abu Aqil from Abu Al-Mutawakkil An-Naji  I called on Jabir bin 'Abdullah Al-Ansari and said to him, "Relate to me what you have heard from Allah's Apostle." He said, "I accompanied him on one of the journeys." (Abu Aqil said, "I do not know whether that journey was for the purpose of Jihad or 'Umra.") "When we were returning," Jabir continued, "the Prophet said, 'Whoever wants to return earlier to his family, should hurry up.' We set off and I was on a black red tainted camel having no defect, and the people were behind me. While I was in that state the camel stopped suddenly (because of exhaustion). On that the Prophet said to me, 'O Jabir, wait!' Then he hit it once with his lash and it started moving on a fast pace. He then said, 'Will you sell the camel?' I replied in the affirmative when we reached Medina, and the Prophet went to the Mosque along with his companions. I, too, went to him after tying the camel on the pavement at the Mosque gate. Then I said to him, 'This is your camel.' He came out and started examining the camel and saying, 'The camel is ours.' Then the Prophet sent some Awaq (i.e. an amount) of gold saying, 'Give it to Jabir.' Then he asked, 'Have you taken the full price (of the camel)\text{"}? I replied in the affirmative. He said, 'Both the price and the camel are for you.'"

04.52.157  ■  Abu Umama  Some people conquered many countries and their swords were decorated neither with gold nor silver, but they were decorated with leather, lead and iron.

04.52.165  ■  'Aisha  Allah's Apostle died while his (iron) armor was mortgaged to a Jew for thirty Sas of barley.

04.52.166  ■  Abu Huraira  The Prophet said, "The example of a miser and the one who gives in charity, is like the example of two men wearing iron cloaks so tightly that their arms are raised forcibly towards their collar-bones. So, whenever a charitable person wants to give in charity, his cloak spreads over his body so much so that it wipes out his traces, but whenever the miser wants to give in charity, the rings (of the iron cloak) come closer to each other and press over his body, and his hands gets connected to his collar-bones. Abu
| 04.52.189 | ■ | Anas | When the Prophet intended to write a letter to the ruler of the Byzantines, he was told that those people did not read any letter unless it was stamped with a seal. So, the Prophet got a **silver** ring-- as if I were just looking at its white glitter on his hand ---- and stamped on it the expression "Muhammad, Apostle of Allah". |
| 04.52.292 | ■ | Aslam | Umar bin Al-Khattab appointed a freed slave of his, called Hunai, manager of the Hima (i.e. a pasture devoted for grazing the animals of the Zakat or other specified animals). He said to him, "O Hunai! Don't oppress the Muslims and ward off their curse (invocations against you) for the invocation of the oppressed is responded to (by Allah); and allow the shepherd having a few camels and those having a few sheep (to graze their animals), and take care not to allow the livestock of 'Abdur-Rahman bin 'Auf and the livestock of ('Uthman) bin 'Affan, for if their livestock should perish, then they have their farms and gardens, while those who own a few camels and those who own a few sheep, if their livestock should perish, would bring their dependents to me and appeal for help saying, 'O chief of the believers! O chief of the believers!' Would I then neglect them? (No, of course). So, I find it easier to let them have water and grass rather than to give them **gold** and **silver** (from the Muslims' treasury). By Allah, these people think that I have been unjust to them. This is their land, and during the pre-Islamic period, they fought for it and they embraced Islam (willingly) while it was in their possession. By Him in Whose Hand my life is! Were it not for the animals (in my custody) which I give to be ridden for striving in Allah's Cause, I would not have turned even a span of their land into a Hima." |
| 04.52.307 | ■ | Abu Huraira | The Prophet got up amongst us and mentioned Al Ghulul, emphasized its magnitude and declared that it was a great sin saying, "Don't commit Ghulul for I should not like to see anyone amongst you on the Day of Resurrection, carrying over his neck a sheep that will be bleating, or carrying over his neck a horse that will be neighing. Such a man will be saying: 'O Allah's Apostle! Intercede with Allah for me,' and I will reply, 'I can't help you, for I have conveyed Allah's Message to you Nor should I like to see a man carrying over his neck, a camel that will be grunting. Such a man will say, 'O Allah's Apostle! Intercede with Allah for me, and I will say, 'I can't help you for I have conveyed Allah's Message to you,' or one carrying over his neck **gold** and **silver** and saying, 'O Allah's Apostle! Intercede with Allah for me,' and I will say, 'I can't help you for I have conveyed Allah's Message to you,' or one carrying clothes that will be fluttering, and the man will say, 'O Allah's Apostle! Intercede with Allah for me.' And I will say, 'I can't help you, for I have conveyed Allah's Message to you.'" |
| 04.52.322 | ■ | Muharib bin Dithar | Jabir bin 'Abdullah said, "When Allah's Apostle arrived at Medina, he slaughtered a camel or a cow." Jabir added, "The Prophet bought a camel from me for two Uqiyas (of..."
<table>
<thead>
<tr>
<th>Source</th>
<th>Page</th>
<th>Tabular Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anas bin Malik</td>
<td>04.53.341</td>
<td>When the cup of Allah's Apostle got broken, he fixed it with a silver wire at the crack. (The sub-narrator, 'Asim said, &quot;I saw the cup and drank (water) in it.&quot; )</td>
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<td>Abu Huraira</td>
<td>04.53.353</td>
<td>The Prophet said, &quot;A prophet amongst the prophets carried out a holy military expedition, so he said to his followers, 'Anyone who has married a woman and wants to consummate the marriage, and has not done so yet, should not accompany me; nor should a man who has built a house but has not completed its roof; nor a man who has sheep or shecamels and is waiting for the birth of their young ones.' So, the prophet carried out the expedition and when he reached that town at the time or nearly at the time of the 'Asr prayer, he said to the sun, 'O sun! You are under Allah's Order and I am under Allah's Order O Allah! Stop it (i.e. the sun) from setting.' It was stopped till Allah made him victorious. Then he collected the booty and the fire came to burn it, but it did not burn it. He said (to his men), 'Some of you have stolen something from the booty. So one man from every tribe should give me a pledge of allegiance by shaking hands with me.' (They did so and) the hand of a man got stuck over the hand of their prophet. Then that prophet said (to the man), 'The theft has been committed by your people. So all the persons of your tribe should give me the pledge of allegiance by shaking hands with me.' The hands of two or three men got stuck over the hand of their prophet and he said, 'You have committed the theft.' Then they brought a head of gold like the head of a cow and put it there, and the fire came and consumed the booty. The Prophet added: Then Allah saw our weakness and disability, so he made booty legal for us.&quot;</td>
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<tr>
<td>Jabir bin 'Abdullah</td>
<td>04.53.390</td>
<td>Allah's Apostle once said to me, &quot;If the revenue of Bahrain came, I would give you this much and this much.&quot; When Allah's Apostle had died, the revenue of Bahrain came, and Abu Bakr announced, &quot;Let whoever was promised something by Allah's Apostle come to me.&quot; So, I went to Abu Bakr and said, &quot;Allah's Apostle said to me, 'If the revenue of Bahrain came, I would give you this much and this much.'&quot; On that Abu Bakr said to me, &quot;Scoop (money) with both your hands.&quot; I scooped money with both my hands and Abu Bakr asked me to count it. I counted it and it was five-hundred gold pieces. The total amount he gave me was one thousand and five hundred (gold pieces.)</td>
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Narrated Anas: Money from Bahrain was brought to the Prophet. He said, "Spread it in
the Mosque." It was the biggest amount that had ever been brought to Allah's Apostle. In the meantime Al-'Abbas came to him and said, "O Allah's Apostle! Give me, for I gave the ransom of myself and Aqil." The Prophet said (to him), "Take." He scooped money with both hands and poured it in his garment and tried to lift it, but he could not and appealed to the Prophet, "Will you order someone to help me in lifting it?" The Prophet said, "No." Then Al-'Abbas said, "Then will you yourself help me carry it?" The Prophet said, "No." Then Al-'Abbas threw away some of the money, but even then he was not able to lift it, and so he again requested the Prophet "Will you order someone to help me carry it?" The Prophet said, "No." Then Al-'Abbas said, "Then will you yourself help me carry it?" The Prophet said, "No." So, Al-'Abbas threw away some more money and lifted it on his shoulder and went away. The Prophet kept on looking at him with astonishment at his greediness till he went out of our sight. Allah's Apostle did not get up from there till not a single Dirham remained from that money.

| 04.54.468 | ■ | ■ | Abu Huraira | Allah's Apostle said, "The first group (of people) who will enter Paradise will be (glittering) like the moon when it is full. They will not spit or blow their noses or relieve nature. Their utensils will be of gold and their combs of gold and silver; in their centers the aloeswood will be used, and their sweat will smell like musk. Everyone of them will have two wives; the marrow of the bones of the wives' legs will be seen through the flesh out of excessive beauty. They (i.e. the people of Paradise) will neither have differences nor hatred amongst themselves; their hearts will be as if one heart and they will be glorifying Allah in the morning and in the evening."

| 04.54.469 | ■ | ■ | Abu Huraira | Allah's Apostle said, "The first batch (of people) who will enter Paradise will be (glittering) like a full moon; and those who will enter next will be (glittering) like the brightest star. Their hearts will be as if the heart of a single man, for they will have no enmity amongst themselves, and everyone of them shall have two wives, each of whom will be so beautiful, pure and transparent that the marrow of the bones of their legs will be seen through the flesh. They will be glorifying Allah in the morning and evening, and will never fall ill, and they will neither blow their noses, nor spit. Their utensils will be of gold and silver, and their combs will be of gold, and the fuel used in their centers will be the aloes-wood, and their sweat will smell like musk."

| 04.55.544 | ■ | ■ | Abu Huraira | Allah's Apostle said, "The first group of people who will enter Paradise, will be glittering like the full moon and those who will follow them, will glitter like the most brilliant star in the sky. They will not urinate, relieve nature, spit, or have any nasal secretions. Their combs will be of gold, and their sweat will smell like musk. The aloes-wood will be used in their centers. Their wives will be houris. All of them will look alike and will resemble their father Adam (in statute), sixty cubits tall."

| 04.55.558 | ■ | ■ | Ibn 'Abbas | The Prophet said, "I have been made victorious with As-Saba (i.e. an easterly wind)
and the people of 'Ad were destroyed by Ad-Dabur (i.e. a westerly wind)." Narrated Abu Said: Ali sent a piece of gold to the Prophet who distributed it among four persons: Al-Aqra' bin Habis Al-Hanzali from the tribe of Mujashi, 'Uyaina bin Badr Al-Fazari, Zaid At-Ta'i who belonged to (the tribe of) Bani Nahban, and 'Alqama bin Ulatha Al-'Amir who belonged to (the tribe of) Bani Kilab. So the Quraish and the Ansar became angry and said, "He (i.e. the Prophet, ) gives the chief of Najd and does not give us." The Prophet said, "I give them) so as to attract their hearts (to Islam)."

Then a man with sunken eyes, prominent checks, a raised forehead, a thick beard and a shaven head, came (in front of the Prophet ) and said, "Be afraid of Allah, O Muhammad!" The Prophet ' said "Who would obey Allah if I disobeyed Him? (Is it fair that) Allah has trusted all the people of the earth to me while, you do not trust me?"

Somebody who, I think was Khalid bin Al-Walid, requested the Prophet to let him chop that man's head off, but he prevented him. When the man left, the Prophet said, "Among the off-spring of this man will be some who will recite the Qur'an but the Qur'an will not reach beyond their throats (i.e. they will recite like parrots and will not understand it nor act on it), and they will renegade from the religion as an arrow goes through the game's body. They will kill the Muslims but will not disturb the idolaters. If I should live up to their time' I will kill them as the people of 'Ad were killed (i.e. I will kill all of them).

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04.55.604

Abu Huraira

The Prophet said, "While Job was naked, taking a bath, a swarm of gold locusts fell on him and he started collecting them in his garment. His Lord called him, 'O Job! Have I not made you rich enough to need what you see? He said, 'Yes, O Lord! But I cannot dispense with your Blessing.'"

04.55.645

Abu Huraira

The Prophet said, "None spoke in cradle but three: (The first was) Jesus, (the second was), there a man from Bani Israel called Juraij. While he was offering his prayers, his mother came and called him. He said (to himself), 'Shall I answer her or keep on praying?' (He went on praying) and did not answer her, his mother said, "O Allah! Do not let him die till he sees the faces of prostitutes." So while he was in his hermitage, a lady came and sought to seduce him, but he refused. So she went to a shepherd and presented herself to him to commit illegal sexual intercourse with her and then later she gave birth to a child and claimed that it belonged to Juraij. The people, therefore, came to him and dismantled his hermitage and expelled him out of it and abused him. Juraij performed the ablution and offered prayer, and then came to the child and said, 'O child! Who is your father?' The child replied, 'The shepherd.' (After hearing this) the people said, 'We shall rebuild your hermitage of gold,' but he said, 'No, of nothing but mud.'(The third was the hero of the following story) A lady from Bani Israel was nursing her child at her breast when a handsome rider passed by her. She said, 'O Allah
'Make my child like him.' On that the child left her breast, and facing the rider said, 'O Allah! Do not make me like him.' The child then started to suck her breast again. (Abu Huraira further said, "As if I were now looking at the Prophet sucking his finger (in way of demonstration.") After a while the people passed by, with a lady slave and she (i.e. the child's mother) said, 'O Allah! Do not make my child like this (slave girl)!', On that the child left her breast and said, 'O Allah! Make me like her.' When she asked why, the child replied, 'The rider is one of the tyrants while this slave girl is falsely accused of theft and illegal sexual intercourse.'

Ibn Umar

Allah's Apostle said, "Once three persons (from the previous nations) were traveling, and suddenly it started raining and they took shelter in a cave. The entrance of the cave got closed while they were inside. They said to each other, 'O you! Nothing can save you except the truth, so each of you should ask Allah's Help by referring to such a deed as he thinks he did sincerely (i.e. just for gaining Allah's Pleasure).’ So one of them said, 'O Allah! You know that I had a laborer who worked for me for one Farq (i.e. three Sas) of rice, but he departed, leaving it (i.e. his wages). I sowed that Farq of rice and with its yield I bought cows (for him). Later on when he came to me asking for his wages, I said (to him), 'Go to those cows and drive them away.' He said to me, 'But you have to pay me only a Farq of rice,' I said to him, 'Go to those cows and take them, for they are the product of that Farq (of rice).’ So he drove them. O Allah! If you consider that I did that for fear of You, then please remove the rock.' The rock shifted a bit from the mouth of the cave. The second one said, 'O Allah, You know that I had old parents whom I used to provide with the milk of my sheep every night. One night I was delayed and when I came, they had slept, while my wife and children were crying with hunger. I used not to let them (i.e. my family) drink unless my parents had drunk first. So I disliked to wake them up and also disliked that they should sleep without drinking it, I kept on waiting (for them to wake) till it dawned. O Allah! If You consider that I did that for fear of you, then please remove the rock.' So the rock shifted and they could see the sky through it. The (third) one said, 'O Allah! You know that I had a cousin (i.e. my paternal uncle's daughter) who was most beloved to me and I sought to seduce her, but she refused, unless I paid her one-hundred Dinars (i.e. gold pieces). So I collected the amount and brought it to her, and she allowed me to sleep with her. But when I sat between her legs, she said, 'Be afraid of Allah, and do not deflower me but legally. I got up and left the hundred Dinars (for her). O Allah! If You consider that I did that for fear of you than please remove the rock. So Allah saved them and they came out (of the cave).’ (This Hadith indicates that one can only ask Allah for help directly or through his performed good deeds. But to ask Allah through dead or absent prophets, saints, spirits, holy men, angels etc. is absolutely forbidden in Islam and it is a kind of..."
<table>
<thead>
<tr>
<th>Page No.</th>
<th>Grade</th>
<th>Author</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>04.56.678</td>
<td>■</td>
<td>Abu Huraira</td>
<td>Allah's Apostle said, &quot;A man bought a piece of land from another man, and the buyer found an earthenware jar filled with gold in the land. The buyer said to the seller, 'Take your gold, as I have bought only the land from you, but I have not bought the gold from you.' The (former) owner of the land said, 'I have sold you the land with everything in it.' So both of them took their case before a man who asked, 'Do you have children?' One of them said, 'I have a boy.' The other said, 'I have a girl.' The man said, 'Marry the girl to the boy and spend the money on both of them and give the rest of it in charity.' &quot;</td>
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<td>04.56.793</td>
<td>■</td>
<td>'Adi bin Hatim</td>
<td>While I was in the city of the Prophet, a man came and complained to him (the Prophet, ) of destitution and poverty. Then another man came and complained of robbery (by highwaymen). The Prophet said, &quot;Adi! Have you been to Al-Hira?&quot; I said, &quot;I haven't been to it, but I was informed about it.&quot; He said, &quot;If you should live for a long time, you will certainly see that a lady in a Howdah traveling from Al-Hira will (safely reach Mecca and) perform the Tawaf of the Ka'ba, fearing none but Allah.&quot; I said to myself, &quot;What will happen to the robbers of the tribe of Tai who have spread evil through out the country?&quot; The Prophet further said. &quot;If you should live long, the treasures of Khosrau will be opened (and taken as spoils).&quot; I asked, &quot;You mean Khosrau, son of Hurrmuz?&quot; He said, &quot;Khosrau, son of Hurrmuz; and if you should live long, you will see that one will carry a handful of gold or silver and go out looking for a person to accept it from him, but will find none to accept it from him. And any of you, when meeting Allah, will meet Him without needing an interpreter between him and Allah to interpret for him, and Allah will say to him: 'Didn't I send a messenger to teach you?' He will say: 'Yes.' Allah will say: 'Didn't I give you wealth and do you favors?' He will say: 'Yes.' Then he will look to his right and see nothing but Hell, and look to his left and see nothing but Hell.&quot; 'Adi further said: I heard the Prophet saying, &quot;Save yourself from the (Hell) Fire even with half a date (to be given in charity) and if you do not find a half date, then with a good pleasant word.&quot; 'Adi added: (later on) I saw a lady in a Howdah traveling from Al-Hira till she performed the Tawaf of the Ka'ba, fearing none but Allah. And I was one of those who opened (conquered) the treasures of Khosrau, son of Hurrmuz. If you should live long, you will see what the Prophet Abu-l-Qasim had said: 'A person will come out with a handful of gold...etc.</td>
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<td>04.56.809</td>
<td>■</td>
<td>Khabbab bin Al-Arat</td>
<td>We complained to Allah's Apostle (of the persecution inflicted on us by the infidels) while he was sitting in the shade of the Ka'ba, leaning over his Burd (i.e. covering sheet). We said to him, &quot;Would you seek help for us? Would you pray to Allah for us?&quot;</td>
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</table>
He said, "Among the nations before you a (believing) man would be put in a ditch that was dug for him, and a saw would be put over his head and he would be cut into two pieces; yet that (torture) would not make him give up his religion. His body would be combed with iron combs that would remove his flesh from the bones and nerves, yet that would not make him abandon his religion. By Allah, this religion (i.e. Islam) will prevail till a traveler from Sana (in Yemen) to Hadramaut will fear none but Allah, or a wolf as regards his sheep, but you (people) are hasty.

| 04.56.817  | Ibn Abbas | Musailama-al-Kadhhab (i.e. the liar) came in the life-time of Allah's Apostle with many of his people (to Medina) and said, "If Muhammad makes me his successor, I will follow him." Allah's Apostle went up to him with Thabit bin Qais bin Shams; and Allah's Apostle was carrying a piece of a date-palm leaf in his hand. He stood before Musailama (and his companions) and said, "If you asked me even this piece (of a leaf), I would not give it to you. You cannot avoid the fate you are destined to, by Allah. If you reject Islam, Allah will destroy you. I think that you are most probably the same person whom I have seen in the dream." Abu Huraira told me that Allah's Apostle; said, "While I was sleeping, I saw (in a dream) two gold bracelets round my arm, and that worried me too much. Then I was instructed divinely in my dream, to blow them off and so I blew them off, and they flew away. I interpreted the two bracelets as symbols of two liars who would appear after me. And so one of them was Al-Ansi and the other was Musailama Al-Kadhhab from Al-Yamama."

| 05.57.022  | Abu Said | The Prophet said, "Do not abuse my companions for if any one of you spent gold equal to Uhud (in Allah's Cause) it would not be equal to a Mud or even a half Mud spent by one of them."

| 05.57.041  | Al-Miswar bin Makhrama | When 'Umar was stabbed, he showed signs of agony. Ibn 'Abbas, as if intending to encourage 'Umar, said to him, "O Chief of the believers! Never mind what has happened to you, for you have been in the company of Allah's Apostle and you kept good relations with him and you parted with him while he was pleased with you. Then you were in the company of Abu Bakr and kept good relations with him and you parted with him (i.e. he died) while he was pleased with you. Then you were in the company of the Muslims, and you kept good relations with them, and if you leave them, you will leave them while they are pleased with you." 'Umar said, (to Ibn "Abbas), "As for what you have said about the company of Allah's Apostle and his being pleased with me, it is a favor, Allah did to me; and as for what you have said about the company of Abu Bakr and his being pleased with me, it is a favor Allah did to me; and concerning my impatience which you see, is because of you and your companions. By Allah! If (at all) I had gold equal to the earth, I would have ransomed myself with it from the Punishment of Allah before I meet Him."
| 05.58.124 | ■ | Sa'd's father | When the emigrants reached Medina. Allah's Apostle established the bond of fraternity between 'Abdur-Rahman and Sad bin Ar-Rabi. Sad said to 'Abdur-Rahman, "I am the richest of all the Ansar, so I want to divide my property (between us), and I have two wives, so see which of the two you like and tell me, so that I may divorce her, and when she finishes her prescribed period (i.e. 'Idda) of divorce, then marry her." Abdur-Rahman said, "May Allah bless your family and property for you; where is your market?" So they showed him the Qainuqa' market. (He went there and) returned with a profit in the form of dried yogurt and butter. He continued going (to the market) till one day he came, bearing the traces of yellow scent. The Prophet asked, "What is this (scent)?" He replied, "I got married." The Prophet asked, "How much Mahr did you give her?" He replied, "I gave her a date-stone of gold or a golden date-stone." (The narrator, Ibrahim, is in doubt as to which is correct.) |
| 05.58.125 | ■ | Anas | When 'Abdur-Rahman bin 'Auf came to us, Allah's Apostle made a bond of fraternity between him and Sad bin Ar-Rabi' who was a rich man, Sad said, "The Ansar know that I am the richest of all of them, so I will divide my property into two parts between me and you, and I have two wives; see which of the two you like so that I may divorce her and you can marry her after she becomes lawful to you by her passing the prescribed period (i.e. 'Idda) of divorce. 'Abdur Rahman said, "May Allah bless you your family (i.e. wives) for you." (But 'Abdur-Rahman went to the market) and did not return on that day except with some gain of dried yogurt and butter. He went on trading just a few days till he came to Allah's Apostle bearing the traces of yellow scent over his clothes. Allah's Apostle asked him, "What is this scent?" He replied, "I have married a woman from the Ansar." Allah's Apostle asked, "How much Mahr have you given?" He said, "A date-stone weight of gold or a golden date-stone." The Prophet said, "Arrange a marriage banquet even with a sheep." |
| 05.58.158 | ■ | Qais binUbud | While I was sitting in the Mosque of Medina, there entered a man (Abdullah bin Salam) with signs of solemnity over his face. The people said, "He is one of the people of Paradise." He prayed two light Rakat and then left. I followed him and said, "When you entered the Mosque, the people said, 'He is one of the people of Paradise.' " He said, "By Allah, one ought not say what he does not know; and I will tell you why. In the lifetime of the Prophet I had a dream which I narrated to him. I saw as if I were in a garden." He then described its extension and greenery. He added: In its center there was an iron pillar whose lower end was fixed in the earth and the upper end was in the sky, and at its upper end there was a (ring-shaped) hand-hold. I was told to climb it. I said, "I can't." "Then a servant came to me and lifted my clothes from behind and I climbed till I reached the top (of the pillar). Then I got hold of the hand-hold, and I was told to hold it tightly, then I woke up and (the effect of) the hand-hold was in my hand. I
narrated al I that to the Prophet who said, 'The garden is Islam, and the hand-hold is the Most Truth-worthy Hand-Hold. So you will remain as a Muslim till you die.' The narrator added: "The man was 'Abdullah bin Salam."

| 05.58.191 | Khabbaba | I came to the Prophet while he was leaning against his sheet cloak in the shade of the Ka'ba. We were suffering greatly from the pagans in those days. I said (to him), "Will you invoke Allah (to help us)?" He sat down with a red face and said, "(A believer among) those who were before you used to be combed with iron combs so that nothing of his flesh or nerves would remain on his bones; yet that would never make him desert his religion. A saw might be put over the parting of his head which would be split into two parts, yet all that would never make him abandon his religion. Allah will surely complete this religion (i.e. Islam) so that a traveler from Sana to Hadra-maut will not be afraid of anybody except Allah." (The sub-narrator, Baiyan added, "Or the wolf, lest it should harm his sheep.")

| 05.58.227 | Abbas bin Malik | Malik bin Sasaa said that Allah's Apostle described to them his Night Journey saying, "While I was lying in Al-Hatim or Al-Hijr, suddenly someone came to me and cut my body open from here to here." I asked Al-Jarud who was by my side, "What does he mean?" He said, "It means from his throat to his pubic area," or said, "From the top of the chest." The Prophet further said, "He then took out my heart. Then a gold tray of Belief was brought to me and my heart was washed and was filled (with Belief) and then returned to its original place. Then a white animal which was smaller than a mule and bigger than a donkey was brought to me." (On this Al-Jarud asked, "Was it the Buraq, O Abu Hamza?" I (i.e. Anas) replied in the affirmative). The Prophet said, "The animal's step (was so wide that it) reached the farthest point within the reach of the animal's sight. I was carried on it, and Gabriel set out with me till we reached the nearest heaven.

When he asked for the gate to be opened, it was asked, 'Who is it?' Gabriel answered, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has Muhammad been called?' Gabriel replied in the affirmative. Then it was said, 'He is welcomed. What an excellent visit his is!' The gate was opened, and when I went over the first heaven, I saw Adam there. Gabriel said (to me), 'This is your father, Adam; pay him your greetings.' So I greeted him and he returned the greeting to me and said, 'You are welcomed, O pious son and pious Prophet.' Then Gabriel ascended with me till we reached the second heaven. Gabriel asked for the gate to be opened. It was asked, 'Who is it?' Gabriel answered, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has he been called?' Gabriel answered in the affirmative. Then it was said, 'He is welcomed. What an
excellent visit his is!' The gate was opened.

When I went over the second heaven, there I saw Yahya (i.e. John) and 'Isa (i.e. Jesus) who were cousins of each other. Gabriel said (to me), 'These are John and Jesus; pay them your greetings.' So I greeted them and both of them returned my greetings to me and said, 'You are welcomed, O pious brother and pious Prophet.' Then Gabriel ascended with me to the third heaven and asked for its gate to be opened. It was asked, 'Who is it?' Gabriel replied, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has he been called?' Gabriel replied in the affirmative. Then it was said, 'He is welcomed, what an excellent visit his is!' The gate was opened, and when I went over the third heaven there I saw Joseph. Gabriel said (to me), 'This is Joseph; pay him your greetings.' So I greeted him and he returned the greeting to me and said, 'You are welcomed, O pious brother and pious Prophet.' Then Gabriel ascended with me to the fourth heaven and asked for its gate to be opened. It was asked, 'Who is it?' Gabriel replied, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has he been called?' Gabriel replied in the affirmative. Then it was said, 'He is welcomed, what an excellent visit his is!'

The gate was opened, and when I went over the fourth heaven, there I saw Idris. Gabriel said (to me), 'This is Idris; pay him your greetings.' So I greeted him and he returned the greeting to me and said, 'You are welcomed, O pious brother and pious Prophet.' Then Gabriel ascended with me to the fifth heaven and asked for its gate to be opened. It was asked, 'Who is it?' Gabriel replied, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has he been called?' Gabriel replied in the affirmative. Then it was said, 'He is welcomed, what an excellent visit his is! So when I went over the fifth heaven, there I saw Harun (i.e. Aaron), Gabriel said, (to me). This is Aaron; pay him your greetings.' I greeted him and he returned the greeting to me and said, 'You are welcomed, O pious brother and pious Prophet.' Then Gabriel ascended with me to the sixth heaven and asked for its gate to be opened. It was asked, 'Who is it?' Gabriel replied, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has he been called?' Gabriel replied in the affirmative. It was said, 'He is welcomed. What an excellent visit his is!'

When I went over the sixth heaven, there I saw Moses. Gabriel said (to me), 'This is Moses; pay him your greeting. So I greeted him and he returned the greetings to me
and said, 'You are welcomed, O pious brother and pious Prophet.' When I left him (i.e. Moses) he wept. Someone asked him, 'What makes you weep?' Moses said, 'I weep because after me there has been sent (as Prophet) a young man whose followers will enter Paradise in greater numbers than my followers.' Then Gabriel ascended with me to the seventh heaven and asked for its gate to be opened. It was asked, 'Who is it?' Gabriel replied, 'Gabriel.' It was asked, 'Who is accompanying you?' Gabriel replied, 'Muhammad.' It was asked, 'Has he been called?' Gabriel replied in the affirmative. Then it was said, 'He is welcomed. What an excellent visit his is!'

So when I went (over the seventh heaven), there I saw Abraham. Gabriel said (to me), 'This is your father; pay your greetings to him.' So I greeted him and he returned the greetings to me and said, 'You are welcomed, O pious son and pious Prophet.' Then I was made to ascend to Sidrat-ul-Muntaha (i.e. the Lote Tree of the utmost boundary) Behold! Its fruits were like the jars of Hajr (i.e. a place near Medina) and its leaves were as big as the ears of elephants. Gabriel said, 'This is the Lote Tree of the utmost boundary.' Behold! There ran four rivers, two were hidden and two were visible, I asked, 'What are these two kinds of rivers, O Gabriel?' He replied, 'As for the hidden rivers, they are two rivers in Paradise and the visible rivers are the Nile and the Euphrates.'

Then Al-Bait-ul-Ma'mur (i.e. the Sacred House) was shown to me and a container full of wine and another full of milk and a third full of honey were brought to me. I took the milk. Gabriel remarked, 'This is the Islamic religion which you and your followers are following.' Then the prayers were enjoined on me: They were fifty prayers a day. When I returned, I passed by Moses who asked (me), 'What have you been ordered to do?' I replied, 'I have been ordered to offer fifty prayers a day.' Moses said, 'Your followers cannot bear fifty prayers a day, and by Allah, I have tested people before you, and I have tried my level best with Bani Israel (in vain). Go back to your Lord and ask for reduction to lessen your followers' burden.' So I went back, and Allah reduced ten prayers for me. Then again I came to Moses, but he repeated the same as he had said before. Then again I went back to Allah and He reduced ten more prayers. When I came back to Moses he said the same, I went back to Allah and He ordered me to observe ten prayers a day. When I came back to Moses, he repeated the same advice, so I went back to Allah and was ordered to observe five prayers a day.

When I came back to Moses, he said, 'What have you been ordered?' I replied, 'I have
been ordered to observe five prayers a day.' He said, 'Your followers cannot bear five prayers a day, and no doubt, I have got an experience of the people before you, and I have tried my level best with Bani Israel, so go back to your Lord and ask for reduction to lessen your follower's burden.' I said, 'I have requested so much of my Lord that I feel ashamed, but I am satisfied now and surrender to Allah's Order.' When I left, I heard a voice saying, 'I have passed My Order and have lessened the burden of My Worshippers.'

05.58.274  Anas

When 'Abdur-Rahman bin Auf came to Medina and the Prophet established the bond of brotherhood between him and Sad bin Ar-Rabi-al-Ansari, Saud suggested that 'Abdur-Rahman should accept half of his property and family. 'Abdur Rahman said, "May Allah bless you in your family and property; guide me to the market." So 'Abdur-Rahman (while doing business in the market) made some profit of some condensed dry yoghurt and butter. After a few days the Prophet saw him wearing clothes stained with yellow perfume. The Prophet asked, "What is this, O 'Abdur-Rahman?" He said, "O Allah's Apostle! I have married an Ansar' woman." The Prophet asked, "What have you given her as Mahr?" He (i.e. 'Abdur-Rahman) said, "A piece of gold, about the weight of a date stone." Then the Prophet said, Give a banquet, even though of a sheep."

05.59.312  Hisham

That his father said, "The sword of Az-Zubair was decorated with silver." Hisham added, "The sword of Urwa was (also) decorated with silver."

05.59.325  Abu Huraira

Allah's Apostle sent out ten spies under the command of 'Asim bin Thabit Al-Ansari, the grand-father of 'Asim bin 'Umar Al-Khattab. When they reached (a place called) Al-Hadah between 'Usfan and Mecca, their presence was made known to a sub-tribe of Hudhail called Banu Liydan. So they sent about one hundred archers after them. The archers traced the footsteps (of the Muslims) till they found the traces of dates which they had eaten at one of their camping places. The archers said, "These dates are of Yathrib (i.e. Medina)," and went on tracing the Muslims' footsteps. When 'Asim and his companions became aware of them, they took refuge in a (high) place. But the enemy encircled them and said, "Come down and surrender. We give you a solemn promise and covenant that we will not kill anyone of you." 'Asim bin Thabit said, "O people! As for myself, I will never get down to be under the protection of an infidel. O Allah! Inform your Prophet about us." So the archers threw their arrows at them and martyred 'Asim. Three of them came down and surrendered to them, accepting their promise and covenant and they were Khubaib, Zaid bin Ad-Dathina and another man. When the archers got hold of them, they untied the strings of the arrow bows and tied their captives with them. The third man said, "This is the first proof of treachery! By Allah, I will not go with you for I follow the example of these." He meant the martyred companions. The archers dragged him and struggled with him (till they martyred him).
Then Khubaib and Zaid bin Ad-Dathina were taken away by them and later on they sold them as slaves in Mecca after the event of the Badr battle.

The sons of Al-Harit bin 'Amr bin Naufal bought Khubaib for he was a person who had killed (their father) Al-Hari bin 'Amr on the day (of the battle) of Badr. Khubaib remained imprisoned by them till they decided unanimously to kill him. One day Khubaib borrowed from a daughter of Al-Harith, a razor for shaving his public hair, and she lent it to him. By chance, while she was inattentive, a little son of hers went to him (i.e. Khubaib) and she saw that Khubaib had seated him on his thigh while the razor was in his hand. She was so much terrified that Khubaib noticed her fear and said, "Are you afraid that I will kill him? Never would I do such a thing." Later on (while narrating the story) she said, "By Allah, I had never seen a better captive than Khubaib. By Allah, one day I saw him eating from a bunch of grapes in his hand while he was fettered with **iron** chains and (at that time) there was no fruit in Mecca." She used to say," It was food Allah had provided Khubaib with."

When they took him to Al-Hil out of Mecca sanctuary to martyr him, Khubaib requested them. "Allow me to offer a two-Rak'at prayer." They allowed him and he prayed two Rakat and then said, "By Allah! Had I not been afraid that you would think I was worried, I would have prayed more." Then he (invoked evil upon them) saying, "O Allah! Count them and kill them one by one, and do not leave anyone of them". Then he recited: "As I am martyred as a Muslim, I do not care in what way I receive my death for Allah's Sake, for this is for the Cause of Allah. If He wishes, He will bless the cut limbs of my body." Then Abu Sarva, Ubqa bin Al-Harith went up to him and killed him. It was Khubaib who set the tradition of praying for any Muslim to be martyred in captivity (before he is executed). The Prophet told his companions of what had happened (to those ten spies) on the same day they were martyred. Some Quraish people, being informed of 'Asim bin Thabit's death, sent some messengers to bring a part of his body so that his death might be known for certain, for he had previously killed one of their leaders (in the battle of Badr). But Allah sent a swarm of wasps to protect the dead body of 'Asim, and they shielded him from the messengers who could not cut anything from his body.

<p>| 05.59.380 | ■ | Zaid bin Thabit | When the Prophet set out for (the battle of) Uhud, some of those who had gone out with him, returned. The companions of the Prophet were divided into two groups. One group said, &quot;We will fight them (i.e. the enemy),&quot; and the other group said, &quot;We will not fight them.&quot; So there came the Divine Revelation:-- ' (O Muslims!) Then what is the matter within you that you are divided. Into two parties about the hypocrites? Allah has cast |</p>
<table>
<thead>
<tr>
<th>05.59.412</th>
<th>Abu Huraira</th>
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</table>

The Prophet sent a Sariya of spies and appointed 'Asim bin Thabit, the grandfather of 'Asim bin 'Umar bin Al-Khattab, as their leader. So they set out, and when they reached (a place) between 'Usfan and Mecca, they were mentioned to one of the branch tribes of Bani Hudhail called Liyyan. So, about one-hundred archers followed their traces till they (i.e. the archers) came to a journey station where they (i.e. 'Asim and his companions) had encamped and found stones of dates they had brought as journey food from Medina.

The archers said, "These are the dates of Medina," and followed their traces till they took them over. When 'Asim and his companions were not able to go ahead, they went up a high place, and their pursuers encircled them and said, "You have a covenant and a promise that if you come down to us, we will not kill anyone of you." 'Asim said, "As for me, I will never come down on the security of an infidel. O Allah! Inform Your Prophet about us." So they fought with them till they killed 'Asim along with seven of his companions with arrows, and there remained Khubaib, Zaid and another man to whom they gave a promise and a covenant. So when the infidels gave them the covenant and promise, they came down. When they captured them, they opened the strings of their arrow bows and tied them with it. The third man who was with them said, "This is the first breach in the covenant," and refused to accompany them. They dragged him and tried to make him accompany them, but he refused, and they killed him. Then they proceeded on taking Khubaib and Zaid till they sold them in Mecca. The sons of Al-Harith bin 'Amr bin Naufal bought Khubaib. It was Khubaib who had killed Al-Harith bin 'Amr on the day of Badr. Khubaib stayed with them for a while as a captive till they decided unanimously to kill him. (At that time) Khubaib borrowed a razor from one of the daughters of Al-Harith to shave his pubic hair. She gave it to him. She said later on, "I was heedless of a little baby of mine, who moved towards Khubaib, and when it reached him, he put it on his thigh. When I saw it, I got scared so much that Khubaib noticed my distress while he was carrying the razor in his hand. He said 'Are you afraid that I will kill it? Allah willing, I will never do that,' " Later on she used to say, "I have never seen a captive better than Khubaib Once I saw him eating from a bunch of grapes although at that time no fruits were available at Mecca, and he was fettered with iron chains, and in fact, it was nothing but food bestowed upon him by Allah." So they took him out of the Sanctuary.
(of Mecca) to kill him. He said, "Allow me to offer a two-Rak'at prayer." Then he went to them and said, "Had I not been afraid that you would think I was afraid of death, I would have prayed for a longer time." So it was Khubaib who first set the tradition of praying two Rakat before being executed. He then said, "O Allah! Count them one by one," and added, 'When I am being martyred as a Muslim, I do not care in what way I receive my death for Allah's Sake, because this death is in Allah's Cause. If He wishes, He will bless the cut limbs." Then 'Uqba bin Al-Harith got up and martyred him. The narrator added: The Quraish (infidels) sent some people to 'Asim in order to bring a part of his body so that his death might be known for certain, for 'Asim had killed one of their chiefs on the day of Badr. But Allah sent a cloud of wasps which protected his body from their messengers who could not harm his body consequently.

<table>
<thead>
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<th>Hadith No.</th>
<th>Author</th>
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<tbody>
<tr>
<td>05.59.505</td>
<td>Anas</td>
<td>Some people of the tribe of 'Ukl and 'Uraina arrived at Medina to meet the Prophet and embraced Islam and said, &quot;O Allah's Prophet! We are the owners of milch livestock (i.e. bedouins) and not farmers (i.e. countrymen).&quot; They found the climate of Medina unsuitable for them. So Allah's Apostle ordered that they should be provided with some milch camels and a shepherd and ordered them to go out of Medina and to drink the camels' milk and urine (as medicine) So they set out and when they reached Al-Harra, they reverted to Heathenism after embracing Islam, and killed the shepherd of the Prophet and drove away the camels. When this news reached the Prophet, he sent some people in pursuit of them. (So they were caught and brought back to the Prophet ). The Prophet gave his orders in their concern. So their eyes were branded with pieces of iron and their hands and legs were cut off and they were left away in Harra till they died in that state of theirs. (See Hadith 234 Vol 1)</td>
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<tr>
<td>05.59.541</td>
<td>Abu Huraira</td>
<td>When we conquered Khaibar, we gained neither gold nor silver as booty, but we gained cows, camels, goods and gardens. Then we departed with Allah's Apostle to the valley of Al-Qira, and at that time Allah's Apostle had a slave called Mid'am who had been presented to him by one of Banu Ad-Dibbab. While the slave was dismounting the saddle of Allah's Apostle an arrow the thrower of which was unknown, came and hit him. The people said, &quot;Congratulations to him for the martyrdom.&quot; Allah's Apostle said, &quot;No, by Him in Whose Hand my soul is, the sheet (of cloth) which he had taken (illegally) on the day of Khaibar from the booty before the distribution of the booty, has become a flame of Fire burning him.&quot; On hearing that, a man brought one or two leather straps of shoes to the Prophet and said, &quot;These are things I took (illegally).&quot; On that Allah's Apostle said, &quot;This is a strap, or these are two straps of Fire.&quot;</td>
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<tr>
<td>05.59.636</td>
<td>Al-Bara</td>
<td>Allah's Apostle sent us to Yemen along with Khalid bin Al-Walid. Later on he sent Ali bin Abi Talib in his place. The Prophet said to 'Ali, &quot;Give Khalid's companions the choice of either staying with you (in Yemen) or returning to Medina.&quot; I was one of</td>
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Ali bin Abi Talib sent a piece of gold not yet taken out of its ore, in a tanned leather container to Allah's Prophet. Allah's Apostle distributed that amongst four Persons: 'Uyaina bin Badr, Aqra bin Habis, Zaid Al-Khail and the fourth was either Alqama or Amir bin At Tufail. On that, one of his companions said, "We are more deserving of this gold than these (persons)." When that news reached the Prophet, he said, "Don't you trust me though I am the truth worthy man of the One in the Heavens, and I receive the news of Heaven (i.e. Divine Inspiration) both in the morning and in the evening?"

There got up a man with sunken eyes, raised cheek bones, raised forehead, a thick beard, a shaved head and a waist sheet that was tucked up and he said, "O Allah's Apostle! Be afraid of Allah." The Prophet said, "Woe to you! Am I not of all the people of the earth the most entitled to fear Allah?" Then that man went away. Khalid bin Al-Wahd said, "O Allah's Apostle! Shall I chop his neck off?" The Prophet said, "No, for he may offer prayers." Khalid said, "Numerous are those who offer prayers and say by their tongues (i.e. mouths) what is not in their hearts." Allah's Apostle said, "I have not been ordered (by Allah) to search the hearts of the people or cut open their bellies."

Then the Prophet looked at him (i.e. that man) while the latter was going away and said, "From the offspring of this (man there will come out (people) who will recite the Qur'an continuously and elegantly but it will not exceed their throats. (They will neither understand it nor act upon it). They would go out of the religion (i.e. Islam) as an arrow goes through a game's body." I think he also said, "If I should be present at their time I would kill them as the nations a Thamud were killed."

Musalimah Al-Kadhdhab came during the lifetime of the Prophet and started saying, "If Muhammad gives me the rule after him, I will follow him." And he came to Medina with a great number of the people of his tribe. Allah's Apostle went to him in the company of Thabit bin Qais bin Shammas, and at that time, Allah's Apostle had a stick of a date-palm tree in his hand. When he (i.e. the Prophet ) stopped near Musalimah while the latter was amidst his companions, he said to him, "If you ask me for this piece (of stick), I will not give it to you, and Allah's Order you cannot avoid, (but you will be destroyed), and if you turn your back from this religion, then Allah will destroy you. And I think you are the same person who was shown to me in my dream, and this is Thabit bin Qais who will answer your questions on my behalf." Then the Prophet went away from him. I asked about the statement of Allah's Apostle: "You seem to be the same person who was shown to me in my dream," and Abu Huraira informed me that Allah's Apostle said, "When I was sleeping, I saw (in a dream) two bangles of gold on my hands and that worried me. And then I was inspired Divinely in the dream that I should blow on them, so I blew on them and both the bangles flew away. And I
interpreted it that two liars (who would claim to be prophets) would appear after me. One of them has proved to be Al Ansi and the other, Musailima."

| 05.59.660 |  | Abu Huraira | Allah's Apostle said, "While I was sleeping, I was given the treasures of the earth and two gold bangles were put in my hands, and I did not like that, but I received the inspiration that I should blow on them, and I did so, and both of them vanished. I interpreted it as referring to the two liars between whom I am present; the ruler of Sana and the Ruler of Yamaha." |
| 05.59.661 |  | Abu Raja Al-Utaridi | We used to worship stones, and when we found a better stone than the first one, we would throw the first one and take the latter, but if we could not get a stone then we would collect some earth (i.e. soil) and then bring a sheep and milk that sheep over it, and perform the Tawaf around it. When the month of Rajab came, we used (to stop the military actions), calling this month the iron remover, for we used to remove and throw away the iron parts of every spear and arrow in the month of Rajab. Abu Raja' added: When the Prophet sent with (Allah's) Message, I was a boy working as a shepherd of my family camels. When we heard the news about the appearance of the Prophet, we ran to the fire, i.e. to Musailima al-Kadhdbab. |
| 05.59.662 |  | Ubaidullah bin Abdullah bin Utba | We were informed that Musailima Al-Kadhdhab had arrived in Medina and stayed in the house of the daughter of Al-Harith. The daughter of Al-Harith bin Kuraiz was his wife and she was the mother of 'Abdullah bin 'Amir. There came to him Allah's Apostle accompanied by Thabit bin Qais bin Shammas who was called the orator of Allah's Apostle. Allah's Apostle had a stick in his hand then. The Prophet stopped before Musailima and spoke to him. Musailima said to him, "If you wish, we would not interfere between you and the rule, on condition that the rule will be ours after you... The Prophet said, "If you asked me for this stick, I would not give it to you. I think you are the same person who was shown to me in a dream. And this is Thabit bin Al-Qais who will answer you on my behalf." The Prophet then went away. I asked Ibn Abbas about the dream Allah's Apostle had mentioned. Ibn Abbas said,"Someone told me that the Prophet said, "When I was sleeping, I saw in a dream that two gold bangles were put in my hands, and that frightened me and made me dislike them. Then I was allowed to blow on them, and when I blew at them, both of them flew. Then I interpreted them as two liars who would appear.' One of them was Al-'Ansi who was killed by Fairuz in Yemen and the other was Musailima Al-Kadhdbab." |
| 05.59.674 |  | Alqama | We were sitting with Ibn Masud when Khabbab came and said, "O Abu Abdur-Rahman! Can these young fellows recite Qur'an as you do?" Ibn Mas'ud said, "If you wish I can order one of them to recite (Qur'an) for you." Khabbab replied, "Yes. "Ibn Mas'ud said, "Recite, O 'Alqama!" On that, Zaid bin Hudair, the brother of Ziyad bin Hudair said, (to Ibn Mas'ud), "Why have you ordered 'Alqama to recite though he does
Ibn Mas'ud said, "If you like, I would tell you what the Prophet said about your nation and his (i.e. 'Alqama's) nation." So I recited fifty Verses from Sura-Maryam. 'Abdullah (bin Mas'ud) said to Khabbab, "What do you think (about 'Alqama's recitation)?" Khabbab said, "He has recited well." 'Abdullah said, "Whatever I recite, 'Alqama recites." Then 'Abdullah turned towards Khabbab and saw that he was wearing a gold ring. whereupon he said, "Hasn't the time for its throwing away come yet?" Khabbab said, "You will not see me wearing it after today," and he threw it away.

06.60.183  |  |  |  | Zaid bin Wahb  
I passed by (visited) Abu Dhar at Ar-Rabadha and said to him, "What has brought you to this land?" He said, "We were at Sham and I recited the Verse: "They who hoard up gold and silver and spend them not in the way of Allah; announce to them a painful torment," (9.34) where upon Muawiya said, 'This Verse is not for us, but for the people of the Scripture.' Then I said, 'But it is both for us (Muslim) and for them.'"

06.60.196  |  |  |  | Samura bin Jundab  
Allah's Apostle said, "Tonight two (visitors) came to me (in my dream) and took me to a town built with gold bricks and silver bricks. There we met men who, half of their bodies, look like the most handsome human beings you have ever seen, and the other half, the ugliest human beings you have ever seen. Those two visitors said to those men, 'Go and dip yourselves in that river. So they dipped themselves therein and then came to us, their ugliness having disappeared and they were in the most handsome shape. The visitors said, 'The first is the Garden of Eden and that is your dwelling place.' Then they added, 'As for those people who were half ugly and half handsome, they were those who mixed good deeds and bad deeds, but Allah forgave them.'"

06.60.281  |  |  |  | Aisha  
When there was said about me what was said which I myself was unaware of, Allah's Apostle got up and addressed the people. He recited Tashahhud, and after glorifying and praising Allah as He deserved, he said, "To proceed: O people Give me your opinion regarding those people who made a forged story against my wife. By Allah, I do not know anything bad about her. By Allah, they accused her of being with a man about whom I have never known anything bad, and he never entered my house unless I was present there, and whenever I went on a journey, he went with me." Sad bin Mu'adh got up and said, "O Allah's Apostle Allow me to chop their heads off" Then a man from the Al-Khazraj (Sa'd bin 'Ubada) to whom the mother of (the poet) Hassan bin Thabit was a relative, got up and said (to Sad bin Mu'adh), "You have told a lie! By Allah, if those persons were from the Aus Tribe, you would not like to chop their heads off." It was probable that some evil would take place between the Aus and the Khazraj in the mosque, and I was unaware of all that. In the evening of that day, I went out for some of my needs (i.e. to relieve myself), and Um Mistah was accompanying me. On our return, Um Mistah stumbled and said, "Let Mistah. be ruined" I said to her, "O
mother Why do you abuse your Son" On that Um Mistah became silent for a while, and stumbling again, she said, "Let Mistah be ruined" I said to her, "Why do you abuse your son?" She stumbled for the third time and said, "Let Mistah be ruined" whereupon I rebuked her for that. She said, "By Allah, I do not abuse him except because of you." I asked her, "Concerning what of my affairs?" So she disclosed the whole story to me. I said, "Has this really happened?" She replied, "Yes, by Allah." I returned to my house, astonished (and distressed) that I did not know for what purpose I had gone out. Then I became sick (fever) and said to Allah's Apostle "Send me to my father's house." So he sent a slave with me, and when I entered the house, I found Um Rumqan (my mother) downstairs while (my father) Abu Bakr was reciting something upstairs. My mother asked, "What has brought you, O (my) daughter?" I informed her and mentioned to her the whole story, but she did not feel it as I did. She said, "O my daughter! Take it easy, for there is never a charming lady loved by her husband who has other wives but that they feel jealous of her and speak badly of her." But she did not feel the news as I did. I asked (her), "Does my father know about it?" She said, "yes" I asked, Does Allah's Apostle know about it too?" She said, "Yes, Allah's Apostle does too." So the tears filled my eyes and I wept. Abu Bakr, who was reading upstairs heard my voice and came down and asked my mother, "What is the matter with her? " She said, "She has heard what has been said about her (as regards the story of Alqlfk)." On that Abuq Bakr wept and said, "I beseech you by Allah, O my daughter, to go back to your home" I went back to my home and Allah's Apostle had come to my house and asked my maid-servant about me (my character). The maid-servant said, "By Allah, I do not know of any defect in her character except that she sleeps and let the sheep enter (her house) and eat her dough." On that, some of the Prophet's companions spoke harshly to her and said, "Tell the truth to Allah's Apostle." Finally they told her of the affair (of the slander). She said, "Subhan Allah! By Allah, I know nothing against her except what goldsmith knows about a piece of pure gold." Then this news reached the man who was accused, and he said, "Subhan Allah! By Allah, I have never uncovered the private parts of any woman." Later that man was martyred in Allah's Cause. Next morning my parents came to pay me a visit and they stayed with me till Allah's Apostle came to me after he had offered the Asr prayer. He came to me while my parents were sitting around me on my right and my left. He praised and glorified Allah and said, "Now then O 'Aisha! If you have committed a bad deed or you have wronged (yourself), then repent to Allah as Allah accepts the repentance from his slaves." An Al-Ansari woman had come and was sitting near the gate. I said (to the Prophet). "Isn't it improper that you speak in such a way in the presence of this lady? Allah's Apostle then gave a piece of advice and I turned to my father and requested him to answer him (on my behalf).
My father said, "What should I say?" Then I turned to my mother and asked her to answer him. She said, "What should I say?" When my parents did not give a reply to the Prophet, I said, "I testify that none has the right to be worshipped except Allah, and that Muhammad is His Apostle!" And after praising and glorifying Allah as He deserves, I said, "Now then, by Allah, if I were to tell you that I have not done (this evil action) and Allah is a witness that I am telling the truth, that would not be of any use to me on your part because you (people) have spoken about it and your hearts have absorbed it; and if I were to tell you that I have done this sin and Allah knows that I have not done it, then you will say, 'She has confessed herself guilty.' By Allah, I do not see a suitable example for me and you but the example of (I tried to remember Jacob's name but couldn't) Joseph's father when he said; So (for me) 'Patience is most fitting against that which you assert. It is Allah (alone) whose help can be sought.' At that very hour the Divine Inspiration came to Allah's Apostle and we remained silent. Then the Inspiration was over and I noticed the signs of happiness on his face while he was removing (the sweat) from his forehead and saying, "Have the good tidings O 'Aisha! Allah has revealed your innocence." At that time I was extremely angry. My parents said to me. "Get up and go to him." I said, "By Allah, I will not do it and will not thank him nor thank either of you, but I will thank Allah Who has revealed my innocence. You have heard this story but neither did not deny it nor change it (to defend me)." (Aisha used to say:) "But as regards Zainab bint Jahsh, (the Prophet's wife), Allah protected her because of her piety, so she did not say anything except good (about me), but her sister, Hamna, was ruined among those who were ruined. Those who used to speak evil about me were Mistah, Hassan bin Thabit, and the hypocrite, Abdullah bin Ubai, who used to spread that news and tempt others to speak of it, and it was he and Hamna who had the greater share therein. Abu Bakr took an oath that he would never do any favor to Mistah at all. Then Allah revealed the Divine Verse:"--

"Let not those among you who are good and wealthy (i.e. Abu Bakr) swear not to give (any sort of help) to their kinsmen, and those in need, (i.e. Mistah) ...Do you not love that Allah should forgive you? And Allah if Oft-Forgiving, Most Merciful." (24.22)

On that, Abu Bakr said, "Yes, by Allah, O our Lord! We wish that You should forgive us." So Abu Bakr again started giving to Mistah the expenditure which he used to give him before.

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06.60.401 Abdullah bin Qais

Allah's Apostle said, "Two gardens, the utensils and the contents of which are of silver, and two other gardens, the utensils and contents of which are of gold. And nothing will prevent the people who will be in the Garden of Eden from seeing their Lord except the
| 06.60.402 | ■ | ■ | Abdullah bin Qais | Allah's Apostle said, "In Paradise there is a pavilion made of a single hollow pearl sixty miles wide, in each corner of which there are wives who will not see those in the other corners; and the believers will visit and enjoy them. And there are two gardens, the utensils and contents of which are made of silver; and two other gardens, the utensils and contents of which are made of so-and-so (i.e. gold) and nothing will prevent the people staying in the Garden of Eden from seeing their Lord except the curtain of Majesty over His Face." |
| 06.61.547 | ■ | Sahl bin Sad | A lady came to the Prophet and declared that she had decided to offer herself to Allah and His Apostle. The Prophet said, "I am not in need of women." A man said (to the Prophet) "Please marry her to me." The Prophet said (to him), "Give her a garment." The man said, "I cannot afford it." The Prophet said, "Give her anything, even if it were an iron ring." The man apologized again. The Prophet then asked him, "What do you know by heart of the Qur'an?" He replied, "I know such-and-such portion of the Qur'an (by heart)." The Prophet said, "Then I marry her to you for that much of the Qur'an which you know by heart." |
| 06.61.548 | ■ | Sahl bin Sad | A lady came to Allah's Apostle and said, "O Allah's Apostle! I have come to you to offer myself to you." He raised his eyes and looked at her and then lowered his head. When the lady saw that he did not make any decision, she sat down. On that, a man from his companions got up and said, "O Allah's Apostle! If you are not in need of this woman, then marry her to me." Allah's Apostle said, "Do you have anything to offer her?" He replied, "No, by Allah, O Allah's Apostle!" The Prophet said to him, "Go to your family and see if you can find something.' The man went and returned, saying, "No, by Allah, O Allah's Apostle! I have not found anything." The Prophet said, "Try to find something, even if it is an iron ring." He went again and returned, saying, "No, by Allah, O Allah's Apostle, not even an iron ring, but I have this waist sheet of mine." The man had no upper garment, so he intended to give her, half his waist sheet. So Allah's Apostle said, "What would she do with your waist sheet? If you wear it, she will have nothing of it over her body, and if she wears it, you will have nothing over your body." So that man sat for a long period and then got up, and Allah's Apostle saw him going away, so he ordered somebody to call him. When he came, the Prophet asked him, "How much of the Qur'an do you know?" He replied, "I know such Surat and such Surat, and went on counting it, The Prophet asked him, "Can you recite it by heart?" he replied, "Yes." The Prophet said, "Go, I have married this lady to you for the amount of the Qur'an you know by heart." |
| 07.62.010 | ■ | Anas bin Malik | 'Abdur-Rahman bin 'Auf came (from Mecca to Medina) and the Prophet made a bond of brotherhood between him and Sad bin Ar-Rabi' Al-Ansari. Al-Ansari had two wives, |
so he suggested that 'Abdur-Rahman take half, his wives and property. 'Abdur-Rahman replied, "May Allah bless you with your wives and property. Kindly show me the market." So 'Abdur-Rahman went to the market and gained (in bargains) some dried yoghurt and some butter. After a few days the Prophet saw 'Abdur-Rahman with some yellow stains on his clothes and asked him, "What is that, O 'Abdur-Rahman?" He replied, "I had married an Ansari woman." The Prophet asked, "How much Mahr did you give her?" He replied, "The weight of one (date) stone of gold." The Prophet said, "Offer a banquet, even with one sheep."

| 07.62.024 | Sahl bin Sad As-Sa'idi | A woman came to Allah's Apostle and said, "O Allah's Apostle! I have come to give you myself in marriage (without Mahr)." Allah's Apostle looked at her. He looked at her carefully and fixed his glance on her and then lowered his head. When the lady saw that he did not say anything, she sat down. A man from his companions got up and said, "O Allah's Apostle! If you are not in need of her, then marry her to me." The Prophet said, "Have you got anything to offer?" The man said, "No, by Allah, O Allah's Apostle!" The Prophet said (to him), "Go to your family and see if you have something." The man went and returned, saying, "No, by Allah, I have not found anything." Allah's Apostle said, "(Go again) and look for something, even if it is an iron ring." He went again and returned, saying, "No, by Allah, O Allah's Apostle! I could not find even an iron ring, but this is my Izar (waist sheet)." He had no rida. He added, "I give half of it to her." Allah's Apostle said, "What will she do with your Izar? If you wear it, she will be naked, and if she wears it, you will be naked." So that man sat down for a long while and then got up (to depart). When Allah's Apostle saw him going, he ordered that he be called back. When he came, the Prophet said, "How much of the Quran do you know?" He said, "I know such Sura and such Sura," counting them. The Prophet said, "Do you know them by heart?" He replied, "Yes." The Prophet said, "Go, I marry her to you for that much of the Quran which you have."

| 07.62.054 | Sahl bin Sad | A woman presented herself to the Prophet (for marriage). A man said to him, "O Allah's Apostle! (If you are not in need of her) marry her to me." The Prophet said, "What have you got?" The man said, "I have nothing." The Prophet said (to him), "Go and search for something) even if it were an iron ring." The man went and returned saying, "No, I have not found anything, not even an iron ring; but this is my (Izar) waist sheet, and half of it is for her." He had no Rida (upper garment). The Prophet said, "What will she do with your waist sheet? If you wear it, she will have nothing over her; and if she wears it, you will have nothing over you." So the man sat down and when he had sat a long time, he got up (to leave). When the Prophet saw him (leaving), he called him back, or the man was called (for him), and he said to the man, "How much of the Quran do you know (by heart)?" The man replied I know such Sura and such Sura (by heart),"
A woman came to Allah's Apostle and said, "O Allah's Apostle! I have come to you to present myself to you (for marriage)." Allah's Apostle glanced at her. He looked at her carefully and fixed his glance on her and then lowered his head. When the lady saw that he did not say anything, she sat down. A man from his companions got up and said, "O Allah's Apostle! If you are not in need of her, then marry her to me." The Prophet said, "Have you got anything to offer." The man said, 'No, by Allah, O Allah's Apostle!" The Prophet said (to him), "Go to your family and try to find something." So the man went and returned, saying, "No, by Allah, O Allah's Apostle! I have not found anything." The Prophet said, "Go again and look for something, even if it were an iron ring." He went and returned, saying, "No, by Allah, O Allah's Apostle! I could not find even an iron ring, but this is my Izar (waist sheet)." He had no Rida (upper garment). He added, "I give half of it to her." Allah's Apostle said "What will she do with your Izar? If you wear it, she will have nothing over herself thereof (will be naked); and if she wears it, then you will have nothing over yourself thereof.' So the man sat for a long period and then got up (to leave). When Allah's Apostle saw him leaving, he ordered that he e called back. When he came, the Prophet asked (him), "How much of the Qur'an do you know (by heart)?" The man replied, I know such Sura and such Sura and such Sura," naming the suras. The Prophet said, "Can you recite it by heart?" He said, 'Yes.' The Prophet said, "Go I let you marry her for what you know of the Quran (as her Mahr)."
A woman came to the Prophet, and presented herself to him (for marriage). He said, "I am not in need of women these days." Then a man said, "O Allah's Apostle! Marry her to me." The Prophet asked him, "What have you got?" He said, "I have got nothing." The Prophet said, "Give her something, even an iron ring." He said, "I have got nothing." The Prophet asked (him), "How much do you know of the Quran (by heart)?" He said, "So much and so much." The Prophet said, "I have married her to you for what you know of the Quran (by heart)."

| 07.62.072 | Sahl | A woman came to the Prophet, and presented herself to him (for marriage). He said, "I am not in need of women these days." Then a man said, "O Allah's Apostle! Marry her to me." The Prophet asked him, "What have you got?" He said, "I have got nothing." The Prophet said, "Give her something, even an iron ring." He said, "I have got nothing." The Prophet asked (him), "How much do you know of the Quran (by heart)?" He said, "So much and so much." The Prophet said, "I have married her to you for what you know of the Quran (by heart)."

| 07.62.078 | Anas | Abdur Rahman bin 'Auf married a woman and gave her gold equal to the weight of a date stone (as Mahr). When the Prophet noticed the signs of cheerfulness of the marriage (on his face) and asked him about it, he said, "I have married a woman and gave (her) gold equal to a date stone in weight (as Mahr)."

| 07.62.079 | Sahl bin As-Sa'idi | While I was (sitting) among the people in the company of Allah's Apostle a woman stood up and said, "O Allah's Apostle! She has given herself in marriage to you; please give your opinion of her." The Prophet did not give her any reply. She again stood up and said, "O Allah's Apostle! She has given herself (in marriage) to you; so please give your opinion of her. The Prophet did not give her any reply. She again stood up for the third time and said, "She has given herself in marriage to you: so give your opinion of her." So a man stood up and said, "O Allah's Apostle! Marry her to me." The Prophet asked him, "Have you got anything?" He said, "No." The Prophet said, "Go and search for something, even if it were an iron ring." The man went and searched and then returned saying, "I could not find anything, not even an iron ring." Then the Prophet said, "Do you know something of the Quran (by heart)?" He replied, "I know (by heart) such Sura and such Sura." The Prophet said, "Go! I have married her to you for what you know of the Quran (by heart)."

| 07.62.080 | Sahl bin Sad | The Prophet said to a man, "Marry, even with (a Mahr equal to) an iron ring."

| 07.62.083 | Anas bin Malik | 'Abdur-Rahman bin 'Auf came to Allah's Apostle and he had marks of Sufra (yellow perfume). Allah's Apostle asked him (about those marks). 'AbdurRahman bin Auf told him that he had married a woman from the Ansar. The Prophet asked, "How much Mahr did you pay her?" He said, "I paid gold equal to the weight of a date stone." Allah's Apostle said to him, "Give a wedding banquet, even if with one sheep."
| 07.62.085   | • | Anas | The Prophet saw the traces of Sufrā (yellow perfume) on Abūd-Rahman b. 'Auf and said, "What is this?" 'Abdur-Rahman, said, "I have married a woman and have paid gold equal to the weight of a datestone (as her Mahr). The Prophet said to him, "May Allah bless you: Offer a wedding banquet even with one sheep." |
| 07.62.096   | • | Anas | When 'Abdur-Rahman b. 'Auf married an Ansāri woman, the Prophet asked him, "How much Mahr did you give her?" 'Abdur-Rahman said, "Gold equal to the weight of a date stone." Anas added: When they (i.e. the Prophet and his companions) arrived at Medina, the emigrants stayed at the Ansār's houses. 'Abdur-Rahman b. 'Auf stayed at Sad b. Ar-Rabi's house. Sad said to 'Abdur-Rahman, "I will divide and share my property with you and will give one of my two wives to you." 'Abdur-Rahman said, "May Allah bless you, your wives and property (I am not in need of that; but kindly show me the way to the market)." So 'Abdur-Rahman went to the market and traded there gaining a profit of some dried yoghurt and butter, and married (an Ansāri woman). The Prophet said to him, "Give a banquet, even if with one sheep." |
| 07.62.104   | • | Al-Ba‘rā‘ bin ‘Aṣib | The Prophet ordered us to do seven (things) and forbade us from seven. He ordered us to visit the patients, to follow the funeral procession, to reply to the sneezer (i.e., say to him, 'Yarhamuqallah (May Allah bestow His Mercy upon you), if he says 'Alhamdulillah' (Praise be to Allah), to help others to fulfill their oaths, to help the oppressed, to greet (whomever one should meet), and to accept the invitation (to a wedding banquet). He forbade us to wear golden rings, to use silver utensils, to use Mayathir (cushions of silk stuffed with cotton and placed under the rider on the saddle), the Qasiyya (linen clothes containing silk brought from an Egyptian town), the Istibraq (thick silk) and the Dibaj (another kind of silk). (See Hadith No. 539 and 753). |
| 07.63.216h | • | Anas b. Malik | During the lifetime of Allah's Apostle a Jew attacked a girl and took some silver ornaments she was wearing and crushed her head. Her relative brought her to the Prophet while she was in her last breaths, and she was unable to speak. Allah's Apostle asked her, "Who has hit you? So-and-so?", mentioning somebody other than her murderer. She moved her head, indicating denial. The Prophet mentioned another person other than the murderer, and she again moved her head indicating denial. Then he asked, "Was it so-and-so?", mentioning the name of her killer. She nodded, agreeing. Then Allah's Apostle; ordered that the head of that Jew be crushed between two stones. |
| 07.63.219i | • | Abu Hurairah | Allah's Apostle said, The example of a miser and a generous person is like that of two persons wearing iron cloaks from the breast up to the neck. When the generous person spends, the iron cloak enlarges and spread over his skin so much so that it covers his fingertips and obliterates his tracks. As for the miser, as soon as he thinks of spending every ring of the iron cloak sticks to its place (against his body) and he tries to expand... |
it, but it does not expand. The Prophet pointed with his hand towards his throat.

| 07.65.337 | ■ | ■ | 'Abdur-Rahman bin Abi Laila | We were sitting in the company of Hudhaifa who asked for water and a Magian brought him water. But when he placed the cup in his hand, he threw it at him and said, "Had I not forbidden him to do so more than once or twice?" He wanted to say, "I would not have done so," adding, "but I heard the Prophet saying, "Do not wear silk or Dibaja, and do not drink in silver or golden vessels, and do not eat in plates of such metals, for such things are for the unbelievers in this worldly life and for us in the Hereafter." |
| 07.67.384 | ■ | ■ | Adi bin Hatim | I asked the Prophet about the game killed by a Mi'rad (i.e. a sharp-edged piece of wood or a piece of wood provided with a sharp piece of iron used for hunting). He said, "If the game is killed with its sharp edge, eat of it, but if it is killed with its shaft, with a hit by its broad side then the game is (unlawful to eat) for it has been beaten to death." I asked him about the game killed by a trained hound. He said, "If the hound catches the game for you, eat of it, for killing the game by the hound, is like its slaughtering. But if you see with your hound or hounds another dog, and you are afraid that it might have shared in hunting the game with your hound and killed it, then you should not eat of it, because you have mentioned Allah's name on (sending) your hound only, but you have not mentioned it on some other hound."

| 07.67.394 | ■ | ■ | Adi bin Hatim | I said, "O Allah's Apostle! I let loose my hound after a game and mention Allah's Name on sending it." The Prophet said, "If you let loose your hound after a game and you mention Allah's Name on sending it and the hound catches and kills the game and eats of it, then you should not eat of it, for it has killed it for itself." I said, "Sometimes when I send my hound after a game, I find another hound along with it and I do not know which of them has caught the game." He said, "You must not eat of it because you have not mentioned, the Name of Allah except on sending your own hound, and you did not mention it on the other hound." Then I asked him about the game hunted with a Mi'rad (i.e. a sharp edged piece of wood or a piece of wood provided with a sharp piece of iron used for hunting). He said, "If the game is killed with its sharp edge, you can eat of it, but if it is killed by its broad side (shaft), you cannot eat of it, for then it is like an animal beaten to death with a pie."

| 07.69.536 | ■ | ■ | Ibn Abi Laila | While Hudhaita was at Mada'in, he asked for water. The chief of the village brought him a silver vessel. Hudhaifa threw it away and said, "I have thrown it away because I told him not to use it, but he has not stopped using it. The Prophet forbade us to wear clothes of silk or Dibaj, and to drink in gold or silver utensils, and said, 'These things are for them (unbelievers) in this world and for you (Muslims) in the Hereafter.'"
| 07.69.537 | ■ | ■ | Hudhaifa | The Prophet said, "Do not drink in gold or silver utensils, and do not wear clothes of silk or Dibaj, for these things are for them (unbelievers) in this world and for you in the
<table>
<thead>
<tr>
<th>Hadith No.</th>
<th>Text</th>
<th>Translation</th>
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<tbody>
<tr>
<td>07.69.538</td>
<td>Um Salama: (the wife of the Prophet) Allah's Apostle said, &quot;He who drinks in silver utensils is only filling his abdomen with Hell Fire.&quot;</td>
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<tr>
<td>07.69.539</td>
<td>Al-Bara' bin 'Azib: Allah's Apostle ordered us to do seven things and forbade us from seven. He ordered us to visit the sick, to follow funeral processions, (to say) to a sneezer, (May Allah bestow His Mercy on you, if he says, Praise be to Allah), to accept invitations, to greet (everybody), to help the oppressed and to help others to fulfill their oaths. He forbade us to wear gold rings, to drink in silver (utensils), to use Mayathir (silken carpets placed on saddles), to wear Al-Qissi (a kind of silken cloth), to wear silk, Dibaj or Istabraq (two kinds of silk).</td>
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<td>07.69.542</td>
<td>'Asim al-Ahwal: I saw the drinking bowl of the Prophet with Anas bin Malik, and it had been broken, and he had mended it with silver plates. That drinking bowl was quite wide and made of Nadar wood, Anas said, &quot;I gave water to the Prophet in that bowl more than soqandq (for a long period).&quot; Ibn Sirin said: Around that bowl there was an iron ring, and Anas wanted to replace it with a silver or gold ring, but Abu Talha said to him, &quot;Do not change a thing that Allah's Apostle has made.&quot; So Anas left it as it was.</td>
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<td>07.70.553</td>
<td>Al-Bara bin Azib: Allah's Apostle ordered us to do seven things and forbade us to do seven other things. He forbade us to wear gold rings, silk, Dibaj, Istabriq, Qissy, and Maithara; and ordered us to accompany funeral processions, visit the sick and greet everybody. (See Hadith No. 104)</td>
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<td>07.71.589</td>
<td>Anas: Some people were sick and they said, &quot;O Allah's Apostle! Give us shelter and food. So when they became healthy they said, &quot;The weather of Medina is not suitable for us.&quot; So he sent them to Al-Harra with some she-camels of his and said, &quot;Drink of their milk.&quot; But when they became healthy, they killed the shepherd of the Prophet and drove away his camels. The Prophet sent some people in their pursuit. Then he got their hands and feet cut and their eyes were branded with heated pieces of iron. I saw one of them licking the earth with his tongue till he died.</td>
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<tr>
<td>07.71.590</td>
<td>Anas: The climate of Medina did not suit some people, so the Prophet ordered them to follow his shepherd, i.e. his camels, and drink their milk and urine (as a medicine). So they followed the shepherd that is the camels and drank their milk and urine till their bodies became healthy. Then they killed the shepherd and drove away the camels. When the news reached the Prophet he sent some people in their pursuit. When they were brought, he cut their hands and feet and their eyes were branded with heated pieces of iron.</td>
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| 07.71.623 | Anas bin Malik: Some people from the tribes of 'Ukl and 'Uraina came to Allah's Apostle and embraced Islam and said, "O Allah's Apostle! We are owners of livestock and have never been farmers," and they found the climate of Medina unsuitable for them. So Allah's Apostle
ordered that they be given some camels and a shepherd, and ordered them to go out
with those camels and drink their milk and urine. So they set out, but when they
reached a place called Al-Harra, they reverted to disbelief after their conversion to
Islam, killed the shepherd and drove away the camels. When this news reached the
Prophet he sent in their pursuit (and they were caught and brought). The Prophet
ordered that their eyes be branded with heated iron bars and their hands be cut off, and
they were left at Al-Harra till they died in that state.

| 07.71.670 | ■ | Abu Huraira | The Prophet said, "Whoever purposely throws himself from a mountain and kills
himself, will be in the (Hell) Fire falling down into it and abiding therein perpetually
forever; and whoever drinks poison and kills himself with it, he will be carrying his
poison in his hand and drinking it in the (Hell) Fire wherein he will abide eternally
forever; and whoever kills himself with an iron weapon, will be carrying that weapon
in his hand and stabbing his abdomen with it in the (Hell) Fire wherein he will abide
eternally forever."

| 07.72.689 | ■ | Abu Huraira | Allah's Apostle has set forth an example for a miser and a charitable person by
comparing them to two men wearing two iron cloaks and their hands are raised to their
breasts and necks. Whenever the charitable man tries to give a charitable gift, his iron
cloak expands till it becomes so wide that it will cover his fingertips and obliterate his
tracks And, whenever the miser wants to give a charitable gift, his cloak becomes very
tight over him and every ring gets stuck to its place Abu Huraira added; I saw Allah's
Apostle putting his finger in the (chest) pocket of his shirt like that If you but saw him
trying to widen (the opening of his shirt) but it did not widen.

| 07.72.722 | ■ ■ | Ibn Abi Laila | While Hudhaifa was at Al-Madain, he asked for water whereupon the chief of the
village brought him water in a silver cup. Hudhaifa threw it at him and said, "I have
thrown it only because I have forbidden him to use it, but he does not stop using it.
Allah's Apostle said, 'Gold, silver, silk and Dibaj (a kind of silk) are for them
(unbelievers) in this world and for you (Muslims) in the hereafter.'

| 07.72.728 | ■ ■ | Hudhaifa | The Prophet forbade us to drink out of gold and silver vessels, or eat in it, Ann also
forbade the wearing of silk and Dibaj or sitting on it.

| 07.72.753 | ■ ■ | Al-Bara' bin 'Azib | The Prophet forbade us to use seven things: He forbade using gold rings, silk, Istabraq,
Dibaj, red Mayathir, Al-Qassiy, and silver utensils. He ordered us to do seven other
things. To pay a visit to the sick; to follow funeral processions; to say, "May Allah be
merciful to you" to a sneezer if he says "Praise be to Allah"; to return greetings, to
accept invitations; to help others to fulfil their oaths and to help the oppressed ones.

| 07.72.754 | ■ | Abu Huraira | The Prophet forbade the wearing of a gold ring.

| 07.72.755 | ■ ■ | 'Abdullah | Allah's Apostle wore a gold or silver .. ring and placed its stone towards the palm of
his hand. The people also started wearing gold rings like it, but when the Prophet saw them wearing such rings, he threw away that golden ring and then wore a silver ring.

07.72.756 Ibn 'Umar

Allah's Apostle wore a gold ring or a silver ring and placed its stone towards the palm of his hand and had the name 'Muhammad, the Apostle of Allah' engraved on it. The people also started wearing gold rings like it, but when the Prophet saw them wearing such rings, he threw away his own ring and said, "I will never wear it," and then wore a silver ring, whereupon the people too started wearing silver rings. Ibn Umar added: After the Prophet Abu Bakr wore the ring, and then Umar and then 'Uthman wore it till it fell in the Aris well from 'Uthman. bin 'Umar : Allah's Apostle wore a gold ring, then he threw it and said, "I will never wear it." The people also threw their (gold) rings.

07.72.757 Anas bin Malik

that he saw a silver ring on the hand of Allah's Apostle for one day only. Then the people had silver rings made for themselves and wore it. On that, Allah's Apostle threw away their rings as well. (For the details of this Hadith, see Fateh-Al-Bari, Vol. 12, page 438).

07.72.759 Anas

The ring of the Prophet was of silver, and its stone was of silver too.

07.72.760 Sahl

A woman came to the Prophet and said, "I have come to present myself to you (for marriage)." She kept standing for a long period during which period the Prophet looked at her carefully. When she stayed for a Long period, a man said to the Prophet "If you are not in need of her, then marry her to me." The Prophet said, "Have you got anything to give her (as Mahr)?" The man said, "No." The Prophet said, "Go (to your house) and search for something." The man went and came back to say, "By Allah, I could not find anything." The Prophet said, "Go again and search for something, even if it be an iron ring." He went again and came back saying, "No, by Allah, I could not get even an iron ring." The man had only an Izar and had no Rida' (upper garment). He said, "I will give her my Izar as Mahr." On that the Prophet said, "Your Izar? If she wears it, nothing of it will remain on you, and if you wear it nothing of it will be on her" The man went aside and sat down When the Prophet saw him leaving (after a while), he called back and asked. "How much Qur'an do you know (by heart)? He said, 'I know such and such Suras,' naming some Suras. The Prophet said, "I marry her to you for the amount of Qur'an you know (by heart)."

07.72.761 Anas bin Malik

Allah's Apostle wanted to write a letter to a group of people or some non-Arabs. It was said to him, "They do not accept any letter unless it is stamped." So the Prophet had a silver ring made for himself, and on it was engraved: 'Muhammad, the Apostle of Allah'. . . as if I am now looking at the glitter of the ring on the finger (or in the palm) of the Prophet.

07.72.762 Ibn 'Umar

Allah's Apostle had a silver ring made for himself and it was worn by him on his hand. Afterwards it was worn by Abu Bakr, and then by 'Umar, and then by 'Uthman till it
fell in the Aris well. (On that ring) was engraved: 'Muhammad, the Apostle of Allah.'

07.72.764  ■  Anas bin Malik  When the Prophet intended to write to the Byzantines, it was said to him, "Those people do not read your letter unless it is stamped." So the Prophet took a silver ring and got 'Muhammad, the Apostle of Allah' engraved on it ... as if I am now looking at its glitter in his hand.

07.72.765  ■  Abdullah  The Prophet had a golden ring made for himself, and when he wore it, he used to turn its stone toward the palm of his hand. So the people too had gold made for themselves. The Prophet then ascended the pulpit, and after glorifying and praising Allah, he said, "I had it made for me, but now I will never wear it again." He threw it away, and then the people threw away their rings too. (Juwairiya, a sub-narrator, said: I think Anas said that the Prophet was wearing the ring in his right hand.)

07.72.766  ■  Anas bin Malik  Allah's Apostle took a silver ring and had 'Muhammad, the Apostle' of Allah' engraved on it. The Prophet then said (to us), 'I have a silver ring with 'Muhammad, the Apostle of Allah' engraved on it, so none of you should have the same engraving on his ring.'

08.73.153  ■  'Abdullah bin Abu Mulaika  The Prophet was given a gift of a few silken cloaks with gold buttons. He distributed them amongst some of his companions and put aside one of them for Makhrama. When Makhrama came, the Prophet said, "I kept this for you." (Aiyub, the sub-narrator held his garment to show how the Prophet showed the cloak to Makhrama who had something unfavorable about his temper.)

08.74.253g  ■  ■  Al-Bara' bin 'Azib  Allah's Apostle ordered us to do seven (things): to visit the sick, to follow the funeral processions, to say Tashmit to a sneezer, to help the weak, to help the oppressed ones, to propagate As-Salam (greeting), and to help others to fulfill their oaths (if it is not sinful). He forbade us to drink from silver utensils, to wear gold rings, to ride on silken saddles, to wear silk clothes, Dibaj (thick silk cloth), Qassiy and Istabraq (two kinds of silk). (See Hadith No. 539, Vol. 7)

08.74.258  ■  Sahl bin Sa'd  A man peeped through a round hole into the dwelling place of the Prophet, while the Prophet had a Midray (an iron comb) with which he was scratching his head. the Prophet said, "Had known you were looking (through the hole), I would have pierced your eye with it (i.e., the comb)." Verily! The order of taking permission to enter has been enjoined because of that sight, (that one should not look unlawfully at the state of others). (See Hadith No. 807, Vol. 7)

08.74.285  ■  Abu Dhar  While I was walking with the Prophet at the Hurra of Medina in the evening, the mountain of Uhud appeared before us. The Prophet said, "O Abu Dhar! I would not like to have gold equal to Uhud (mountain) for me, unless nothing of it, not even a single Dinar remains of it with me, for more than one day or three days, except that single Dinar which I will keep for repaying debts. I will spend all of it (the whole amount) among Allah's slaves like this and like this and like this." The Prophet pointed
out with his hand to illustrate it and then said, "O Abu Dhar!" I replied, "Labbaik wa Sa'daik, O Allah's Apostle!" He said, "Those who have much wealth (in this world) will be the least rewarded (in the Hereafter) except those who do like this and like this (i.e., spend their money in charity)." Then he ordered me, "Remain at your place and do not leave it, O Abu Dhar, till I come back." He went away till he disappeared from me. Then I heard a voice and feared that something might have happened to Allah's Apostle, and I intended to go (to find out) but I remembered the statement of Allah's Apostle that I should not leave, my place, so I kept on waiting (and after a while the Prophet came), and I said to him, "O Allah's Apostle, I heard a voice and I was afraid that something might have happened to you, but then I remembered your statement and stayed (there). The Prophet said, "That was Gabriel who came to me and informed me that whoever among my followers died without joining others in worship with Allah, would enter Paradise." I said, "O Allah's Apostle! Even if he had committed illegal sexual intercourse and theft?" He said, "Even if he had committed illegal sexual intercourse and theft.'

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<tr>
<th>Time</th>
<th>Source</th>
<th>Narrator</th>
<th>Event/Story</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.75.395</td>
<td>Anas</td>
<td>The Prophet seeing a yellow mark (of perfume) on the clothes of 'Abdur-Rahman bin 'Auf, said, &quot;What about you?&quot; 'Abdur-Rahman replied, &quot;I have married a woman with a Mahr of gold equal to a date-stone.&quot; The Prophet said, &quot;May Allah bestow His Blessing on you (in your marriage). Give a wedding banquet, (Walima) even with one sheep.&quot;</td>
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<td>08.76.446</td>
<td>Sahl bin Sa'd</td>
<td>I heard Ibn Az-Zubair who was on the pulpit at Mecca, delivering a sermon, saying, &quot;O men! The Prophet used to say, &quot;If the son of Adam were given a valley full of gold, he would love to have a second one; and if he were given the second one, he would love to have a third, for nothing fills the belly of Adam's son except dust. And Allah forgives he who repents to Him.&quot; Ubaï said, &quot;We considered this as a saying from the Qur'an till the Sura (beginning with) 'The mutual rivalry for piling up of worldly things diverts you...' (102.1) was revealed.&quot;</td>
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<td>08.76.447</td>
<td>Anas bin Malik</td>
<td>Allah's Apostle said, &quot;If Adam's son had a valley full of gold, he would like to have two valleys, for nothing fills his mouth except dust. And Allah forgives him who repents to Him.'</td>
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| 08.76.451 | Abu Dhar       | While I was walking with the Prophet in the Harra of Medina, Uhud came in sight. The Prophet said, "O Abu Dhar!" I said, "Labbaik, O Allah's Apostle!" He said, "I would not like to have gold equal to this mountain of Uhud, unless nothing of it, not even a single Dinar of it remains with me for more than three days, except something which I will keep for repaying debts. I would have spent all of it (distributed it) amongst Allah's Slaves like this, and like this, and like this." The Prophet pointed out with his hand towards his right, his left and his back (while illustrating it). He proceeded with his walk and said, "The rich are in fact the poor (little rewarded) on the Day of
Resurrection except those who spend their wealth like this, and like this, and like this, to their right, left and back, but such people are few in number." Then he said to me, "Stay at your place and do not leave it till I come back." Then he proceeded in the darkness of the night till he went out of sight, and then I heard a loud voice, and was afraid that something might have happened to the Prophet. I intended to go to him, but I remembered what he had said to me, i.e. 'Don't leave your place till I come back to you,' so I remained at my place till he came back to me. I said, "O Allah's Apostle! I heard a voice and I was afraid." So I mentioned the whole story to him. He said, "Did you hear it?" I replied, "Yes." He said, "It was Gabriel who came to me and said, 'Whoever died without joining others in worship with Allah, will enter Paradise.' I asked (Gabriel), 'Even if he had committed theft or committed illegal sexual intercourse?' Gabriel said, 'Yes, even if he had committed theft or committed illegal sexual intercourse.'"

| 08.76.452 | ■ | Abu Huraira | Allah Apostle said, "If I had gold equal to the mountain of Uhud, it would not please me that anything of it should remain with me after three nights (i.e., I would spend all of it in Allah's Cause) except what I would keep for repaying debts." |
| 08.76.546 | ■ | Anas bin Malik | Allah's Prophet used to say, "A disbeliever will be brought on the Day of Resurrection and will be asked. "Suppose you had as much gold as to fill the earth, would you offer it to ransom yourself?" He will reply, "Yes." Then it will be said to him, "You were asked for something easier than that (to join none in worship with Allah (i.e. to accept Islam, but you refused)." |
| 08.76.567 | ■ | An-Nu'man bin Bashir | I heard the Prophet saying, "The least punished person of the (Hell) Fire people on the Day of Resurrection will be a man under whose arch of the feet two smoldering embers will be placed, because of which his brain will boil just like Al-Qmirjal (copper vessel) or a Qum-qum (narrow-necked vessel) is boiling with water." |
| 08.78.646 | ■ | Ibn Umar | Allah's Apostle had a gold ring made for himself, and he used to wear it with the stone towards the inner part of his hand. Consequently, the people had similar rings made for themselves. Afterwards the Prophet; sat on the pulpit and took it off, saying, "I used to wear this ring and keep its stone towards the palm of my hand." He then threw it away and said, "By Allah, I will never wear it." Therefore all the people threw away their rings as well. |
| 08.78.698 | ■ | Abu Huraira | We went out in the company of Allah's Apostle on the day of (the battle of) Khaibar, and we did not get any gold or silver as war booty, but we got property in the form of things and clothes. Then a man called Rifa'a bin Zaid, from the tribe of Bani Ad-Dubaib, presented a slave named Mid'am to Allah's Apostle. Allah's Apostle headed towards the valley of Al-Qura, and when he was in the valley of Al-Qura an arrow was thrown by an unidentified person, struck and killed Mid'am who was making a she-|
camel of Allah's Apostle kneel down. The people said, "Congratulations to him (the slave) for gaining Paradise." Allah's Apostle said, "No! By Him in Whose Hand my soul is, for the sheet which he stole from the war booty before its distribution on the day of Khaibar, is now burning over him." When the people heard that, a man brought one or two Shiraks (leather straps of shoes) to the Prophet. The Prophet said, "A Shirak of fire, or two Shiraks of fire."

08.80.750 ■ Al-Aswad

Aisha said, "I bought Barira and her masters stipulated that the Wala would be for them." Aisha mentioned that to the Prophet and he said, "Manumit her, as the Wala is for the one who gives the silver (i.e. pays the price for freeing the slave)." Aisha added, "So I manumitted her. After that, the Prophet called her (Barira) and gave her the choice to go back to her husband or not. She said, "If he gave me so much and so much (money) I would not stay with him." So she selected her ownself (i.e. refused to go back to her husband)."

08.80.752 ■ Aisha

Allah's Apostle said, "The wala is for the one who gives the silver (pays the price) and does the favor (of manumission after paying the price)."

08.81.774 ■ Abu Huraira

The Prophet said, "Allah curses a man who steals an egg and gets his hand cut off, or steals a rope and gets his hands cut off." Al-Qa'mash said, "People used to interpret the Baida as an iron helmet, and they used to think that the rope may cost a few dirhams."

08.82.794 ■ Anas

Some people from the tribe of 'Ukl came to the Prophet and embraced Islam. The climate of Medina did not suit them, so the Prophet ordered them to go to the (herd of milk) camels of charity and to drink, their milk and urine (as a medicine). They did so, and after they had recovered from their ailment (became healthy) they turned renegades (reverted from Islam) and killed the shepherd of the camels and took the camels away. The Prophet sent (some people) in their pursuit and so they were (caught and) brought, and the Prophets ordered that their hands and legs should be cut off and that their eyes should be branded with heated pieces of iron, and that their cut hands and legs should not be cauterized, till they die.

08.82.796 ■ Anas

A group of people from 'Ukl (tribe) came to the Prophet and they were living with the people of As-Suffa, but they became ill as the climate of Medina did not suit them, so they said, "O Allah's Apostle! Provide us with milk." The Prophet said, I see no other way for you than to use the camels of Allah's Apostle." So they went and drank the milk and urine of the camels, (as medicine) and became healthy and fat. Then they killed the shepherd and took the camels away. When a helper came to Allah's Apostle, he sent some men in their pursuit, and they were captured and brought before mid day. The Prophet ordered for some iron pieces to be made red hot, and their eyes were branded with them and their hands and feet were cut off and were not cauterized. Then they were put at a place called Al-Harra, and when they asked for water to drink
they were not given till they died. (Abu Qilaba said, "Those people committed theft and murder and fought against Allah and His Apostle.")

Anas bin Malik

A group of people from 'Ukl (or 'Uraina) tribe ----but I think he said that they were from 'Ukl came to Medina and (they became ill, so) the Prophet ordered them to go to the herd of (Milch) she-camels and told them to go out and drink the camels' urine and milk (as a medicine). So they went and drank it, and when they became healthy, they killed the shepherd and drove away the camels. This news reached the Prophet early in the morning, so he sent (some) men in their pursuit and they were captured and brought to the Prophet before midday. He ordered to cut off their hands and legs and their eyes to be branded with heated iron pieces and they were thrown at AlqHarra, and when they asked for water to drink, they were not given water. (Abu Qilaba said, "Those were the people who committed theft and murder and reverted to disbelief after being believers (Muslims), and fought against Allah and His Apostle").

Abu Qilaba

Once 'Umar bin 'Abdul 'Aziz sat on his throne in the courtyard of his house so that the people might gather before him. Then he admitted them and (when they came in), he said, "What do you think of AlqQasama?" They said, "We say that it is lawful to depend on Al-Qasama in Qisas, as the previous Muslim Caliphs carried out Qisas depending on it." Then he said to me, "O Abu Qilaba! What do you say about it?" He let me appear before the people and I said, "O Chief of the Believers! You have the chiefs of the army staff and the nobles of the Arabs. If fifty of them testified that a married man had committed illegal sexual intercourse in Damascus but they had not seen him (doing so), would you stone him?" He said, "No." I said, "If fifty of them testified that a man had committed theft in Hums, would you cut off his hand though they did not see him?" He replied, "No." I said, "By Allah, Allah's Apostle never killed anyone except in one of the following three situations: (1) A person who killed somebody unjustly, was killed (in Qisas,) (2) a married person who committed illegal sexual intercourse and (3) a man who fought against Allah and His Apostle and deserted Islam and became an apostate." Then the people said, "Didn't Anas bin Malik narrate that Allah's Apostle cut off the hands of the thieves, branded their eyes and then, threw them in the sun?" I said, "I shall tell you the narration of Anas. Anas said: "Eight persons from the tribe of 'Ukl came to Allah's Apostle and gave the Pledge of allegiance for Islam (became Muslim). The climate of the place (Medina) did not suit them, so they became sick and complained about that to Allah's Apostle. He said (to them), "Won't you go out with the shepherd of our camels and drink of the camels' milk and urine (as medicine)?" They said, "Yes." So they went out and drank the camels' milk and urine, and after they became healthy, they killed the shepherd of Allah's Apostle and took away all the camels. This news reached Allah's Apostle , so he
sent (men) to follow their traces and they were captured and brought (to the Prophet). He then ordered to cut their hands and feet, and their eyes were branded with heated pieces of iron, and then he threw them in the sun till they died." I said, "What can be worse than what those people did? They deserted Islam, committed murder and theft."

Then 'Anbasa bin Said said, "By Allah, I never heard a narration like this of today." I said, "O 'Anbasa! You deny my narration?" 'Anbasa said, "No, but you have related the narration in the way it should be related. By Allah, these people are in welfare as long as this Sheikh (Abu Qilaba) is among them." I added, "Indeed in this event there has been a tradition set by Allah's Apostle. The narrator added: Some Ansari people came to the Prophet and discussed some matters with him, a man from amongst them went out and was murdered. Those people went out after him, and behold, their companion was swimming in blood. They returned to Allah's Apostle and said to him, "O Allah's Apostle, we have found our companion who had talked with us and gone out before us, swimming in blood (killed)." Allah's Apostle went out and asked them, "Whom do you suspect or whom do you think has killed him?" They said, "We think that the Jews have killed him." The Prophet sent for the Jews and asked them, "Did you kill this (person)?" They replied, "No." He asked the Al-Ansars, "Do you agree that I let fifty Jews take an oath that they have not killed him?" They said, "It matters little for the Jews to kill us all and then take false oaths." He said, "Then would you like to receive the Diya after fifty of you have taken an oath (that the Jews have killed your man)?"

They said, "We will not take the oath." Then the Prophet himself paid them the Diya (Blood-money)." The narrator added, "The tribe of Hudhail repudiated one of their men (for his evil conduct) in the Pre-Islamic period of Ignorance.

Then, at a place called Al-Batha' (near Mecca), the man attacked a Yemenite family at night to steal from them, but a man from the family noticed him and struck him with his sword and killed him. The tribe of Hudhail came and captured the Yemenite and brought him to 'Umar during the Hajj season and said, "He has killed our companion." The Yemenite said, "But these people had repudiated him (i.e., their companion)." 'Umar said, "Let fifty persons of Hudhail swear that they had not repudiated him." So forty-nine of them took the oath and then a person belonging to them, came from Sham and they requested him to swear similarly, but he paid one-thousand Dirhams instead of taking the oath. They called another man instead of him and the new man shook hands with the brother of the deceased. Some people said, "We and those fifty men who had taken false oaths (Al-Qasama) set out, and when they reached a place called Nakhlah, it started raining so they entered a cave in the mountain, and the cave collapsed on those
fifty men who took the false oath, and all of them died except the two persons who had shaken hands with each other. They escaped death but a stone fell on the leg of the brother of the deceased and broke it, whereupon he survived for one year and then died." I further said, "Abdul Malik bin Marwan sentenced a man to death in Qisas (equality in punishment) for murder, basing his judgment on Al-Qasama, but later on he regretted that judgment and ordered that the names of the fifty persons who had taken the oath (Al-Qasama), be erased from the register, and he exiled them in Sham."
preemptor loses his right of preemption."

Narrated 'Amr bin Ash-Sharid: Abu Rafi' said that Sa'd offered him four hundred Mithqal of gold for a house. Abu Rafi' said, "If I had not heard Allah's Apostle saying, 'A neighbor has more right to be taken care of by his neighbor,' then I would not have given it to you." Some people said, "If one has bought a portion of a house and wants to cancel the right of preemption, he may give it as a present to his little son and he will not be obliged to take an oath."

| 09.86.110 | ■ | 'Amr bin Ash-Sharid | Abu Rafi’ sold a house to Sa’d bin Malik for four-hundred Mithqal of gold, and said, "If I had not heard the Prophet saying, 'The neighbor has more right to be taken care of by his neighbor (than anyone else),' then I would not have sold it to you." |
| 09.87.144 | ■ | Abu Huraira | Allah's Apostle said, "When the Day of Resurrection approaches, the dreams of a believer will hardly fail to come true, and a dream of a believer is one of forty-six parts of prophetism, and whatever belongs to prophetism can never be false." Muhammad bin Sirin said, "But I say this." He said, "It used to be said, 'There are three types of dreams: The reflection of one's thoughts and experiences one has during wakefulness, what is suggested by Satan to frighten the dreamer, or glad tidings from Allah. So, if someone has a dream which he dislikes, he should not tell it to others, but get up and offer a prayer.' He added, "He (Abu Huraira) hated to see a Ghul (i.e., iron collar around his neck in a dream) and people liked to see fetters (on their feet in a dream). The fetters on the feet symbolizes one's constant and firm adherence to religion." And Abu 'Abdullah said, 'Ghuls (iron collars) are used only for necks:' |
| 09.87.151 | ■ | Jabir bin 'Abdullah | Allah's Apostle said: (I saw in a dream that) I entered Paradise, and behold, there was a palace built of gold! I asked, 'For whom is this palace?' They (the angels) replied, 'For a man from the Quraish.' " The Prophet added, 'O Ibn Al-Khattab! Nothing stopped me from entering it except your Ghira.' "Umar said, 'How dare I think of my Ghira being offended by you, O Allah's Apostle?'" |
| 09.87.155 | ■ | Ibn 'Umar | Men from the companions of Allah's Apostle used to see dreams during the lifetime of Allah's Apostle and they used to narrate those dreams to Allah's Apostle. Allah's Apostle would interpret them as Allah wished. I was a young man and used to stay in the mosque before my wedlock. I said to myself, 'If there were any good in myself, I too would see what these people see.' So when I went to bed one night, I said, 'O Allah! If you see any good in me, show me a good dream.'" So while I was in that state, there came to me (in a dream) two angels. In the hand of each of them, there was a mace of iron, and both of them were taking me to Hell, and I was between them, invoking Allah, "O Allah! I seek refuge with You from Hell." Then I saw myself being
confronted by another angel holding a mace of iron in his hand. He said to me, "Do not be afraid, you will be an excellent man if you only pray more often." So they took me till they stopped me at the edge of Hell, and behold, it was built inside like a well and it had side posts like those of a well, and beside each post there was an angel carrying an iron mace. I saw therein many people hanging upside down with iron chains, and I recognized therein some men from the Quraish. Then (the angels) took me to the right side. I narrated this dream to (my sister) Hafsa and she told it to Allah's Apostle. Allah's Apostle said, "No doubt, 'Abdullah is a good man." (Nafi' said, "Since then 'Abdullah bin 'Umar used to pray much.)

Allah's Apostle very often used to ask his companions, "Did anyone of you see a dream?" So dreams would be narrated to him by those whom Allah wished to tell. One morning the Prophet said, "Last night two persons came to me (in a dream) and woke me up and said to me, 'Proceed!' I set out with them and we came across a man lying down, and behold, another man was standing over his head, holding a big rock. Behold, he was throwing the rock at the man's head, injuring it. The rock rolled away and the thrower followed it and took it back. By the time he reached the man, his head returned to the normal state. The thrower then did the same as he had done before. I said to my two companions, 'Subhan Allah! Who are these two persons?' They said, 'Proceed!' So we proceeded and came to a man lying flat on his back and another man standing over his head with an iron hook, and behold, he would put the hook in one side of the man's mouth and tear off that side of his face to the back (of the neck) and similarly tear his nose from front to back and his eye from front to back. Then he turned to the other side of the man's face and did just as he had done with the other side. He hardly completed this side when the other side returned to its normal state. Then he returned to it to repeat what he had done before. I said to my two companions, 'Subhan Allah! Who are these two persons?' They said to me, 'Proceed!' So we proceeded and came across something like a Tannur (a kind of baking oven, a pit usually clay-lined for baking bread)." I think the Prophet said, "In that oven there was much noise and voices." The Prophet added, "We looked into it and found naked men and women, and behold, a flame of fire was reaching to them from underneath, and when it reached them, they cried loudly. I asked them, 'Who are these?' They said to me, 'Proceed!' And so we proceeded and came across a river." I think he said, "... red like blood." The Prophet added, "And behold, in the river there was a man swimming, and on the bank there was a man who had collected many stones. Behold. while the other man was swimming, he went near him. The former opened his mouth and the latter (on the bank) threw a stone into his mouth whereupon he went swimming again. He returned and every time the performance was repeated, I asked my two companions, 'Who are these (two) persons?'"
They replied, 'Proceed! Proceed!' And we proceeded till we came to a man with a repulsive appearance, the most repulsive appearance, you ever saw a man having! Beside him there was a fire and he was kindling it and running around it. I asked my companions, 'Who is this (man)?' They said to me, 'Proceed! Proceed!' So we proceeded till we reached a garden of deep green dense vegetation, having all sorts of spring colors. In the midst of the garden there was a very tall man and I could hardly see his head because of his great height, and around him there were children in such a large number as I have never seen. I said to my companions, 'Who is this?' They replied, 'Proceed! Proceed!' So we proceeded till we came to a majestic huge garden, greater and better than I have ever seen! My two companions said to me, 'Go up and I went up' The Prophet added, "So we ascended till we reached a city built of gold and silver bricks and we went to its gate and asked (the gatekeeper) to open the gate, and it was opened and we entered the city and found in it, men with one side of their bodies as handsome as the handsomest person you have ever seen, and the other side as ugly as the ugliest person you have ever seen. My two companions ordered those men to throw themselves into the river. Behold, there was a river flowing across (the city), and its water was like milk in whiteness. Those men went and threw themselves in it and then returned to us after the ugliness (of their bodies) had disappeared and they became in the best shape." The Prophet further added, "My two companions (angels) said to me, 'This place is the Eden Paradise, and that is your place.' I raised up my sight, and behold, there I saw a palace like a white cloud! My two companions said to me, 'That (palace) is your place.' I said to them, 'May Allah bless you both! Let me enter it.' They replied, 'As for now, you will not enter it, but you shall enter it (one day) I said to them, 'I have seen many wonders tonight. What does all that mean which I have seen?' They replied, 'We will inform you: As for the first man you came upon whose head was being injured with the rock, he is the symbol of the one who studies the Quran and then neither recites it nor acts on its orders, and sleeps, neglecting the enjoined prayers. As for the man you came upon whose sides of mouth, nostrils and eyes were torn off from front to back, he is the symbol of the man who goes out of his house in the morning and tells so many lies that it spreads all over the world. And those naked men and women whom you saw in a construction resembling an oven, they are the adulterers and the adulteresses; and the man whom you saw swimming in the river and given a stone to swallow, is the eater of usury (Riba) and the bad looking man whom you saw near the fire kindling it and going round it, is Malik, the gatekeeper of Hell and the tall man whom you saw in the garden, is Abraham and the children around him are those children who die with Al-Fitra (the Islamic Faith)." The narrator added: Some Muslims asked the Prophet, "O Allah's Apostle! What about the children of pagans?"
Prophet replied, "And also the children of pagans." The Prophet added, "My two companions added, 'The men you saw half handsome and half ugly were those persons who had mixed an act that was good with another that was bad, but Allah forgave them.'"

<table>
<thead>
<tr>
<th>Hadith No.</th>
<th>Author</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.88.195</td>
<td>Jabir</td>
<td>A man passed through the mosque and he was carrying arrows, the heads of which were exposed (protruding). The man was ordered (by the Prophet) to hold the iron heads so that it might not scratch (injure) any Muslim.</td>
</tr>
<tr>
<td>09.88.196</td>
<td>Abu Musa</td>
<td>The Prophet said, &quot;If anyone of you passed through our mosque or through our market while carrying arrows, he should hold the iron heads,&quot; or said, &quot;..... he should hold (their heads) firmly with his hand lest he should injure one of the Muslims with it.&quot;</td>
</tr>
<tr>
<td>09.88.235</td>
<td>Abu Huraira</td>
<td>Allah's Apostle said, &quot;Soon the river &quot;Euphrates&quot; will disclose the treasure (the mountain) of gold, so whoever will be present at that time should not take anything of it.&quot; Al-Araj narrated from Abii Huraira that the Prophet said the same but he said, &quot;It (Euphrates) will uncover a mountain of gold (under it).&quot;</td>
</tr>
<tr>
<td>09.89.276</td>
<td>Anas bin Malik</td>
<td>When the Prophet intended to write to the Byzantines, the people said, &quot;They do not read a letter unless it is sealed (stamped).&quot; Therefore the Prophet took a silver ring----as if I am looking at its glitter now----and its engraving was: 'Muhammad, Apostle of Allah'</td>
</tr>
<tr>
<td>09.90.334</td>
<td>Abu Huraira</td>
<td>The Prophet said, &quot;If I had gold equal to the mountain of Uhud, I would love that, before three days had passed, not a single Dinar thereof remained with me if I found somebody to accept it excluding some amount that I would keep for the payment of my debts.&quot;</td>
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<tr>
<td>09.92.380</td>
<td>Abu Wail</td>
<td>I sat with Shaiba in this Mosque (Al-Masjid-Al-Haram), and he said, '&quot;Umar once sat beside me here as you are now sitting, and said, 'I feel like distributing all the gold and silver that are in it (i.e., the Ka'ba) among the Muslims'. I said, 'You cannot do that.' 'Umar said, 'Why?' I said, 'Your two (previous) companions (the Prophet and Abu Bakr) did not do it. 'Umar said, 'They are the two persons whom one must follow.'&quot; (See Hadith No. 664, Vol. 2)</td>
</tr>
<tr>
<td>09.92.401</td>
<td>Ibn 'Umar</td>
<td>The Prophet wore a gold ring and then the people followed him and wore gold rings too. Then the Prophet said, &quot;I had this golden ring made for myself. He then threw it away and said, 'I shall never put it on.'&quot; Thereupon the people also threw their rings away.</td>
</tr>
<tr>
<td>09.92.439</td>
<td>'Aisha</td>
<td>This big copper vessel used to be put for me and Allah's Apostle and we would take water from it together (on taking a bath).</td>
</tr>
<tr>
<td>09.93.527</td>
<td>Abu Said Al-Khudri</td>
<td>When 'Ali was in Yemen, he sent some gold in its ore to the Prophet. The Prophet distributed it among Al-Aqra' bin Habis Al-Hanzali who belonged to Bani Mujashi,</td>
</tr>
</tbody>
</table>
'Uyaina bin Badr Al-Fazari, 'Alqama bin 'Ulatha Al-'Amiri, who belonged to the Bani Kilab tribe and Zaid Al-Khail At-Ta'i who belonged to Bani Nabhan. So the Quraish and the Ansar became angry and said, "He gives to the chiefs of Najd and leaves us!"

The Prophet said, "I just wanted to attract and unite their hearts (make them firm in Islam)." Then there came a man with sunken eyes, bulging forehead, thick beard, fat raised cheeks, and clean-shaven head, and said, "O Muhammad! Be afraid of Allah!" The Prophet said, "Who would obey Allah if I disobeyed Him? (Allah). He trusts me over the people of the earth, but you do not trust me?" A man from the people (present then), who, I think, was Khalid bin Al-Walid, asked for permission to kill him, but the Prophet prevented him. When the man went away, the Prophet said, "Out of the offspring of this man, there will be people who will recite the Quran but it will not go beyond their throats, and they will go out of Islam as an arrow goes out through the game, and they will kill the Muslims and leave the idolators. Should I live till they appear, I would kill them as the Killing of the nation of 'Ad."

We said, "O Allah's Apostle! Shall we see our Lord on the Day of Resurrection?" He said, "Do you have any difficulty in seeing the sun and the moon when the sky is clear?" We said, "No." He said, "So you will have no difficulty in seeing your Lord on that Day as you have no difficulty in seeing the sun and the moon (in a clear sky)." The Prophet then said, "Somebody will then announce, 'Let every nation follow what they used to worship.' So the companions of the cross will go with their cross, and the idolators (will go) with their idols, and the companions of every god (false deities) (will go) with their god, till there remain those who used to worship Allah, both the obedient ones and the mischievous ones, and some of the people of the Scripture. Then Hell will be presented to them as if it were a mirage. Then it will be said to the Jews, "What did you use to worship?" They will reply, 'We used to worship Ezra, the son of Allah.' It will be said to them, 'You are liars, for Allah has neither a wife nor a son. What do you want (now)??' They will reply, 'We want You to provide us with water.' Then it will be said to them 'Drink,' and they will fall down in Hell (instead). Then it will be said to the Christians, 'What did you use to worship?'

They will reply, 'We used to worship Messiah, the son of Allah.' It will be said, 'You are liars, for Allah has neither a wife nor a son. What: do you want (now)?' They will say, 'We want You to provide us with water.' It will be said to them, 'Drink,' and they will fall down in Hell (instead). When there remain only those who used to worship Allah (Alone), both the obedient ones and the mischievous ones, it will be said to them, 'What keeps you here when all the people have gone?' They will say, 'We parted with them (in the world) when we were in greater need of them than we are today, we heard
the call of one proclaiming, 'Let every nation follow what they used to worship,' and now we are waiting for our Lord.' Then the Almighty will come to them in a shape other than the one which they saw the first time, and He will say, 'I am your Lord,' and they will say, 'You are not our Lord.' And none will speak to Him then but the Prophets, and then it will be said to them, 'Do you know any sign by which you can recognize Him?' They will say, 'The Shin,' and so Allah will then uncover His Shin whereupon every believer will prostrate before Him and there will remain those who used to prostrate before Him just for showing off and for gaining good reputation. These people will try to prostrate but their backs will be rigid like one piece of a wood (and they will not be able to prostrate). Then the bridge will be laid across Hell." We, the companions of the Prophet said, "O Allah's Apostle! What is the bridge?"

He said, "It is a slippery (bridge) on which there are clamps and (Hooks like) a thorny seed that is wide at one side and narrow at the other and has thorns with bent ends. Such a thorny seed is found in Najd and is called As-Sa'dan. Some of the believers will cross the bridge as quickly as the wink of an eye, some others as quick as lightning, a strong wind, fast horses or she-camels. So some will be safe without any harm; some will be safe after receiving some scratches, and some will fall down into Hell (Fire). The last person will cross by being dragged (over the bridge)." The Prophet said, "You (Muslims) cannot be more pressing in claiming from me a right that has been clearly proved to be yours than the believers in interceding with Almighty for their (Muslim) brothers on that Day, when they see themselves safe.

They will say, 'O Allah! (Save) our brothers (for they) used to pray with us, fast with us and also do good deeds with us.' Allah will say, 'Go and take out (of Hell) anyone in whose heart you find faith equal to the weight of one (gold) Dinar.' Allah will forbid the Fire to burn the faces of those sinners. They will go to them and find some of them in Hell (Fire) up to their feet, and some up to the middle of their legs. So they will take out those whom they will recognize and then they will return, and Allah will say (to them), 'Go and take out (of Hell) anyone in whose heart you find faith equal to the weight of one half Dinar.' They will take out whomever they will recognize and return, and then Allah will say, 'Go and take out (of Hell) anyone in whose heart you find faith equal to the weight of an atom (or a smallest ant), and so they will take out all those whom they will recognize." Abu Sa'id said: If you do not believe me then read the Holy Verse:"
'Surely! Allah wrongs not even of the weight of an atom (or a smallest ant) but if there is any good (done) He doubles it.' (4.40) The Prophet added, "Then the prophets and Angels and the believers will intercede, and (last of all) the Almighty (Allah) will say, 'Now remains My Intercession. He will then hold a handful of the Fire from which He will take out some people whose bodies have been burnt, and they will be thrown into a river at the entrance of Paradise, called the water of life. They will grow on its banks, as a seed carried by the torrent grows. You have noticed how it grows beside a rock or beside a tree, and how the side facing the sun is usually green while the side facing the shade is white. Those people will come out (of the River of Life) like pearls, and they will have (golden) necklaces, and then they will enter Paradise whereupon the people of Paradise will say, 'These are the people emancipated by the Beneficent. He has admitted them into Paradise without them having done any good deeds and without sending forth any good (for themselves).' Then it will be said to them, 'For you is what you have seen and its equivalent as well.'"

| 09.93.536 | ■ | ■ | 'Abdullah bin Qais | The Prophet said, "(There will be) two Paradises of silver and all the utensils and whatever is therein (will be of silver); and two Paradises of gold, and its utensils and whatever therein (will be of gold), and there will be nothing to prevent the people from seeing their Lord except the Cover of Majesty over His Face in the Paradise of Eden (eternal bliss)."

| 09.93.585 | ■ | | Abu Huraira | The Prophet said, "Once while Job (Ayub) was taking a bath in a naked state. Suddenly a great number of gold locusts started falling upon him and he started collecting them in his clothes. His Lord called him, 'O Job! Didn't I make you rich enough to dispense with what you see now?' Job said, 'Yes, O Lord! But I cannot dispense with Your Blessings.'"

| 09.93.608 | ■ | | Anas bin Malik | The night Allah's Apostle was taken for a journey from the sacred mosque (of Mecca) Al-Ka'ba: Three persons came to him (in a dreamy while he was sleeping in the Sacred Mosque before the Divine Inspiration was revealed to Him. One of them said, "Which of them is he?" The middle (second) angel said, "He is the best of them." The last (third) angle said, "Take the best of them." Only that much happened on that night and he did not see them till they came on another night, i.e. after The Divine Inspiration was revealed to him. (Fateh-Al-Bari Page 258, Vol. 17) and he saw them, his eyes were asleep but his heart was not----and so is the case with the prophets: their eyes sleep while their hearts do not sleep. So those angels did not talk to him till they carried him and placed him beside the well of Zam-Zam. From among them Gabriel took charge of him. Gabriel cut open (the part of his body) between his throat and the middle of his chest (heart) and took all the material out of his chest and abdomen and then washed it..."
with Zam-Zam water with his own hands till he cleansed the inside of his body, and then a gold tray containing a gold bowl full of belief and wisdom was brought and then Gabriel stuffed his chest and throat blood vessels with it and then closed it (the chest). He then ascended with him to the heaven of the world and knocked on one of its doors.

The dwellers of the Heaven asked, 'Who is it?' He said, "Gabriel." They said, "Who is accompanying you?" He said, "Muhammad." They said, "Has he been called?" He said, "Yes" They said, "He is welcomed." So the dwellers of the Heaven became pleased with his arrival, and they did not know what Allah would do to the Prophet on earth unless Allah informed them. The Prophet met Adam over the nearest Heaven. Gabriel said to the Prophet, "He is your father; greet him." The Prophet greeted him and Adam returned his greeting and said, "Welcome, O my Son! O what a good son you are!" Behold, he saw two flowing rivers, while he was in the nearest sky. He asked, "What are these two rivers, O Gabriel?" Gabriel said, "These are the sources of the Nile and the Euphrates."

Then Gabriel took him around that Heaven and behold, he saw another river at the bank of which there was a palace built of pearls and emerald. He put his hand into the river and found its mud like musk Adhfar. He asked, "What is this, O Gabriel?" Gabriel said, "This is the Kauthar which your Lord has kept for you." Then Gabriel ascended (with him) to the second Heaven and the angels asked the same questions as those on the first Heaven, i.e., "Who is it?" Gabriel replied, "Gabriel". They asked, "Who is accompanying you?" He said, "Muhammad." They asked, "Has he been sent for?" He said, "Yes." Then they said, "He is welcomed." Then he (Gabriel) ascended with the Prophet to the third Heaven, and the angels said the same as the angels of the first and the second Heavens had said.

Then he ascended with him to the fourth Heaven and they said the same; and then he ascended with him to the fifth Heaven and they said the same; and then he ascended with him to the sixth Heaven and they said the same; then he ascended with him to the seventh Heaven and they said the same. On each Heaven there were prophets whose names he had mentioned and of whom I remember Idris on the second Heaven, Aaron on the fourth Heavens another prophet whose name I don't remember, on the fifth Heaven, Abraham on the sixth Heaven, and Moses on the seventh Heaven because of his privilege of talking to Allah directly. Moses said (to Allah), "O Lord! I thought that
none would be raised up above me."

But Gabriel ascended with him (the Prophet) for a distance above that, the distance of which only Allah knows, till he reached the Lote Tree (beyond which none may pass) and then the Irresistible, the Lord of Honor and Majesty approached and came closer till he (Gabriel) was about two bow lengths or (even) nearer. (It is said that it was Gabriel who approached and came closer to the Prophet. (Fate Al-Bari Page 263, 264, Vol. 17). Among the things which Allah revealed to him then, was: "Fifty prayers were enjoined on his followers in a day and a night."

Then the Prophet descended till he met Moses, and then Moses stopped him and asked, "O Muhammad! What did your Lord enjoin upon you?" The Prophet replied," He enjoined upon me to perform fifty prayers in a day and a night." Moses said, "Your followers cannot do that; Go back so that your Lord may reduce it for you and for them." So the Prophet turned to Gabriel as if he wanted to consult him about that issue. Gabriel told him of his opinion, saying, "Yes, if you wish." So Gabriel ascended with him to the Irresistible and said while he was in his place, "O Lord, please lighten our burden as my followers cannot do that." So Allah deducted for him ten prayers whereupon he returned to Moses who stopped him again and kept on sending him back to his Lord till the enjoined prayers were reduced to only five prayers.

Then Moses stopped him when the prayers had been reduced to five and said, "O Muhammad! By Allah, I tried to persuade my nation, Bani Israel to do less than this, but they could not do it and gave it up. However, your followers are weaker in body, heart, sight and hearing, so return to your Lord so that He may lighten your burden."

The Prophet turned towards Gabriel for advice and Gabriel did not disapprove of that. So he ascended with him for the fifth time. The Prophet said, "O Lord, my followers are weak in their bodies, hearts, hearing and constitution, so lighten our burden." On that the Irresistible said, "O Muhammad!" the Prophet replied, "Labbaik and Sa'daik." Allah said, "The Word that comes from Me does not change, so it will be as I enjoined on you in the Mother of the Book." Allah added, "Every good deed will be rewarded as ten times so it is fifty (prayers) in the Mother of the Book (in reward) but you are to perform only five (in practice)."

The Prophet returned to Moses who asked, "What have you done?" He said, "He has
lightened our burden: He has given us for every good deed a tenfold reward." Moses said, "By Allah! I tried to make Bani Israel observe less than that, but they gave it up. So go back to your Lord that He may lighten your burden further." Allah's Apostle said, "O Moses! By Allah, I feel shy of returning too many times to my Lord." On that Gabriel said, "Descend in Allah's Name." The Prophet then woke while he was in the Sacred Mosque (at Mecca).
APPENDIX D: Transcribed Arabic Text of

*al-dawHa al-mushtabika fi DawābiT dār al-sika*

الدوحة المشتبة في ضوابط دار السكة

*(The Intricate Tree in the Realm of the House of Minting)*
الباب الأول

فِي إِحْسَانِ اللَّهِ ﺑِهِ ﻋَلَى ﺧِلْوَاتِ ﺍِﻟْإِنسَﺎنِ، وَجَعَلَهُمَا
وَسَبِيلًا ﻟَنَفَعِهْ وَمَأْرَبَهُ البَحَارَ كِيفَ كَانَ

مِن كِلَامِ ﺍِﻟْإِمامِ ﺑِنِّيَاءِ ﺍِﻟْإِمامِ ﺑِنْ ﺍِﷲٍ ﺍِبِنِ مُحَمَّدٍ ﺍِبْنِ ﺍِرْبَازِ ﻓَخْرِ ﺍِﷲٍ

التَّفَسِيرُ ﻟِلْوُلَدِ ﺍِبْنِ ﺍِﷲٍ ﻓِي

حِبْطَ ﺍِﻟْشَّهَوَاتِ ﻣِنَ النَّسَاءَ وَبَيْنِ وَالْبَيْنِ ﺍِالتَّفَصِيلِ ﺍِﻟْمُقَنَّطِ ﻣِنَ الْبَيْنِ وَبَيْنِ
وَالْمَلْكِ ﺍِﻟْمُسْوَمِ ﻣِنَ البَيْنِ وَبَيْنِ ﺍِالْحَرْصِ، ذَٰلِكَ مَتَعُ الحَيَاةِ

الْدُّنِيَا، وَبِلِّكُنْ أَعْلَمَ ﻟَمْآَبُ ﻓِي

إِمَا ﻓِي ﺍِالْبَيْنِ وَبَيْنِ
ثُمَّ جَمِيعُ ﺍِالْأَشْيَاءِ، فَمَا لَكُمْ ﻓِي ﺍِجْمَاعِ ﺍِالْأَشْيَاءِ،

وَصَفَاءُ ﺍِالْمَلْكِ ﺍِﻟْمُؤْمِنِ ﻓِي ﺍِبْدَاءِ، وَالْبَدَاءُ ﺍِبْدَاءِ

الْكَمْلَ، وَالْكَمْلُ ﻓِي ﺍِلْدُنْيَا، وَمَا ﻓِي ﺍِبْدَاءِ

وَفَصَاءُ أَكْمَلُ الوُسُرِ إِلَى ﺍِبْدَاءِ ﺍِبْدَاءِ

الَّذِي ﻓِي ﺍِلْدُنْيَا، وَمَا لَوْ ﻓِي ﺍِبْدَاءِ ﻻَ إِلَى ﺍِبْدَاءِ،

فَيَوْرُ ﺍِبْدَاءِ، ﻓَلَّا ﺍِمْرَآَبُ ﻓِي ﺍِجْمَاعِ ﺍِبْدَاءِ، وَمَا ﻓِي ﺍِبْدَاءِ

سِبْحَانَهُ ﺍِﻟْسَبْعَةُ إِلَى ﺍِبْدَاءِ، ﻓَيَوْرُ ﺍِبْدَاءِ ﻓِي ﺍِلْدُنْيَا، وَمَا لَوْ ﻓِي ﺍِبْدَاءِ،
والاستمتاع بالدنيا على وجه:

منها أن ينفرد به من خصه الله تعالى

بمجه النعم، فيكون مذموما [و منها أن
يترك الانتفاع به مع الحاجة إليه، فيكون أيضاً
مذموما] و منها أن ينتعف به في وجه المباح من غير
أن يتوصل به إلى الآخرة، و ذلك لا ممدوح ولا
مذموم، ومنها أن ينتعف به على وجه
يتوصيل به إلى مصالح الآخرة، و ذلك هو الممدوح.

و الانتفاع بمجه الشهوات وسائل إلى منافع الآخرة، و الله
 تعالى قد ندب إليها، [فكان مزيناً لها،
و إما قلنا إن الانتفاع بما وسائل إلى ثواب
الآخرة لوجهه] فإنه قد يتصدف بما
و يقوى بها على طاعة الله تعالى. و إذا انفع بها
و علمن أن تلك المنافع [إما تيسر
بتخليق الله [ تعالى] و إعانته، صار ذلك سببا
لاشتعال العبد بالشكر العظيم. و القادر على
التمتع بهذه اللذات إذا تركها و اشتعل بالعبادة،
و تحمل ما فيها من المشقة كان أكثر ثوابا. فثبت بذلك أن الانتفاع
بمجردة الطيبات وسائل إلى ثواب الآخرة.

و بيات آخر: أن من آنآه لله

الدنيا كان الواجب أن يصرفها فيما يكون [أحسن] مآبه،

و يتوصل به إلى سعادة الآخرة.

ورد قبي الخبر على ما نقله بعض المذكورين

أنه لمما وقع من نبينا آدم عليه السلام ما وقع هجره

كل شيء إلا شجرة العود فإنها آوته،

و بكى عليه كل شيء في الجنة إلا الذهب والفضة,

فأوحي الله إليهما: مالكما لم تبكيما على محب طره

محببه؟ فقالا: إلهنا، إنا لا نبكي على محب عصى

محببه! فقال الله تعالى لهما:

و عزتي و جلال ل أعزنهما و لأجعلهما قيمة

كل شيء، و لاجعلن أولاد آدم حداماً لكما. و أوحى الله إلى

شجرة العود: مالك آويت محب طره

محببه؟ فقالت: إلهي، رحمة ميّ لديه! فقال:

و عزتي و جلال

لأذنبك في الدنيا بالنار، فلا
يُنْتَفَعُ بِكَ إِلاَّ بَعْدَ إِحْرَاقِكَ إِلَى يَوْمِ مَوْلَاهُ.

وَ رُوِى أُبُو نُعِيمٍ فِي "حْلَيْتِه" أَنَّهُ سَئِلَ وَهْبٍ بِنَ مُنِيبٍ رَضِيَ اللَّهُ عَنْهُ [عَنْ] عَنَّ الْدِّينَانِيرِ وَ الْدَرَاهِمِ، فَقَالَ: الْدِّينَانِيرِ وَ الْدَرَاهِمِ حَوْاتِمٌ رَبِّ الْعَالَمِينَ فِي الْأَرْضِ لِمَعَاشٍ بَيْنَ آدَمٍ، لَا تَوَكَّلْ وَ لَا تَشْرَبْ، فَإِنَّ ذَهَبَتْ بِخَاتِمِ رَبِّ الْعَالَمِينَ قُضِيَتَ حَاجَتَكُ.

وَ جَامِعُ الْذِّهِبِ وَ الْفَضْيَةِ مِنْ وَجْهِهِ وَ مِنْفَقُهُما فِي وَجْهِهِ مِنْ حُمْاَةِ الْإِسْلاَمِ. قَالَ بَعْضُ الْشِّيْخَاءِ: حُمْاَةُ الْإِسْلاَمِ خَمْسٌ: حُمَاَةٌ بَالْسَلَانِ، وَ حُمَاَةُ بَالْسَلَانِ، وَ حُمَاَةُ بَالْبَيْتِ، وَ حُمَاَةُ بَالْجِنَّانِ، وَ حُمَاَةُ بَالْجِنَّانِ. أَمَّا الْحُمَاَةُ بَالْسَلَانِ فَهَذَا حَرَامٌ فَاتَّرَكَوْهُ، وَ أَمَّا الْحُمَاَةُ بَالْبَيْتِ فَهَذَا حَلَالٌ، وَ أَمَّا الْحُمَاَةُ بَالْجِنَّانِ يُذِبَّونَ عَنْ الْقَلَبِ، وَ يَقْمُونُ الْمُفَسِّدِينَ، وَ أَمَّا الْحُمَاَةُ بَالْسَلَانِ فَهَذَا حَلَالٌ، وَ أَمَّا الْحُمَاَةُ بَالْبَيْتِ فَهَذَا حَرَامٌ. فَخَذِؤُوْهُ، وَ هَذَا حَرَامٌ مَا فَاتَّرَكَوْهُ، وَ أَمَّا الْحُمَاَةُ بَالْجِنَّانِ فَهَذَا حَلَالٌ، وَ أَمَّا الْحُمَاَةُ بَالْسَلَانِ، فَ حَلَالٌ مَا فَاتَّرَكَوْهُ، وَ أَمَّا الْحُمَاَةُ بَالْسَلَانِ، فَ حَرَامٌ مَا فَاتَّرَكَوْهُ، وَ أَمَّا الْحُمَاَةُ بَالْبَيْتِ
و هم الصالحون القائمون الداعون لرجم طول
اللبابي بصلاح الأحوال، و أما الحماة ببائح
فبائحان ثرى [الفضة]. فجامعه من وجهه
و متفقه في وجهه يُعد من حماة الإسلام، لأن الناس ينتفعون
به عند الحاجة والسولة. وقد نظمها الشاعر
 فقال:

إذا شئت أن تبكي فَقيِّدا من الورى
و تنصب عبادتي بعد الني المكرم
فشاهير سيف للعدو مصمم
يسد به في كل ثغ مثلم
و حامل علم ناصح متواضع
حرص على التعليم للمتعلم
و حاكم عدّل بالشريعة قائم
يجيب بحكم الله لا بالتحكم
وقائم ليل خاشع متهجّد
له في الطوئ ما ليس للمتجشم
و جامع أموال ضخم عريضة
يوجد بما فضلا على كل مسلم
هم خمسة يبكي عليهم، و غيرهم
إلى حيث ألقت رحلتها أم قشع
و قال بعض الحكّاء: الذهب والفضة يوديان العجزان و
يؤتيان الكسلان، و هما يصلح الملك
و ينتظم السلك، فلا سلطان إلا برجال، ولا
رجال إلا بمال، ولا مال إلا برعية،
ول لا رعية إلا بعدل، ولا عدل إلا
بسلطان.

و حكى الأدباء في علو مرتبة الذهب والفضة
كثيراً يشهد بصحة ما قاله الرئيس أبو نصر بن هبة الله
في المفاخرة بين الدينار و الدرهم
و تحاكمهما للسيف، قال في فصل منه:
"أنا المالك فلا أساجل، والسيد فلا
أطلول، والغالب فلا أظهر،
و المعروف فلا أنكر، والمقدم على كل شيء،
و المحبت إلى كل عاقل،
و المكرّم المصون، والعزيز الذي لا يهون. خبرى واصٍ،
و نفعى حاصل، أنفى العدم، و أخوّل النعم،
و أقيم سوق اللذات، و أقرب البعيد من الطيبات.
وجهى عتيق و نسي
عراق. إسمى الفرج، و كتب أبو السرور، و لا يبقى جدتي
تقادم الدهور" إلى غير ذلك من فصوله، و في هذا
مقنع لمن تأمله و تدبره.
الباب الثاني

في أسماؤهما جميع اللغات
و ما يختص بهما من النعوت والصفات

قال صاحب "الجماهير في أصناف الجوهر": الذهب بالعربية هو النضار، و يقال لما استغني عنه - بخلوشه - عن الإذابة: العقيق و بالسريانية ذهباً، والهندي سورة، و بالتركية آلوة، و بالفارسية: زر.

و النبض يقع على الذهب والفضة كما هو قبل أن يستعمل. و منهم من يوقت النبض على جميع الجوهر الذائبة قبل استعمالها، إلا أنه بالذهب أعرف منه بالفضة و غيرها.

و قيل: سمي هذا الجسم بالذهب لأنه يسرع بالذهب و يبطئ بالطيب إلى الأصحاب.

و قيل سمى به لأن من رأى في المعدن يذهب له و يبهم و يكاد عقله
يذهب. ويقال: رجل ذاهب.

إذا أصابه ذلك، وقيل لأحد الحكماء لم يسفر الذهب؟ فقال: لكثرة أعدائه فهو يفرق منهم.

و في ديوان اللغة: العسجد هو الذهب. و من أسمائه الزخرف، وهو في الأصل ما زُين من القول حتى باح في معرض الصدق. ثم نقل إلى التنزويري والتزيين في صناعة التصويري، ومنه نقل إليه الذهب، قال الله تعالى: "أو يكون لك بيت من زخرف" أى مزين منقوش بالذهب.

ثم إن من الذهب ما يصفى بالنار، إما بالإذابة وحدها أو باتخاذ الشحميرة و الجيد المختار يسمى لقطا لأنه يلقط من المعادن قطعا، و ربما لم يخل من شوائب ما، فخلصته التصفية.

حتى أتصف بالإبرиз.
وثبت بعدها على وزنه و لم يكن ينقص
في الذبوب شيئاً. قال أبو إسحاق الصابي:
صلبت بناد الهم فازدت صفرة
كذا الذهب الأبرز ينصّفو على السبك

و قال آخر:
أرى الشيخ ينقص في جسده و يزداد بالسن في حنكه
كما ينقص النير في وزنه و يزداد بالسرب في قيمته

و مثله قول: الزاهد في الذهب الأحمر
أكرم من الذهب الأصفر.

و أما الفضة فاسمها بالعربية للجيين، وبالرومية أرجوساً
و بالسريانية سيما [و بالفارسية سيم] و بالتركية كمش و بالهندية روب.
و تسمى الصريف، و يظن بالصيرف
أنه منه، فإن عم الصراف مزاولة الصرف
من العين و الورق في التفاضل بين
النقود المختلفة، كأنه مأخوذ منه.
و يقال لها أيضا الصنادل.
و كأنه صفة لها بالجودة، فإنه يقال فضة
صول و صوة، قال صاحب "التبليغات": يقال
الورق للدرآهم المضروبة منها. و الرقة بكسر
الراء وفتح القاف وخفيفها
الدرآهم المسكوكة، لا يقال في غيرها.
و الورق المسكوک و غيره، وقيل هما
للمسکوك. و قال صاحب "المصنف الغريب": السَّامُ
عروق الذهب، واحدته سامة. و يقال للذهب
النظر. و يقال في الفضة إن القطعة منها تسمى
وديلة. و قال صاحب "آداب الكتاف" إن من أسماء الذهب
النظر.
الباب الثالث

حيث معادينهما وكيفية توليدهما فيها
و استخراجهما وتخصيصهما
و منفعة كل منهما حتى أستوفيها

ذكر المعدنون أن الذهب والفضة [يوجدان] في أماكن
من بعض أقاليم الأرض. فالذهب في جزيرة سرنديب في
أرض الهند، وأرض العراق، و بساحل إفريقيه، و أرض
إلبيرة من جزيرة الأندلس، إلا أنه قليل وطيب،
و في أرض الجنوب من أرض السودان، وكيفما بعَدَت
عندهم من العمران كثير ذهبها.

و الفضة في أماكن من المغرب كجبال
جبلين و ما و الها من أرض السوس
و بمعدن عرام و وانشيريس. و لكن أهل البحث [فيهما]
و كثيرا [ما] تجلب إليه من مدينة
سردانية، و قليلا من أرض إلبيرة وجهة أشبيلة
و كبريق من عمل قرطة، و جبال مرسية
و بَعْتُه. وَ في ذلِك كِلَه حَكْمَة وَ بَرْهان,
و أَوضَح بِيَان عَلَى وَجْوَد الصَّانِع الْدِّيَان.

قال صَفَوِان يُخاطِب بَشَارًا وَ يَذكِر مَعَادن
الأَرْض وَ غَيْرها:

زمَمت بَأَن النَّار أَكْرَم [عَنْصِرًا]
و في الأَرْض تَحْيَا بِالجُحْرَاء وَ الزِّنَد
و تُخْلَق فِي أَرْحَامهَا وَ أَروُمِهَا
أَعَابِي لا تَحْصَى بَخْط وَ لا عَقَد
و في القرَّ مِن لِّجَ الْبَحْر مَنَافع
مِن اللَّوْلَو المَكْتُون وَ العِنْبَ الْوَرَد
كَذَلِك سَر الأَرْض فِي الْبَحْر كُلِه
و في الْفِيُضَة العَقَبَا وَ الجِبِل الصَّلِيد
و في الْحَرْة الرَّجَالِيَّة تَلْفَي مَعَادن
هُن مَعَارِي تَبِجَّسُ بالْحَضَد
مِن الْجَهْب الأَلْبَر وَ الفَضْة الْحَب
تَرَوَّق وَ يُصِب ذَا القَنَاة وَ الْزَهْد
و كَل فَلْيَم مِن نَّاس وَ أَنْك
و مِن رَبْط حَي وَ نَوْشَاد يُسَدَّى
و فيها زروعٍ و كُحلٌ و مرّكٌ
و من نزلتها غير كاب و لا مُكد
و فيها ضروب القار و الشّبن و المها
و أصناف كربت مطاولة الوقّد
ترى العرق منها في المعادن لا يحا
كما قَدَّت الحُسناء حاشية البرد
و من إثد جُون و كلس وفِضّةٍ
و من توبه في المعادن من هند
و في كل أغوار البلاد معادن
و في ظاهر البيداء من مستوٍ بح
فذلك تدبير و نفع و حكمة
و واضح برلان على الواحد الفرد
و فصل: و الذهب و الفضة هما من الأحساد الذائبة.
و قد أُجري الله تعالى بحكمته و تدبيره فيها
أن الكواكب تعين على إخراج المواد المعدنية
من الأرض إذا قبلت الأرض ما قبلت من تلك المادة على
قدر ما كان في جوفها من الأجزة المشاكِلِة لتلك
المادة العلوية، فكل حسن منها مناسب للكوب من
الأسرّب. وعِلِّة كُونه أن
الماء المسخن في جُوَف الأرض بِماَكِن مِعلومة إِذَا قَبِلت الشمس
ذلك المكان استحِر المَوضع، وقَبِل الماء الذِي في جُوَف الأرض وصار بخاراً
يطلب الصعود هارباً من الحرارة [تم]
يعدم الحرارة، لَأَن الشمس لم تبق
عليه بقاء أبدياً، و إنها هي مِنْتقلة. فإِذا ذهِبت الحرارة عنه
رجع مُنْسَقلاً طُالِباً مُرَكِّزه,
وقد استفاد من تلك الحرارة جزءًا، فَلم تزل تلك الحرارة تذهب ببعض
الطيف الماء الذي فيه
و تلتصق عَلَى سطوحه إلى أن يغلف و يتكاثف
و يخرج من حد الماء إلى حد الذهبية،
فَيصير زئبقًا ما اكتسب من حرارة على الصباح
و تَدَّحرَج لفْرَط غَلظه و لاَن بَحْرَه
غَلظ، و لَذا لم تقدَر الحرارة على الِفْوَذ إليه، حَتَّى
تُبَدِّد رِطوتيه أجمع، و لِصقت الحرارة بسَطِوَحه
شيئاً بعَد شيء. و تلك الحرارة و اللمعان البَدِيان عليه هما
ما تقلب إلى هذه الصورة التي تسمى زبيبًا، فهو

دهن من أدهان المعدن، وهو أحد الأجساد، وإذا كان هذا الماء ألطف جوهرًا من الماء الأول، لأن المياه تختلف في الرقة والغلوط،

فإنما كان هذا الماء في موضع يكون أشد حرا من الموضع الأول و يكون الماء أرق جوهرًا وألطف جسماً من الثاني، و سخته حرارة الشمس استمد من الحرارة وقبل منها أطلسه جُرّ المكان الذي هو قية أكثر مما قبل الماء الأول، فتطفَّت رطوبته وببس بسًا كثيرًا. و تذهب الشمس عنه و تبقى الحرارة الإبن مازجته تغتدى بالرطوبة على مهل، فلا يزال هذا دابه حتى يغر إلى أبتر موضع يقرب منه فلا يضمحل، فيجسَّد البرد و يجَّرِه الافراط [في] البس عليه و قلة الرطوبة فيه، فيصير دُهنًا من الأدهان المعدنية،

إلا أنه أحر و أببس من الدهن الأول فيسمن كبريتا، فالأول أحق باسم الدهنية. و بَذه الصلة إذا التقى الحجران في المعدن كان كل منهما ذهباً لا عتدال المجتعد من الأرض والهول و الطبيخ.
قال أصحاب المعادن أن الأسباب إذا ذهب
و طارت فضلاتها برزت منه فضية.

فصل: وكيفية استخراج الذهب من معادينه و أماكينه
على ما حكاه صاحب "الجماهر في [معرفة] الجواهر"
تختلف، فمنه ما يسيل الماء في بعض الأحيان في
المواضع التي لا يصل إليها إنسان، فإنه يحفر في المسيل حفرات،
ويجعل فيها زئبق، وتترك حتى يحول الحول
عليها، ثم يؤتي إليها و قد صار الزئبق
ذهب، و هذا لأن ذلك الماء في مبتدئه إذا
جرى، فحمل الرمل مع الذهب الذي كأجنحة
البعوض رقة و صغرًا يمر بما على ذلك
الزئبق، فيتعلق به الذهب و يترك الرمل يذهب.

و يحكي أن [في] بعض الأماكن عينها هى لوالهم،
لا يقرها أحد، و هو يكسحها كل سنة، و يستخرج منها
ذهب كثيرو، و لا شك أنه من جنس ما
ذكر.
و [كذلك] الذهب الذي يخرج من ماء جيحون،
فإنه قريب من منابعه المنحدرة من عل. و عندما تفتر قوة الماء الحامل للذهب باقترابه ومن المستواة فيعجز عن حمله و يخليه للدربوب، فإذا استخرج مع الرمل و التراب مزخر بالعسل و جعل بالعصر [و النار] بنادق مزينة.

و حكى أن بعض الجبال قرية خالية من المبرة و النعمة أصلا، و إنما معاشهم ترطيب الأمطار الربيعية، فإنما إذا جاءت و سالت خرجوا عند هدوئها و إقلاعها بسكاكين و أوتاد حديد [ينحتون] عن المسابر و يكشفون طبئها عن ذهب كشاييف ضرورية مطولة و كخيوط بآلات الصاغة ممدودة، و يجمعوها لأثمان ما يحمل إليهم من المبرة و اللحمو و سائر الحوائج، و لولا ذلك لما قصدهم أحد، و لولا
ذلك لما أمكنهم سكنها، و الله أعلم بمصالح عباده.

و الذهب الجلوب من أرض السودان لا يبلغه إلا الموغل فيها باعتِسَاف أميال تلك البرارى الخالية في المدة الطايلة، و بالاقتدار على حمل الأرواد والفائدة منها تراحمه، فمنه ما لا يعرّ عليه إلا بعد طلوع الشمس للمعان شعاعها، ففيّخذ كينادق بيلتقطها من يعرفها، ومنه ما يؤخذ [من مسارى]

السيول المتحدرة من جبل القمر
و الجبال الجنوبية عنها، و تلك الجبال شديدة الشهوق، فقد يحمل الماء بقوته القطع الكبيرة من الذهب يشبه الخزف. و بما سمي النيل أرض الذهب، و بما معادن في غيران عميرة النيل.

فصل: و أحجار الذهب على ما حكاه المعدنيون أحمر و أصفر و لون ثالث و هو قليل، و هو أسود الظاهر أحمر الباطن، و هي كلها في خِلاية من

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النقل، فإذا عرقتا كان العيار أحمر أو أصفر، فإذا
اشكل عليك فاكرسه و دُفعه و اجعله في كُوَّن عَظْمٍ
و حصّ و أوقعد عليه بالكبر و الفحم إلى نصف النهار، فإن
أُسْبُك لك شيء فسعدك. وقد يجعل في
الكوحل عند السبك بورق زجاجي و رصاص و صابون
منشف، و كذلك تصنع بالاشكرورية و بالرمل إذا
شككت فيها، من الجسد عشرة أجزاء و من البورق و الرصاص
و الصابون المنشف من كل واحد جزء واحد أو أزيد من ذلك
بيسمر.

و أحجار الفضة ذات ألوان خمسة: أبيض و أسود و أحضر
مشرب بحمرة و مشرب بصفرة و نوع الأشكرورية و عروق
سود و من حجرة مكّبرته. و هي كلها إذا كسرت
كان داخلها ململع براقا يزينه حُرَّش في الأكتر. إذا
عيرقتا كان عيارها للبضاء، فإذا شكت
في حجرها فادبها، و اجعله بالوزن في كوجل
كما ذكرنا، و اجعل معه قدر الربع من بورق زجاجي
و رصاص، و أوقعد عليها بنار الفحم و الكبير قدر ساعتين
أو ثلاثا، فقد خلص الفضة و تبقى في قاع
الكوحل.
فصل: و أما تفصيلها من خيبتها فالمماثل فيهما ذوكره الطبري في تفسير قوله تعالى: وًما
يوقدون عليه في النار ابتغاء حلية أو متاع
زيد مثله وكذلك يضرب الله احق و الباطل": و هو
مثل ضربه الله في الحق و الباطل، يقول: كما
يبقى خالص هذا الذهب و الفضة حين إدخالهما
النار و ذهب خبيثهما كذلك يبقى الحق
لأهله. و قوله "أو متاع زبد مثله".
يقول: هذا الحديد و الصفر الذي يُنتفع به فيه
منافع [ثم] يقول: كما يبقى خالص هذا الحديد
و هذا الصفر حين إدخالهما النار و ذهب خبيثهما،
كذلك يبقى الحق لأهله كما يبقى
خالصهما.
أما على ما ذكره الأوائل [من] فلاسفة العرب
الذين وضعوا الكتب العملية كجابر بن حيان
و الرازى و ابن وحشيتة و من سلك آثارهم
فقد جعلوا لأجسام الذهب و الفضة غسلات،
مثالية، منها بالمياه الحارة و منها
بالخلول إلى ما شاكل ذلك، و لكن غسلها بعضها ببعض هو أسرع
إلى طهارة، ثم بالأرواح، ثم بالحجارة،
و هو الذي أردت بالأمالح. و منها غلسلها لإزالة
أوساخها، و لا يمكن ذلك في جسد غير طاهر، لأن
الجسد الطاهر هو الذي يتسخ، فإذا قبل الوسخ غسل
 منه فرجع نقيا إلى حالته الأولى، و هذا لا يكون
إلا في مثل الذهب و الفضة اللذين هما الأجسام الطاهرة، فإن هذين الجسدتين إذا ما مازجا غيرهما
من الأجسام الوسخة توسخا و تعلقت الأوساخ إليها
فغسلهما على وجه: فما كان من
سواد بسبب إحراق أو مجاورة ما يضره
كالكبريت، فإن الفضة إذا شتمه أسودت، فلا
يغسل إلا بالشب، فيكون بالأمالح و يكون
بالشبوب. و هي كلها واحدة، لأنه يزن لون
الإحراق و السواد من الفضة و الذهب، و يبرى لوهما
نوريا. و لا يتسخى هذا الغسل في الذهب
و لا في الفضة إلا فيما مازج النحاس وحده، و أما

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ما مازح أحد [هما] الرصاص، فلا يكون غسله أبدا

إلا بإزالته الرصاص عنه، و هذا هو غسل

الجسد، وهو الذي يفرق بين الجسم و الرصاص [أو

بين] الوسخ و الجسم الظاهر. و ذلك مثل الفضة المخلوطة

بالرصاص، فإما تفصل عنه بأن يصنع كوجل

ثلثه عظم و ثلثاه حص، و يشدد عليهما

بالنار، فإن الكوجل يشرب الرصاص و يقله،

و النار تطير لطيفه و تقلعه، و تبقى الفضة

لا شيء فيها، و كذلك غسلها من النحاس، بأن

تجعل في هذا الكوجل، و تطعم الرصاص أبدا حين

تخرج نقيه خالصة، فهذا وجه من العمل.

أما غسل الذهب من الفضة و النحاس فعلى وجهين:

فغسله من النحاس و حده مثل غسل الفضة

من النحاس بالرصاص على المثال المتقدم، و إن شئت

tطعمهما كبريتا فيحرق النحاس، و يبقى الذهب

خالصا.

و أما غسل الذهب من الرصاص فمثل غسل الفضة من

الرصاص سواء. و أما غسل الذهب من الفضة فعلي
وجهين: أحدهما بالأحجار والآخر بالإمراح، فائدته هو بالأحجار [يكون] بأن يؤخذ الذهب الممزوج بالفضة فيرقق حتى يأتي صافح رقاقاً، وتفرش له فرشة من دفاع الآخر إلا الحجر الـ جل، ويتفر الملحوط بالملح مناصفة، ويكون ذلك في صفحة مجدود ويوقد عليه فرن يعرف بأنون الشجيرة، فإن الفضة تصير في جوف ذلك التراب المتحد، وبقي الصفائح حالصة.

و قد يعمل أيضاً هذا العمل بالشبل واختبر على هذه المرتبة.

و قد يغسل الذهب من الفضة كما يغسل النحاس، بأن يضاف إلى الذهب المخلوط بالفضة شيء من النحاس، ويسبي الكهل و يطعن الكبري الأصغر، فإن الذهب يخلص من الفضة و يبقى خالصاً، والأول أجود.

و قد تغسل الفضة التي خرجت من الذهب وصارت في تلك الأثر التي تسمى شحاراً بأن يرمى على ذلك التراب الرقيق، فإن الرقيق يخشى و يغلم حيث يأتي كالعجين.
قوس: قال أبو الحسن بن رجاء في كتاب "الصناعة

 العمليّة": ﻹ يكن المشتغل فيّ هذه الوجه صاحب حذاق و

 مهارة بما ومعرفة وتجربة، وليباست

 ذلك بالمعاينة لما يعمل فيه، فإن غيرها

 من الأشغال قد يسترده الغلط فيها إلا هذا، فإنه

 إن غل ط في تشجير الذهب وأنزله من فرن الطبخ

 وهو ناقص العبار جاء عليه في إعادته خسارة ونقص،

 فإن غفل عنه وتناهى في التشجير فوق حده كان

 في النقص الكبير و كذلك تخييص الفضة إذا

 أسبلت إن لم يكن متولي النظر فيها عارفا

 بأحوالهما ونميري بين صفاقها وهو غفل ما

 یعلم أنها قد أخذت حقها من السبك فيترها على

 الفور، وإلا كان فيها من النقص كثير. وتناهى بعض من

 يستغل بذلك [فقال إنه] إذا كانت في معظم حرها
وشق الفحرة بأصبعه و هي مهل كالحميم
 فلا تعدل عليه ولا تضره
و ذلك لعلمه بأن الوقت الذي تنتهي فيه شحيرة
و تنفصل من الحبث الذي كان فيها تكون فيه زمان برد،
فيشقها بأصبعه في ذلك الوقت وهو على النار في حالة
العليان.

قال: وأما التبر المجلوب من أرض السودان و غيرها
فيوشد و يزيق و يسبك الحشش منه المسمي
بالعنطن ثم يرق بالمنطقة و يقطع
و يخلط بالذي [بقى] من التبر الذي لم يسبك،
ثم يُسَل الشحيرة، وهي دفاع الآخر الأحمر الجديد
و الملح مناصرة، و يخلط بالتبر، و يوضع في
القدر و يدخل في فرن الشحيرة، و يؤخذ عليه النار يوما
و ليلة أو دون ذلك بنان لينة ثم يخرج منه دون [ ]
و يختير و يقاس بالمعيار، فإن بلغ حده من
الطيب نزل و سبک. ثم
يدفع للعملين بالوزن، و يؤخذ منهم بعد
العمل و الطبع بالوزن. فإن نقص من الوزن
شيء قطع من أجرهم.
فصل: قال الرئيس أبو محمد البيطار في جامعه إن التنكار من أنواع الملح، و أن الصاغة يستعملونه أكثر من غيرهم، و ذلك أنه يعين على سبك الذهب و يلمبه و يسبكه في رفق، ولا يجيل النار على جنس الذهب إذا كان معه.

فصل: وقال بختكان الحكيم: و المرتك المعدود من خبث الذهب و الفضة و يسمى المرداسنج، و هو على الحقيقة خيثهما بعد التخلص من النحاس و غيره.

و منفعته أنه يملأ القروح العفينة حما و يذهب اللحم الزائد في القروح و دمها، و هو نافع من احتكاك الأفخاذ و من عرق الإبطين و راحتهما و بيرئ القروح و البثور إذا طلية عليها، و يمنع من الشراب و النفاخات، و إذا خلط بالخل و الزيت نفع من كثرة القمل إذا طلية به.
و إن أخذ مرتك مغسول و عجن بدهن ورَّد و طلي

به آثار القروح نِقَّاها و أذَّهَب سواها.

فصل: قال: و الذهب معتدل لطيف، سحالته

تدخل في الأدوية السداوية، و أفضل الكين و أيسرها بهما ما كان يحكم الذهب، و إمساكه

في الفم يزيل البخار و تدخل سحالته في داء الثعلب و داء الخيمة طلاءً و يقوى العين

كحلا، و ينفع من أوجاع القلب و من الخفقات و حديث النفس و حبشتها.

فصل: و نقل عن الأوايل أنه إذا أخذ خاتم

ذهب فضة منه، ثم حمي بالنار،

و كوي به قوادم أجنحة الجمام أَلَفَت

أبراجها و لم تفارقها. قال آخرون: سواء أكان الذهب خاتمًا أو غير خاتم، و إن طرح منه
وزن حبتيين في وزن عشرة أرطال زئبق غاصل إلى قعره، و إن طرح في هذا القدر مائة درهم أو غيرها من الأجسام الثقيلة عام فوقه ولم ينزل فيه.

فصل: و إن ثقت الأذن بابرة من ذهب لم تلتتحم.

و إن علق الإبريز على صبي لم يقرع و لم يصرع، و إن لبس منه خاتم في أصبع داهيس خفف و جعه و من كانت به علة تحتاج إلى الكي، ثم كوى بالذهب لم ينقط الموضوع، و إذا أخذ منه ميل و نكحل به بلا كحل حذ الصر، و يضر المثانة، و دفع مضرته بشرب العسل و المسك، و خيره ما لم يحالله غش، الشربة منه قبراط.

و من كتاب "البستان" للفتح بن حافظ: و قد وصف أرسطاطاليس الحجر الذي يجذب الفضة، و هو حجر أبيض لونه إلى الغبرة، و إذا شددت عليه بالأسنان صر.
356 كما يُصرف الرصاص، و ليس فيه شيء، فمن
357 أخذ وزن أوقية من ذلك الحجر و جعله على مقدار خمسة
358 أذرع من فضة جذبها إلى نفسه، و إن كانت الفضة
359 مُسمَّرة قلع تلك المسامير من مواضعها.
360 و من جعل فضًا من ذلك الحجر على خاتم ذهب أو نحاس ثم
361 قربه إلى مثل وزنه من الفضة جذبها و قلعها،
362 و إن قرب ذلك الفض من خاتم فضة سعي الخاتم
363 إليه.
364 و حجر الذهب أيضًا معروف، و ذلك أن الذهب إذا
365 سُجِّل بالباريد من حديد و خلط بالتراب ثم أُمزَّ عليه هذا
366 الحجر فإنه يخرجه من التراب و يلقطه حتى لا
367 يبقى منه شيء إلا جذبه إلى نفسه.
368 و إن الذهب إذ كان الناس يتصرفون به فيما
369 بينهم، و عليه تدور الدواير فليحفظوه، فإنه
370 إذا جاوره المس و هو النحاس فإنه يكشف لونه
371 و يسوّد حمرته. و إن جاورته الفضة
372 بيضته و نقشت من قوته. و كلما جعل
373 من الأجسام الدون على الجسم الشريف كان الدون الأغلب
لأن كل جسد إذا خالط ما لم يقارنه في الجنس
غيره وأفسده.

قال على بن عيسى الكحالة في "تذكرتكم" إن الاقليمياء
التي تخرج من شحيرة الذهب و الفضة هي
من أفضل أدوية العين، و تنفع
للمتحفيف إذا كان فيها رطوبة أو سيلان حار [أو] لطيف، لا سيما إذا
كان ذلك من تاكل وحدة، و تصلح للأثر الذي
ليس بفليط، و للقروح، وهي من أدوية
الحرقة فيها و البياض و التغر الزابد و الحرب العتيق
و كل علة عتيقة كالسائل العتيق.

فصل: قال أصحاب الأوفاق إنه إذا رسم في صحيفة
من الذهب مسدس من وفق مائة و أحد عشر من العدد حين تكون
الشمس في شروقها سهل على من استعمله سائر مطالببه
و منافقه، وهو هذا:
الدواحم المشرقة في دوابيب دار السكة

فصل الثامن

وأما الفضنة على ما قاله الحكيم في "أدويته المفردة" فباردة يابسة في الدرجة الأولى. وإذا بردت الفضنة وخلطت بالأدوية المشروبة نفعت من كثرة الرطوبات ومن البلغم النازج ومن العلل الكائنة من العفونه، خاصيتها النفع من إدرار البول ومن البلغم الشديد، واضرارها بالثمانة، وتدفع مضرها بالعسل والجوز. بواعظها - ما لم يخلطها الغش - الشربة منها دافق.
و إذا رسم في صحيفة منها مربع من وفق أربعة و ثلاثين
من العدد حين يكون القمر في المشترى و ينظره
نظرًا ممّوضًا، أو المشترى في بيت من بيوته سهلًا على
من استعمله الحفظَ و استقامت له الولايات و كان في أمن
إذا دخل على السلاطين، و هذا هو بحول الله
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اللَّيْثُابُ الرَّابِعُ

في معرفة [مقدار] ما ينتمي فيهما
من نفيس الأحجار مع بقاء
مجهة الصنعة من غير نقش لذلك
و لا نقار
و هو فائدة هندسية يعلم بها النقد المغشوش
و مقدار [عشي من غير حمى بالنار] و لا
برد مبرد و لا يندب ميلق,
بل يعلم ذلك و الذهب و الفضة على حاملهما
من سكة أو صياغة أو ترصيع فصوص
مع بقائه على مجهته. ي تحتاجها الفقهاء و القضاة
في أموال الأيتام و الملوك و أرباب
الأموال النفيسة.

و صورة ذلك على ما حكاه الشهاب القرافي في
"ذخيرته" أن نتخذ ميزانا تتحرك علاقة
كشفه من طرف العمود إلى وسطه,
و تعمل على طرف العمود علامات متقاربة

مناسبة البعث محررة التساوي، ثم

تأخذ ذهبا و فضة خالصتين، و تسوى بين

رتبتهما في الهواء، ثم ترسلهما في مايع متساوي الأجزاء

سهل الحركة كالماء

الصاق و نحوه، فتجعل في كفة الذهب من

الماء أكثر مما في كفة الفضة بسبب تلزز

الذهب، فتحرّك علاقة كفته على

العمود حتى يساوي الفضة في الماء كما ساواها

في الهواء، و تحتفظ عدد تلك العلامات التي قطعتها علاقة

كفته، و لتكون ستة مثلا،

فتعلم أن ذلك فضل الذهب الخالص على الفضة الخالصة.

و مثل ذلك بفرض الجسم الممتنع ذهبا،

و تزنه فضة خالصة في الهواء، ثم تضعهما في الماء، فترجح

كفة الممتنع لتلزز الذهب، فتسوى بينهما

بتحريك العلاقة على العمود، فإن قطعت العلاقة

تلك العلامات الست، فهو خالص لا غش فيه و إن حصلت

المتساوية دون ذلك، و إن تكن حصلت بل بحركة على أربع فقط

فقد بقى الثالث، فتلته فضة على هذه النسبة.
أو تعمل جرمين متساويي العظم، أحدهما ذهب خالص و الآخر فضية خالصة، و تجرر وزهما، وتكتن الفضة أربعة و الذهب خمسة، و تعمل حרמה آخر مساويا عظمه لعظم الممتحن فضة خالصة، و لتعرف وزنه، و ليكن سبعة فوز زن الممتحن ثمانية، فزيادة الممتحن واحد، ونسبته إلى السبعة نسبة السبع، و نسبة الواحد في الذهب الخالص إلى الفضة الخالصة نسبة الربع، ففى الممتحن من الغش بقدر ما يكون الربع والسبع، فلو كان الممتحن ثمانية و نصفا و ربعا حتى يكون الزائد مثل ربع الفضة إلى تقابله كان خالصا.

فإن عصر علينا وجود الفضة مساوية للمختلط عملنا جرمين من شمع أو غيره أحدهما مساو عظمه لعظمة المختلط و الآخر [مساو] عظمه لعظم فضة أعدادناها، ثم نعرف وزن الشمعين. فإن كانت [نسبة] زن شمع الممتحن إليه كنسبة زن فضة إليها فالممتحن فضة خالصة.
و إن كان ذهبا، فاجعل مكان الفضة ذهبا.

فإن عَسْر [وجود] جسم بساوى عظمه عظم المختلط، فترى بصح في الهواء في ميزان محكم،
ثم زيله من الميزان و تملأ كفته بالماء، ثم تضع المتمكن في الكفة، فيطلق بعض الماء و ترجح الكفة، فتقابله بالصح في الكفة الأخرى، فتكون هذه الصح أكثر من صنح الهواء إن كان جوهرها أخف من جوهر الذهب كان الحاصل من الماء معها أقل و مع المتمكن أكثر، [و إن كان جوهرها] أثقل من جوهر الذهب كانت أكثر من صنح الهواء، [و إن كانت] مساوية له [في الجوهر] كانت مساوية لصنح الهواء، ثم تحفظ نسبة ما بين الوزن في الهواء [و الوزن] في الماء من زيادة الصح وقلتها، و تفعل ذلك بجسم خالص من الذهب إن كان المتمكن ذهبا أو [من] الفضة إن كان فضة، فإن استوت النسبتان فهو خالص، أو اختفتا فهو مغشوش بقدر الاختلاف. و بهذه الطرقة تتمحن سائر المعادن.
البَابُ الخامس

في أول من ضرب الدينار و الدرهم
و أقام أماكن طبعهما
و ضوابط سبكهما و فادحهما,
و ما سحَّر من الخلل عند
دفعهما و قضهما.
و هذا الباب معظم الكتاب و فيه أثنا عشر فصلا
الفصل الأول

في أول من ضرب الدينار و الدرهم قبل الإسلام
و بعده، و أول خليفة كتب عليها اسم
الله تبارك و تعالى في الإسلام، و عين الأماكن
التي تضرب بما و شدد في تخصيصها

قال القاضي أبو الحسن بن لال في شرحه لمقامات
الحريري: إن الناس في أول الزمان كانوا يتبايعون
بالعُروض فيما بينهم كالمخطة
و الشعر و الحبوب و الفواكه و ما أشبه ذلك،
فشكوا إلى ملكهم ما ساءهم
من ذلك و ما يخفون من تلف أموالهم إن هم
بقوا على هذه الحالة، فأمرهم أن يختاروا ما
لا يفسد على طول مكث الزمان، فاختاروا حجر
الذهب الذي هو أبقى جواهر الأرض لا يفسد
أبداً، و كلمة بقي تحت الأرض صلح و طاب،
و كلمة دخل النار تخلص و حسن، و أمر
بضرب الدنانير و طبعها بطبائع الملك،
و تهى أن يفسد أو أن يكسر طابعها،
و أن من فعل ذلك تقطع يده,
يريد على سنتهم.
و أخبروه أيضًا أنهم يحتاجون إلى ما لا
يفي فهمه بقيمة الدينار [بل] بأقل منه أو بأجزائه
مما لابد لهم من مصلحة
أنفسهم من شراء الخوانج، فأمرهم
باختيار حجر آخر دون الذهب تكون قيمة
الدينار منه عشرة دراهم، فاختاروا الفضة، و ضرب منها
الدرهم و طبعه بطبائع الملك، و كانت قيمة العشرين دينارًا
مائتين درهم.
و لم تزل الروم تستعمل الأدناني و الفرس تستعمل الدرهم،
حين جاء الإسلام، فكان الناس يستعملون ذلك إلى زمن عبد الملك بن
مروان فضرب الأدناني و الدرهم، و كتب على
الدينار "الله أحد" و كانت قبل ذلك ملسية لا كتب فيها،
و كتب على الدرهم كذلك.
و كانت الدرهم في أيام الفرس مختلفة على ثلاثة أوزان،
منها درهم على وزن المثلث عشرون قيراطًا،
و درهم على وزن اثنتي عشرة قيراطًا، و درهم على وزن عشرة
قراريط.
فلما جاء الإسلام و احتاج إلى تقدير الزكاة أخذ الأوساط
من جميع الأوزان من جميع الثلاثة، و هي اثنان و أربعون قيراطًا،
فاتفقوا على أن يكون الدرهم على وزن أربعة عشر قيراطًا من قراريط
المثلث: و المثلث أربعة و عشرون قيراطًا، كل قيراط من ثلاث حبات،
و أربعة و عشرون في ثلاثة أثنان و سبعون، فهو من اثنتين و سبعين حبة.
و من البرققي ليوثيمه بن سنيد ابن
عباس قال: إن أول سكة وضعت في الأردن الأدناني
و الدراهم، وضعها مورود بن كنبان، و كان الناس قبل ذلك يتبعون
بالتبر من الذهب و الفضة، فلما ضربت الدنانير
و الدراهم نَخَرَ إبليس نخرةً،
و قبض عليها في يديه و قبَلها وقال: استمكنت من
بين آدم! بكما يقطعون الأرحام
و يسفكون الدماء و يظلم بعضهم بعضًا!
و قبل إن عمر بن الخطاب - رضي الله عنه -
لما رأى اختلاف الدراهم نظر إلى أغلب
ما يتعامل الناس فيه من أعلاها و أدنائها،
فجعل منها آثى عشر دانقاً و أخذ نصفها فكانت ستة دوانق، فمثَّل
زدت على الدرهم ثلاثة أسباعه كان مثقالًا، و مثَّل
نقصت من المثلال ثلاثة أعشاره كان درهماً.
و كانت الفرس عند فساد أمورهم قد فسدت
نقودهم، و النقد هو الخالص من الفضة و الذهب، فاتسع
فيه، حتى جعل المعنجل أن كل مدفوع نقدا من
كل شيء فميز المغشوش من الخالص.
و قد اختلف في أول من ضربها في الإسلام；
فقيل إن أول من ضربهما في الإسلام عبد الملك بن مروان،
و كانت حينئذ الدنانير من ضرب الروم،
و الدراهم من ضرب كسري و جميح، و كانت قليلة،
 فأمر عبد الملك بن مروان الحجاج بضربها سنة
أربع و سبعين من الهجرة و قبل سنة خمس و سبعين، و كتب عليها:
الله أحد، الله الصمد." ثم ولي ابن هبرة في أيام يزيد
فضربها أجود ما كانت، ثم ولي خالد بن عبد الله البجلي
ثم القسري، فضربها و شدد
في تجويهها، ثم ضربهما بعده يوسف بن عمر فأفرط في تجويهها،
فكانت الهبرية و الخالدية و اليوسفية
أجود دراهم بين أمية، و كان المنصور لا يأخذ
غيرها.

وقيل إن أول من ضربهما مصعب بن الزبير عن
أمر عبد الله بن الزبير سنة سبعين على
ضرب الأكاسرة، و علىها من جانب [ و "الله" في جانب،
ثم غيرها الحجاج و كتب عليها "بسم الله".

و روى عن النبي صلى الله عليه و سلم
النهى عن كسر دراهم المسلمين الجارية عليهم.
و السكينة هي الحديدة يطبع عليها الدينار
و الدرهم، فسميت سكية بما الدنانير
و الدراهم.

و من كتب الأوائل أن عبد الملك بن مروان أمر الحجاج
بأخذ دار الضرب، فسأل الحجاج عما كانت
الفرس تعمل في ضرب الدنانير و الدراهم،
فأخذوا دار الضرب، فكان أولاً من اتخذها
و جمع فيها الطبعين، فكان يضرب المال للسلطان
[إما يجتمع له] من التبر و خلاصة
الزيوف [و الستوقة] و البهرجة، [ثم أذن
للتجار و غيرهم] في أن تضرب لهم الأوراق،
و استحللها من فضول ما كان يؤخذ
من [فضول] الأجرة للصناع و للطبعين،
و ختم على أيدى الطبعين.

فلما ولى عمر بن هبيرة العراق ليزيد بن عبد
الملك خلَص الفضية أجود من تغليص من قبله
وجود الدراهم و شدد في العيار.
العراق هشام بن عبد الملك، فاشتد في النقود
أكثر من تشديد ابن هبيرة حتى أحكم أمرها
أبلغ من إحكامه.

ثم ولي يوسف بن عمر، فأفرط
في الشدة على الطباعيين وأصحاب العبارة
وقطع الأيدي وضرب الأبشر، فكانت المهيزة
و الخالدية و اليوسفية أجود نقود بين أمية.

و من كلام الحافظ أبي محمد بن حزم في
بعض تواليفه [ ] للإمام أن يأمر الناس أن
لا يجري بينهم في معاملتهم إلا
الذهب الخالص و الفضة الخالصة، و يأخذ الإمام بسبك
كل سكة منقوشة و يميز محضها من غشها،
ثم يصرف ذلك إلى صاحبه.
الفصل الثاني
في أول من ضرب الدرهم المركَّن هو أبو عبد الله المهدي
و أول من أقام دار الضرب فاس
مهدها الله تعالى
و ذلك أن صاحب الضرهم المركَّن هو أبو عبد الله المهدي
القائم بأمر الموحدين، و كانت الضرهم قبل ظرور
الدولة الموحدة كلها مدورة، فأمر المهدي أن تكون
درهمه مركنة، فكانت كذلك من حساب عشرين منها
في الأوقية و ثلاثة منها في الدينار.
و كان بمدينة فاس القرويين و الأندلس دارا
سكة، فنقلهم الخليفة أبو عبد الله الناصر ابن المنصور الموحدي
لدار أعدها بقصبتها
حين بناها سنة ستمائة و أعدُّها
مُوْدِعاً للأموال المندفعة بما و طوابع سكتها، و أتقن
ثقافتها على أتم حال. و غالب
ما كان يسبك فيها الذهب، و أما الضرهم فكانت
تَرِدُ من جميع الأفاق مختلفة السكة
و الوزن، و كان الناس يتعاملون بكل سمة
منها، إلى أن صار التعامل في الدراهم على وزن هذه
العقوبة حسبما يُذكَر بِجَوْل اللَّهِ.

الفصل الثالث

في الأوصاف المعتبرة في ناظر
السكة، و ذلك مما لا غنى عنه، و ما لا بد منه

و لما كان هذا الذهب والفضة من أشرف
الأشياء كان النظر في أمورهما من
أشرف الأمور. [و] كما يعتبر في إمام
الصلاة أن يكون عالماً بما لا تصح الصلاة إلا به قراءة
وقفاً، و كما يعتبر فيمن أراد
أن يتحمل شهادة أن يكون عالماً بوجه التحمل،
كذلك ينبغي أن يكون الناظر في هذا المفراد هو الواجب
على كل من قدّم على أمر أن يعلم الحكم
فيه و يستكمل له النظر حتى يستوفيّه و لا
يأخذ برأيه فيه على البديهة و لا على [الظن]
و ما يشبهه بِل يشعر في نفسه أن الثواب
لمَن علم فاقتدى و العقاب
لم ظلم فاعنتئ. و إذا كان
معروف الأمانة و له بالصناعة الجارية فيها
علم و معرفة، كتميز النقود
و أوصاف المعادن و ما يُصَبِحها و ما يُفسدُها
و أسباب غشها و ما يَزيله، مع دربة
بأنواع خطوط الطوابع و أشكال الفتح
و تصنيفه و الخط و هُمْرته مع الزاهدة
و الديانة استوئق الناس بِسِكتِهم و كثر الفايد
و نمي العائد. و إذا دخل فيها من ليس من
أهلها و لا عدّ من رجالها، لا سيما مع
إهمال دقائقها و الإغفال عن وجه البحث
في حقائقها عادات بالخبران و عدم
الرجحان، و تعطل فايدها و قل
عايدة.
الفصل الرابع
في أحوال شهودها
و ربط عقودها
و لا بد شاهدى عدل للشهادة

عند الحاجة همما، لما يخاف من المناكرت بين الدافع و الصانع;

و يقدَّم هما من يقدم الناظر، فإنهما

إن قدمهما الناظر كانا له لا

عليه. و لا بد من مياومه كل واحد منهما

كالناظر، لما يطرأ من المطالب، ويكون عالمين

بما يشهدان فيه، و إلا كان سبب

إضاعة الأموال و اختلال الأحوال. و يكون بيد

كل واحد منهما مفتاح حولق الأزواج

التي يطع فيها نفقاتها بعد حصر

أشخاصها. و في هذا الجولق يكون إمام

الذهب و صنح الوزن و العيار. و إن كانا

من يتناوبان في كل شهر مع غيرهما

فهو أحسن.

و ليحذر السكاكون أن يطبعوا دينارا

أو درهما إلا معاينتهما.

و يختاران بوزن العمل بما قضى كل سكاك

و ما طبع بقول الشهر، فإن كان مساوايا
الفصل الخامس

وظائف الفتاح،

و ما يتعلق بذلك من وجه الاستصلاح

و لكل شيء أساس، و أساس أعمال

دار السكقة الفتاح، فهو أصل من أصولها،

فإن استقام استقامت الأعمال بما.

و ينبغي أن يكون بارع الخط، فإن ذلك حرص

للدينار و الدرهم. [و قد قال] حكيم العرب: الخط

أصل في الروح و إن ظهر بآلة الجسم.
و قال الحكيم الروم: الخط هندسة روحانية،
و إن ظهر بالآلة جسمانية.
و طوابع الدينار والدرهم هي جوانب الملك،
 فمن ضرب عليها فكأنما ضرب على خاتم الملك.
و إذا لم يكن بارع الخط، فتأى مزية تكون له؟ و أي حرمة تكون لطابعه؟ و الخط الضعيف يتطرق الضرب عليه، كما يضرب على شهادة الشاهد الذي لا يحكم وضع شهادته.
و بالخط سمي المطبوع مطبوعا،
و هو أصل فيه و إن كان آخر العمل، لأنه به ختم.
و ينبغي ألا [يُغيِّر] ما عهد من الكتاب في الدينار والدرهم، ولا يزيد في سطوره، ولا ينقص منها برآيه، ولا يكون ذلك إلا بإذن الملك، فهو القدوة والعاده. و إن كان اسم ملك
ذلك الوقت في الدينار و الدرهم فهـو من الكمال،
لنـلا يـكون مـتلوـف الضرـب.

و لـتكن آلاته و أقلاـمـه ابـن أـعدـها
للـفتح مـثـقـفة بـجـوـلـق الأزرواـج إـلـى أن يـحـتاج
إـلـيها فـتـخـرـج له. و لـيـكن مـعـه
من بلازمه مـن الـثـقـات حـين الفـتح إن كـان
غير مأمون لـفسـاد الزمان.
و يـستـر إـذ ذـلـك عـن أـعيـن الـناس إـلـى أن يـتم
عـمـله، فيـرد آـلاته للـجـوـلـق.

و لا يـسـمح له بالـمناـجاة
مع من يـتـهم بـطلـب الـطـواـبـع كـالكـيـماوـيـن
و المـتـهـمـين بالـدـلـسـة في الـدـنـانـيـر و الـدـراـهم.

و لـيـكن المـلمـع الـحـداد الـذـى يـطـرـح لـه الأزرواـج
أـمـنـة عـلـيـها. و يـعـهـد إـلـى أـلا يـطـرـحـه إـلـا
بـدار السـكـة، و لا يـسـمح له أن يـطـرـحـه دوـفـا
بـوجه و لـا عـلـى حـال.
و يبحث الناظر عن الصيارفة، و يمحص عن خطوط الدنانير والدرآم التي قد أعدوها بأيديهم للصرف لفلا تكون خارجية الطوابع. و كذلك يبحث عن نقاش الخلي من الصاغة، فإنهم أصل فوائض الطوابع الخارجية، لا سبما وهم ما يؤمنون في ديارهم، لا يدخل دربهم حاكم بالليل ولا بالنها، وإذا كانوا كذلك فأي شيء يمنعهم من ضرب الدينار والدرهم؟

و يلزم حاكم البلد إذا كان ناصحا للملك أن يبحث عن أحوال الدميدين و غيرهم، فمن سمع عنده صوت مطرقة أو وقود نار للصاغة فليضرب عليه يده، ولا يترك صانعا يخدام الصاغة في داره ولا مستتراً عن أعين الناس، لأن صناعة الدنار والدرهم والصاغة صناعة واحدة، فتجتمعهما المطرقة، والنار، و عنقوده من غش عليه في تزوير طابع الملك راجعة لما نزل به من الأحكام، والله الموفق.

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الفصل السادس
في أحوال السُّكاكين
و الوصايا لهم،
و ما يخذرون منه
و هم ثلاثة مراتب: معلمون و عمَّالون و متعلمون
و الكلام في هذا مع المعلمین، و هم في زماننا
لا يدخِلون معهم في صناعتهم أجنبیا، و إذا دخِل
معهم يدَعُون الاتِّخال و إضاعة
المال.
و ينبغي ألا يدفع الذهب و الفضة في دار السكة
إلا لمن عُلِّمَت أمانته و ديانته
فيما يقضيه [ ]، و إن كانوا
متطابقين فيما بينهم، بسبب ما يطرأ
على أموال الناس بما فهو من الحرم.
و إذا قبض السُّكاك مالا فليك فمحضر
شاهدى الموضوع وموافقة الدافع، 
و يكتبان أسماءهما، و من لم يعرف 
منهما كتب حُلاه، و يحققان ما قبض الصانع، و لا بد من تسمية الأجرة 
و نوع ما يصنع له من كبار و صغار و قوائط 
و مقدار أجل العمل و يكون عمل الذهب 
كله بين يدى الناظر 
و لا يغيِّب السكاك عليه و لا على شيء منه.

و أما الفضة فليسَ بها إلى دار السكة، و يتفقد 
الناظر في أثناء ذلك الحداد و غيره 
فهو الأحبوط، و إذا وزن الناظر 
له بالذهب و الفضة فليحفظ في 
ميزانه، و يجعل شوكة القبة على شوكة 
اللسان، و لا يبخس من حق الدافع و لا من حق 
المدفع له شيئاً، و ليسير نفسه أن الله 
سبحانه ناظر إليه و مطلع عليه. و ليعلم أن تحقيق 
الوزن مأمور به، قال الله تعالى: "و أقيموا الوزن بالقسط 
و لا تخسروا الميزان".
و إذا قبض سكاكك [شيئا بادر إلى وزنه]

بصحيح و بعد ذلك تؤخذ الأجرة فهو أطيب

و أوجب للحق. و ليجتهد في

تحرية الدينار و الدراهم و تحقيقها التحقيق التام

بالصنع الذي هي إمام هناك.

و إذا طبع فليركب الطابع على أخيه

تركبو محكما محفورا، و يحتفظ

من تحويل الكتب فيه. و لا يكون الدينار و الدراهم

منشرحا انشرحا فاحشا خارجا عن القياس المعهود في الطابع. و ليكن مردوغ القنوت لا يشط على

دائرة الدينار و لا أزياق الدرهم من

جهاته الأربع قدر شعيرة فإنه إن شيط على

ذلك أدنى شيء لم يكن الدينار حرزا لما شط

من دائرة و لا لما شط من أزياق الدرهم، و كان الذي سكك أهدي ذلك الشاطب لمستجل

قرضه، إذ لا يقوم الحد إلا على من أخذ من

دائر الخرز، و حرز الدينار و الدرهم هي محااسبة الدائرة

به الخيطة له، و لأجلها يعترم من
القرض. فيجب أن يطالب الاطلاع بذلك كله،
لأن الحد متعلق بهذا الأمر.
و إذا قضى السكак مال أحد فليجعله على حدة،
لا يخلطه مال غيره، ولا يدفع مال هذا لهذا ولا يجوزه عن دولته لدولة غيره.
الفصل السابع
في كمية إمام الذهب
و ما فيه و عبارة من الذهب
جرت العادة و استمر العرب
في إمام دار السكاة أن تكون ذهوب خمسة
تنخير من أطيب النقود كاليعقوبي والحسون والخفشي والمسيئ والمردشي و يثبت في طوابعها حتى تعلم أعيافها بالاختبار الصحيح، و تجمع و تسبك. محضر شاهدي دار السكاة، و يجعل بما سبيكة طول
القبضة، و يطبع في وجهها بعد التعديل
بطوابع دار السكة، و يجعل في جويع الأزواج. و مين احتج إلى غيره أخرج
بمحضر الشهيدين.

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و ألقى به بفرن السبك و لما حققت
ذلك عوقب الفاعل لأجل غشه و أعيد العمل لإمام آخر.
فهذه إحدى دلائل [غش] اليهود لعنهم الله.
و ينبغي أن يقصر السبك لما يحسن
[و] يوثق به و يؤمن عليه، و لا يسمح به لكل من
أراده.
و بلحق بالإمام ميلق العيار و ليكن
حجرًا مبسوطًا إن أمكن متسعًا شديد الكحولة صافيا
و ليلصف في و دك رأس العتر على ما حكاه
أهل التجربة، فإن فيه خاصية لقبول
ما يعير فيه. و يدهن في بعض الأوقات بدهن الجوز
العفن. و إن كانت له علاقة و غلاف مُلْفٌ
فذلك من محسنه. و ليبعد به عن
المواضع الباردة، فإن البرد مما يفسد قبوليته
لما يعير فيه. و مين احتج لتنقيته
و جالسه مما لحق به فإن الأشكورية تزيله. و إن
احتاج أن يعير فيه في يوم برد فليسخن في يدي
إنسان [أو] تحت إبطه أو تحت ركبتيه. و ينبغي أن
لا يُخرِجه الناظر من يده لتلا يعمر فيه ما
الفصل الثامن
في شكل الميزان و حفظه
مع صنحته و تفقده في حال الإحسان
و ذلك أن الميزان هو الحاكم بين الدافع
والقابض، في ينبغي إحكامه بأن تكون قصبه مستقيمة
لا اعوجاج فيها و أن يكون ثقب مسمار القبة
أسفل اللسان لا في القصبة نفسها و أن يكون أولا طويلا متسعا
من وجه اللسان، ثم يثقب بين ذلك ثقبًا ضيقًا
يكون فيه مسمار القبة جاريًا في حرف الثقب بعد أن يختبر وسط
اللسان و يحقق تحقيقا مستوًى، فإنه إذا كان ذلك كذلك تبين فيه
الرجلان والقضبان سريعًا من غير توان.
و يكون للكببة علاقة قوية تتعلق بما عند الوزن في
قائم [يثبت] بالإقتحام بالحجارة و هو عمود من خشب
قد أخرج منه علو يعلق فيه الميزان.
و تكون كفتا هذا الميزان نصف كرة غير مبسوطتين
و أخياطهما من حرير خرّ إن أمكن.
و يختار قبل إعداده للوزن لبلا تكون واحدة أخف من الأخرى.

والصنع أيضًا تكون من النحاس المفروغ محكمة الخرط
من غير تخبيط فيه. و يبقى أن تكون عند العمل ناقصة
فيزاد عليها جسمها من جنسها أو من
غير جنسها كفصول الهند، و تلك ريبة فيها.

و يكون منها بدار السكة نسختان متفق
على تعديلهما، واحدة تسمى إماما
لا تخرج من جدول الأزواج إلا للضرورة،
و ثانية تستعمل في الأوزان دائمًا. و لا بد من
اختبار هذه النسخة و اختبار صنع اسكاكين
بالإمام الذي أعد بالجولج في أول كل شهر أو كل
جمعة و تكون لها علامة تميّز بما من غيرها،
و ينبغي ألا يخرجها الناظر من حوزتها، و لا
يُعَزّ على واحد منها ولا على الصنع المستعملة
460 بين يدى الناظر. و إن اتفقت الغيبة
461 فلا بد من اختبارها بالإمام لما يخشى
462 أن يتطرق من الآفات حين
463 الغيبة على ما في دار السكة [مما] يوجب
464 التهمة.
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466 وكان مما عُثر عليه لبعض اليهود لعنهم الله
467 أنه أُلْفِيَ بِيدهِ جَبَابٌ مِن شَعِيرٍ أَعْدَها لِيْزن
468 بما، فاقمه أحد النبلاء لثقل أَحس فيها،
469 فاختبرها، فإذا في جوفها أطراف من حديد ركزها فيها
470 بعد أن رطبها بالماء ثم جففها،
471 فاشتدت على تلك الحال. و كان معها شعير سالم من ذلك،
472 فكان هذا اليهودي إن قبض لنفسه وزن باليق فيها أطراف
473 الإبر، و إن وزن لغير وزن باليق لا
474 إبر فيها، وقد يُسمَّى هذا في لفافم بالمعمرة،
475 وكذلك يجعلون في قلب النواة من الخروب و غيره.
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477 و سبأئ الكلام على مقدار الرطل و الأوقية
478 و الدينار و الدرهم و غير ذلك إن شاء الله تعالى.
و أما أفعال الجولق والمودع، فلتكن محكمة
العمل لا يستسهل في عمل أمثالها، و لكن المفاتيح محققة
مطبوعة على أفعالها. و ينبغي ألا يخرج مفتاحا من بده
و كذلك الشهدان، و لا تكون شاحصة
للبصائر خوف أن يضرب عليها.

و من الحزم و النظر أن يكون بدار السكة
سامر بأعلاها يحرسها بالليل من
سائر جهاتها، من غير أن يكون له سبب في جوّالان أسفلها.
و كذلك يتخذ لها حارس عند بابها بالنهر لتلا يدخل إليها
أهل الفراق و الاطماع و بالله التوفيق.

الفصل التاسع

في الكلام على النيران، إذ هي أصل في هذا الشان

قال الله تعالى: "الذى جعل لكم من الشجر
الأخضر ناراً فإذا أنتم منه توقدون" وقال عز
وجل: "أفرأيتكم النار التي تورون، أنتم أنشياتم شجرها
أم نحن المنشئون، نحن جعلناها تذكره.
قال الجاحظ في كتاب الحيوان: و النار من أكثر المأمون وأعظم المرفق،
ولو لم يكن فيها إلا أن الله سبحانه جعلها الزاجرة عن المعاصي لكان ذلك مما يزيد في قدرها و نباهة ذكرها.

و ليس في العالم جسم صرف غير ممزوج،
ومرسل غير مركب و مطلق القوى غير محصر و لا مصدر أحسن من النار. و النار سماوية علوية لأن الماء فوق الأرض، و الهواء فوق الماء، و النار فوق الهواء.

ثم بالنار يعيش أها الأرض من وجوه: فمن ذلك صنع الشمس في برد الماء والأرض، لأنها صيادة جميع الحيوان عند حاجتها إلى دفع عادية البرد، ثم سراجهم الذي يستصبحون به و ضياؤهم الذي به يميزون، و كل بخار يرتفع من البحار والمياه و أصول الجبال، و كل ضباب يعلو أو ندى يرتفع ثم يعود.
وركة [ممدودة] على جميع النباتات والحيوان. فإذا الذي
يخلع ويلطفه ويحمل له الأنواع ويأخذ بضبوعه
من قعر الأرض والبحر النار المخلطة له من تحت
والشمس من فوق.

وكل ما في الأرض من عيون نار
[عيون] قطران وزيت ونفط وكبريت وجميع أصناف
الفائز من الذهب والفضة والنحاس والرصاص لولا
النار لما ذابت ولا أسبك في
أصنافها شيء من الجواهر، ولما كان لقواها
جامع ولا خليها مفرق.

ومن التشبيه بما أظم يقولون: شراب كأنه النار،
وكان وجهه النار، فإذا وصفوه بالذكاء قالوا:
ما هو إلا نار، وإذا وصفوا حمراء الفرس
و حمراء الذهب [قالوا] ما هو إلا نار.

وقال قدامة الحكم المشروق في وصف الذهب: الذهب
شعاع مركون ونسيم معقود ونور بصاص وهو
النار الجامدة والكبريت الأحمر [وقدمًا قال العنتابي]: وجمال
كل مجلس أن يكون سقفه أحمر و بساطة أحمر، وقال

بشار بن برد

هيحان عليه حمرة في بياضها

تروق بها العينين و الحسن أحمر

و قالوا: لا تنهى المدن إلا على الماء

و الكالا و المختطب. فدخلت النار في المختطب إذ كان [كل] عود بوري.

و النار المستعملة بدار السكة نار حطب و نار

فحام، و لا يسمح لأحد [بأخذ] فرن بوجه

ولا يجال. و النار هي العيار الأبلج و بما يظهر الإبريز

من البهرج.

الفصل العاشر

في المطالب التي بما

تتم الأعمال و تحسن الأشغال

و ذلك أن المندفع بدار السكة إما أن يكون ذهبا

أو فضة. و الذهب نوعان إما ذهبا
فوجه العمل في التبر أن يكون ممكناً ثم نخلق بغراب قاد اعد لذلك، فما علا الغراب.
يسمي عشوراً، و ما خرج عنه فيحكم بالزئبق حكا منهما، فما قيل الزيء فهو الذهب، و ما لم يقبله طرح. ثم يحمي هذا الزيء بالنار إلى أن يذهب زئبقه، و يبقى الذهب، فيخلط مع العشور، و يوزن و يحفظ وزنه و يسبب بالنار في بوته، و إن جعل فيه عند السبك يسبر تابكر فإنه يعين على سبكه و يليته، ثم يخرج من النار.
بلقاط أو مشيق فيفرز في آثاره المعروفة بالمراط سبائك، ثم يوزن ليعلم مقدار ما نقص في السبك من الوزن الأول، ثم يمد صفائح راقفا معتدلة، و يجعل في الشجرية، وهي دقاقي الأجر الأحمر الجديد و حجر الملح مناصفة، فيبسط منه في شقيق فخار غير مختم، و يجعل عليه من تلك الصفائح طبقاً، و عليها من ذلك الدقاقي طبقاً، [طبقه] من هذا و طبقته من هذا، و ذلك، بعد بلّ الصفائح بالماء. و تغطي تلك الطبقات كذا الدقاقي بعد عجنه بالماء، و يطيين عليها من
كل الجهات، و تطبع بطبائع قد أعدت لذلك،
و تدخّل لفرن الشحيرة المعد بدار السكة،
و يطبق بابه، و يوقد عليه بنار حطب
البلوط الباس.

و يستمر مستوقد الفرن و ناره تتعنكس عليه
أوقاتا معلومة عندهم. و يحفظ في أثناء ذلك
من المبالغة في النار أو التقصير منها، فإنهما لا يستدرك
غلطه. فإذا علم أن ذلك وصل إلى
حده، فليخرج و يبقى في لاشحيرة بعد أن تبرد من نارها،
و ينفض منها تلك الصفائح و تغسل بالماء، ثم
تجمع كالكرة و تنشف من مائها و توزن ليعلم
مقدار ما نقص من الوزن الذي قبل هذه الشحيرة، ثم
يسكب في بوط. فإذا اختلط أجزاءه وجرى صبّ في
المراط المعهود بمحضر الناظر، و يعمل منه
سبائك حين الصب كالاقلاع و تترع منه
و تبقى إلى أن تبرد تلك السبائك بنفسها من غير ماء، و لا يلقي
عليها عند التفرّغ في المراط خالة و لا غيرها.
فإذا برد ذلك من ناره و لم يغب عليه شيء منه فليختبره
الناظر، فإن كان على وجه السبيكة تمويج
لا تكريس فيه وَعَرْوُسْهَا أَحْمَرَ ناصِحًا لَا دَهْوَةَ فِيهِ،
فَليقرأُ بِمَا عَلَى زَبْرَةٍ حَدِيدٍ تَكُونُ بِنِتْيَةٍ، فَإِنْ كَانَتَ
صَمَاءْ فَذَلِكَ مِنْ جَنْدَمَا، وَالصُّوَّتِ دَلِيلٌ
تنحيِسَهَا. [ثُمَّ] تَعِيرُ بِالْمِلْقِ، وَهُوَ أَنّ
تَحَكُّ فِيَ حَكَّا مَحْكَمَةٌ إِلَّا أَنْ يُطِلِّعَ لُوْحَةَ فِيهَ طَلْوَعَا
بِنْ، ثُمّ يَحَكُّ إِمَامُ الْذِّهَبِ أَسْفَلْ ذَلِكَ
حَكَّا مَحْكَمَةٌ. وَكَانَ أُهْلَ الْمَعْرِفَةِ وَالْاَخْتِبَارِ يَعْدَوْنَ
عِنْدَ حَكَّ إِمَامٍ بِحْجَرِ المِلْقِ أَعْدَادًا،
فَمِنْهُمْ مِنْ بَعْدٍ وَاحِدًا وَعَشِيرَينَ، وَمِنْهُمْ
مِنْ بَعْدٍ خَمْسَةٍ وَعَشِيرَينَ إِنْ كَانَ العَصْبَّ ضَعِيفًا، وَيُعْتِيرُ
فِيَهَا أَنْ تَقْطَعْ جَزِئًا مِنَ الزَّمَانِ لَا عَدْدُ الحِكَاتِ،
إِلَى أَنْ يُطِلِّعَ لُوْحَةَ الْمَعْتَادِ طَلْوَعَا بَيْنَ عَدْدَ
وَبَقَابِل هَذَا هَذَا وَيَنَاوِرُ بِهِ، فَإِنَّ اْتَقَفَا مِعًا
فُهُوَ المَتَلِبُ، وَإِنْ كَانَ دَوْنِهُ رَّدُّ ذَلِكَ
لِدَافِعِهِ لِيَلْحَلِصَهُ. وَإِنْ كَانَ أَعْلَى مِنْهُ دَرْجَةٌ فَلَا يَرْتُهُ
لِدَافِعِهِ لَنْ تَضْيِفْ إِلَيْهِ غَيْرِهِ مِنَ الرَّدِّيِّ، وَذَلِكَ لَا
يَجْوُزُ فِي الْفَقْهِ، فَإِنَّ الرَّدِّيَّ لَا يُخْلِطُ بِالْطَّيْبِ،
وَذَلِكَ جَرْحَةٌ فِي شِهَادَةٍ مِنْ فَعْلِهِ.
وَهَذَا اْذْهَبُ الَّذِي هُوَ دَرْجَةُ الْإِمَامِ
فلتؤخذ منه سبيكة و تمد صحيفة مداً محكماً،
و يكون غلظها غلظ ما يعمل منه نظير الدينار عندهم،
و تخمي جميلاً بالغ، وتخرج من النار تلقى على شقف أو حجر إلى أن تبرد من نارها لنفسها من غير ماء، و تمسح باليد
ويختار صفاؤها، فإن كانت ماءً واحداً سمالاً
الوجه من التبرق و الدبوس سمالاً الأجناب من الحروشة و الترشيح قبلت و وزنت
للسياكين. و إن اختلت شيء من هذه الوجرة ضًت
لدافعها إلى أن يخلصها.

و وجه العمل في الحلق على أى
حال كان مطبوعا كالدنانير و بعض الخلاخل و [ما]
يشبهها أو كان غير مطبوخ، فما كان منه منيلاً
أو مزجها أو كثير اللصاح
فليترع ذلك منه ل فلا يتخلق به و يعمر خلائشه،
 فإذا نزع ذلك جعل على حدة إلى أن يشرح
كما وصف في عمل الشحيرة، و يخمى سائره
بالنار جميلاً بليغاً و يختار بالوجه الى
ذكرنا.
و أما الفضفة فاما أن تكون قطعاً مشوبة بالنحاس
أو غير ما تغش به و سواء المعرضة
و المولبة، أو تكون نقرة مفروغة أو سبائك كالخلاخل و شبهها، فإن
المشوبة منها تخلص بأن تجعل في كوجة قد صنعت
من عظم و جبس مدقوقين ثلثها عظم
و ثلثاها حص، و تجعل الكوحة في صحافة فخار,
و تجعل هذه الفضفة المشوبة فيها، و يوجد عليها بنار الفحم,
و يجعل عليها في أثناء ذلك رصاص بقدر
ما يخلصها، و تزال من الكوحة نقرة، و تعتبر بأن يكون وجهها
صافيًا كالمروحة لا تكون فيه و أسفلها مخمفاً
أي منقباً قلياً تقياً وضيعة، و هذا الاختبار تختبر النقود
كلها.

و أما السبائك و الخلاخل و ما يجري مجرها
فتنظر في لوها، فإن كانت بنضاءة لا زرقة فيها رطبة عند
الطی لا تنكسر، فذلك من محاسنها. ثم يبرد
موضع منها بالمبرد و تحمي بنار الفحم حمياً
بالغاء، و ترك إلى أن تبرد بنفسها من غير ماء، فإن خرج الموضع المبرود
أيضاً نقية أبيض لا زرقة فيه فهي الحالصة.
و أما المبالغة في التصفية لها على غير المعتاد، فقد يصنع ذلك من يعمل منها الحيط أو ما يجري مجرياً.

و من الحزم أن يطبع الناظر على كل قطعة يقبضها السكاك بطابع التجوير فيها و حينئذ يندفع للمدادين و يشترط على المدادين ألا يغيبوا على شيء مما اندفع لهم، و يتفقدهم الناظر في أثناء ذلك. و من عثر عليه في غش فليعاقب و لا يصفح عنه، ليكون زجراً لغيره.

الفصل الحادي عشر

في ألقاب عمل السكاكين

عند تحويل الذهب و الفضة بأيديهم

فأول ما يعمل السكاك لسبائك الذهب و الفضة أن يطلقها ثم يحميها ثم يريشها بريشة المطرقة ثم يحميها ثم
يوهِّجها المرة بعد المرة إلى أن تبلغ حد التكريم،
فيكرمها أي يقطعها قطعاً على
قدر اجتهاده في مقدر الدينار ثم يمر
بما بالمكان والميزان ثم يحققها جميعاً فتسمي
حينئذ قترالا، فإن كانت دنانير
فليعملها مستمرة بقدرها المعلوم، ثم بلطمها
المطرقة واحدة واحدة ولا بلطمها أثناين أو ثلاثة مجموعات، فإذا
لطمها فليلحذفها، ثم يحميها
ثم يجعلها كارة خمسين أو أربعين شخصاً منها في
الكارة، ويدرّب بالكارة على الزبرة
و هي بين أصابيع السبابة والإيام ثلاث مرات، و يبدله
في أثناء ذلك، بردى الطرفين وسطاً والوسط طرفين
إلى أن تعتدل إدارتها اعتدالاً محكمًا،
ولا يقتصر في ذلك على مرة واحدة ولا على أثنتين، ثم يحميها
و يجلسها من الكارة واحدة واحدة، و يشبها
و يدفعها للناظر لبجرهما بميزانه، فإذا أخذها
منه فليتحرّ التحقيق المعتدل فيها بما أمكن من
الوجه، و يختبرها بالتربية لإعدادها والجمع
و النفرقة إلى أن تصدق الجملة التي دفعها
للمجربة.
فإن وجد الناظر فيها ناقصة أو خرَّج عن الدائرة منها شيء، أو وجد فيها كلفاً أو مسماراً أو تسريحاً أو كسراً، أو كانت غير معتمدة التفليس، جهة رقيقة وجهة غليظة، قطعها الناظر من أحد جنب الدينار، وردها عليه، فإنه قد يسك من الدينار المردود أرباعاً وأثماناً.

ثم إذا طبع السالم منها فطبعها.

بعد تركيب الفرد من الأزواج على صاحبه، تركيباً محفزاً من غير أن يشتم على دائرته شعراً، فإن دائرة الدينار هي حرزه، فإن شتم منه شيء على الدائرة و كان مشفشاً فكان الطبع أهدي الشابط لمستحل قرضه، فإنه لا يقام الحد إلا على من أخذ من الحرز، وحرز الدينار و الدرهم هي محسنة الدائرة المحيطة به.

و يتأكد على الطبع أن يدوز الأزواج ليكون الضرب بالمطرقة على جهة واحدة، فإن ذلك يطول العمل به ولا يتكسر، و إن لم يجوعهما فالغالب أن يتكسر سريعًا، و في ذلك
حيف على الفتحة. وفي الضرب بالمطرقة على جهة مما
يعقل أصبع القاعدة، وإذا
تعلق تعذر الطبع.

و وإن كان الذي بيد السكاك في العمل دراهم فإذا
بلغ بما إلى حد التفليس فلتكن
مريعة معتدلة القنوت والأركان مستوية الصفحة، والأحور.
أن يُفِلِّسها بعد التقرب وقبل
التحقيق، ثم يحكم تربيعها وكارماً بالخابس
ثم يجلسها أيضاً و يشبها، ثم يدفعها
للناظرين برسم التجربة فليختبرها واحدًا واحدًا
أو يختبرها بالأوليين ويردها إلى أن تصل إلى
جملة ما قبضها فيه أولاً، ثم يطبعها، و يحفظ [من]
أن تكون مشفشاً أو مشرحة أو مطوية أو مسمرة أو مكسورة
أو غير مستوية الصفحة، أحد الجنبين رقيقًا والآخر غليظًا. فإذا
طبعها فليحمها لأجل ما
أكتسبت في حالة الطبع من جسومة الحديد، ثم
يشبها و ينشفها كما ذكرنا.

و كذلك يفعل بالدنانير في الحجم بعد الطبع.
و ينبغي للنااظر أن يتفقد الدنانير والدرهم

بعد الطبع من قلبها أو درسها

أو تجريشها فإن ذلك عيب فاحش فيها.

و من أكد أمور الناظر تفقد

الفرض على اختلافه، و يكون مقدار ما يفرض

من المائة أوقية كالمعلوم عنده، لئلا

يزيد السكاك من عنده في الفرض ما هو ديناء و يأخذ

عوضه من الطيب، و من غاب عليه فلا بد من

حيمه في شقف ليظهر طبيبه من

رديه و مغشوشه. و إذا علم السكاك أن بدار السكة من

يختير عليه و يطلب منه المطالب فإنه لا

يقدم على شيء مما يخل بأعماله، و يكون سبيبا

لنكاله.

الفصل الثاني عشر

في تنمية الفايد
كان فايد دار السكة في القدم أن يُشترى فيها التبر
والحلوى من الذهب والفضة وغير ذلك من مال
السلطان، و يضرب دنانير و دراهم، و يخرج
بالمصارفة، فما فضل من ذلك إلّا فايدة،
و يدفع في أعمال صاحب الأشغال. ثم أهمل ذلك
و جعل التّنظّر فيها ألقاباً على من دفع ذهباً أو فضّة
للضرب بما يسمونه تارّة بالركا،
و تارّة بمعونة دار السكة و تارّة
إجارة، وهو الآن يحسب دينار و ستة أثمان من الذهب
للمائة دينار منه، و يحسب درهماً للأوقية
الواحدة من الفضة. ز صار اليهود كلهم لعنهم الله
يشتغلون بالتجارة في الذهب و الفضة لأ نفسهم فنقص
فايد دار السكة و عواهدها.

و كان مولانا الخليفة المجاهد المرحوم أمير المسلمين أبو
الحسن كرم الله وجهه عزم أن يعد بدار السكة
بفاس ألف دينار من الذهب المطبوع و ألف أوقية من الدراهم
المطبوعة و يكون ذلك في موّاعدها تحت مفاتيح الناظر
و الشهدان لشراء التبر و الحلى و الفضة على اختلاف
أنواع ذلك و تحلّص ما يحتاج لتخليصه و مصارفة
ما يحتاج لصرفة، و يكون الداخل والخارج منه
مربوطاً مستقرًا بأزمة شاهديها
و الناظر فيها. و يدفع فائد ذلك و ربحه في آخر كل
شهر و تعمل به محسوبية في آخر كل عام. و لعله
ال] لذلك و الله أعلم و أرجو أن ينفذ بحول
الله على يد من خلفتهم، نصرهم الله
و خلد ملكهم، و تكون أجر ذلك في
ميزاتهم، فإما منفعة عامة عظيمة للمسلمين.
و هذا لا يشتغل به إلا العارف
بأنواع النقود و وجهة الصرفة
و معرفة الإيجاب في الأخذ و العطاء،
و أولى أن يكون هذا الفائد و الربح و العائد من هذا الوجه
ليبيت المال. و لا يبقى اليهود، فإبن المشغولون
بذلك الليل و أطراف النهار. و قد انقطع
فأيد دار السكة بعملهم الأشغال
بودورهم، و قد ظهرت عليهم الدنانير و الدراهم الخارجية في
أوقات شيق و خلصوا أنفسهم منها بالرشي.
و إذا شاع و ذاع عند الناس إطلاق دار
السكة لذلك قصدوا تذكها
و الله أعلم، و هو يلبهم الصواب برحمةه.
الباب السادس

في مقدار الدينار والدرهم الخاصين بنا
و سبب ضرب هذه الدرعيم اليعقوبية في مغربنا

أصدر هذا الباب بما نقله أبو الحسن بن القطان

في مقدار الدينار والدرهم أول الإسلام، ثم أنخص ما قاله أصحاب المقدار في دينارنا و درهماً المشار إليهما. كانت الدرعيم التي

يتعامل بها على وجه الدهم نوعين: نوع عليه نقش فارس و نوع عليه نقش الروم، أحد النوعين يقال لها البغلية وهي السود، الدرهم منها ثمانية دوانق، و الآخر يقال لها الطرية وهي الـ[معتق]

الدرهم منها أربعة دوانق.

فجاء الإسلام و هي كذلك، فكان الناس يتعاملون
بما مجموعة على الشرط من هذه و الشرط من هذه لدى الإطلاق،
ما لم يعينوا بالنفس أحد النوعين. و كذلك

كانوا يؤدون الزكاة في الإسلام باعتبار

و لما تخرج عبد الملك بن مروان من نقوشها وأراد ضرب الدرهم بنقش الإسلام تحرى معاملتهم المذكورة بما، وأوجب له النظر أن يكون الأمر كذلك، و ذلك بأن يقدر احصائ أرباب الأموال والأموال من تجب له الزكاة، فيبتد أرباب الأموال اعتبار النصاب بالكبار، ويريد من تجب له الزكاة اعتباره بالصغار، فيجب من العدل بين الفريقين كالعدل بين متناهدي سلعة لا بيئة لأحدهما على دعاءه بأن تقسم بينهما. فجمع بين درهم بغلل من ثمانية دوانق و طيرى من أربعة دوانق، فكان من اثني عشر دانقا، فقسمها نصفين، فضرب الدرهم من نصفهما، وهو ستة دوانق، فجاء هذا الدرهم مقدرا بنصفها مكيلا بكيلهما على حد تعامل الناس بها و وافق ذلك ما اجتمع عليه من أمر الدينار الذي لم يختلف أنه أربعة و عشرون قيراطا و القيراط ثلاث حبات مجموعه.
39. انتنوت و سبعون حبة، وأعتى عشيرة دراهم من درهم الكيل هذه

40. بسبعة دنانير من هذه، وصار نصاب الركاة الذي هو مائتا

41. درهم من تلك الدرهم، نصف من الكبار، و نصف من الصغير تعدل

42. مائتين درهم من هذه اضرب عبد الملك، التي هي دراهم الكيل، فصح أن مائتين درهم منها هو النصاب.

43. وافق الجمهور على ذلك لوضعته ما كان

44. معتبرا قبل ذلك كما تقدم. ولم

45. يختلف في ذلك إلا من زعم أن أهل كل بلد يعتبرون

46. النصاب، بما يجري عندهم من الدرهم صغرى أم كبرى،

47. وهو مذهب ابن حبيب الأندلسي، و ياباه

48. ما دل عليه الحديث الصحيح من أن الوزن على أهل

49. مكة، وهذا الذي ذكرناه هو وزنها.

50. و إذا تقرر هذا فاعلم أن قول الجميع بأن

51. سبعة دنانير تزن من دراهم الكيل عشرة دراهم

52. يوجب أن يكون درهم الكيل مفقودا حسنين حبة و خمسين حبة، و إن اختفت على ذلك عند وزنه الموازين

53. و الحب، فهذا هو المرجع إليه، إذ الدينار بلا شك

54. مقدر بأربعة و عشرين قيراطا، و ذلك انتنات و سبعون حبة تعدل درهما
و ثلاثة أسابيع درهم، من دراهم الكيل.

و كيف استناد من مقالة أبي العباس بن البناء المراكشي:

جاء في الحديث الصحيح عن النبي صلى الله عليه وسلم: ليس فيما دون خمس أواق من الفضة صدقة، و جاء الوزن وزن مكة و الكيل كيل المدينة. و أجمع العلماء المتأولون على أن معنى الحديث في الشرعيات: الركاة و كنفارات الأيمن و القطب و الصداق، و أنه أراد وزن مكة و كيل المدينة في مدته، و أما وزن المعاملات و كيلها فكل بلد في ذلك عرف، و هو مختلفة.

وقال أبو عمر بن عبد البر: الوسق ستون صعما بإجماع العلماء بصاع النبي صلى الله عليه وسلم.

و الصاع أربعة أتماد.

و المد رطل و ثلث.
و المعتمد في الرطل أيضًا هو تقديره مائة وثمانية وعشرين درهماً كيلاً، ولا تعتبر الأوقية في تقديره، إنما تعتبر في نصاب زكاة الفضة، فإذا جاءت مذكورة في الحديث نصاً.

و أجمعت الأمة على أن الورق مائتا درهم، ليس فيما دينهما صدقة، وأن مائتين درهم تعدل خمس أواق، والأوقية أربعون درهماً.

فإن أردنا أن نقدر الرطل هذه الأوقية، فهو ثلاث أواق وخمس أوقية، إذ هو مائة وثمانية وعشرون درهماً كيلاً.

ولزم من ذلك أن يبحث عن مقدار الدراهم الكبيرة. وقد ثبت أن عشرة دراهم كيلاً تزن سبعة دنانير، وهذا مشهور موجود في وثائق الناس القديمة وعقودهم، وثبت أن الدينار أربعة وعشرون قيراطاً، وهو متفق عليه، وسَلَّم العلماء أن القيراط وزنه ثلاث حبات من وسط حب الشعر بالدينار.
الذي هو دينار الزكاة الذي تجب في عشرين منه زنة أثنتين وسبعين حبة، فوجب بذلك أن تكون زنة درهم الكيل خمسين حبة وخمس حبة من وسط الشعر.

و قال محمد بن القطان في مقالته إنه شاهد دراهم

للكلب ضرب عبد الملك بن مروان في كبيرة

سنة ثمان وستمائة، ووجدت في كر ورعت للناصر أبي

عبد الله بن المنصور الموحد، فأعطى منها

لأبيه أبي الحسن بركة، وهي فضة مستديرة الشكل

عليها مكتوب: أمر بضرب هذه الدررهم أمير المؤمنين

عبد الملك بن مروان، قال: وكان قد نادنا غير

مرة بوسط حب الشعير، فكان الدرهم منها يعدل خمسين

حبة وخمس حبة.

و قال أبو الحسن بن القطان في مقالته إنه وجد زنة

الدينار البقيعي من حب الشعر الوسط أربعا وثمانين حبة،

و أنه وجد في درهم الموحدين، وهو درهم السكة المزدوجة

ثمانية وعشرين حبة. و دينار الزكاة من دينارنا ستة أسابيع.

و في أوقتنا المغربية من تلك الدررهم المرعية عشرون
و فيها أيضاً ستة دنانير و ثلثا دينار من دنانيرنا، لأن دينارنا يزن منها ثلاثة دراهم مربعة موحدة.

فَتَنْخَصُ من ذلك كله أن:

الوسق ستون صاعاً.

و الصاع أربعة أمداد بعده النبي صلى الله عليه وسلم.

و المد رطل وثلث.

و الرطل مائة درهم و ثمانية و عشرون من دراهم الكيل.

و [درهم الكيل] وزنه خمسون حبة و خمسًا حبة بالحب الذي به وُزِن الدينار اليعقوبي المماثل لزنة دينارنا، وهي أربع و ثمانون حبة.
و في الحبة أربع أرزات.

و في الأرزة أربع اسممات.

و في السمسة أربع خردلات.

و في الخردلة أربع [من] أوراق النخالة.

و في ورق النخالة أربع ذرات.

و الذرة جزء من ألف وأربعة و عشرين جزءًا من حب الشعير.

و قد سمى الله [الذرة] مثقالًا.
و أعلم أن في أوقتتنا عشرة دراهم و ثلثى درهم
كيلية، و من دنانيرنا الجارية الآن ستة دنانير و ثلثا دينار.

وفيها من الدرام الصغار الأعظمية الجارية الآن تسعة و ستون درهما.

فنصاص الزكاة من هذه الصغار ثمانية عشرة أوقية
من أوقتتنا، و تعدل مائتان دينار و أربعة و عشرين دينارا فضية صغيرة
عشرية.

و نصاص قطع يد السارق منها ثمانية عشر
درهما و ستة أعشار عشرة درهم، و وهو أيضا أقل الصداق
على مذهب مالك رحمة الله.

و المقدار الذي يبيع به الحاضن على محضونه الواحد منها سبعون
دينارا و تسعة أعشار دينار و خمسة أسباع عشر دينار على ما
اختاره أبو عبد الله محمد بن أحمد بن القطان في
وثائقه، و هي التي تعدل عشرين دينارا قرطبية الى
ذكر أنه جرى العمل بما، و هي النّ في الدرهم الواحد
منها ست و ثلاثون حبة، و توازن مائة درهم من دراهم
الكيل وأربعين قروبة، و هي معين قوهم:
"دخل أربعين". كذا نقل معناه ابن فتحون.
و الدرهم الداخل هو الذي إذا زدت عليه
خمسية كان كيلا و إذا انقصت منه خمسية كان دخلاً
و يسمى دخلاً بإدخالك عليه خمسية
الناقصين من الكيل، فصار كيلاً بهذه
المداخلة.
و نصاب الذهب من هذه الدنانير الجارية
الآن في الزكاة سبعة عشر ديناراً و سبع دينار.
و درهم الكيل الداخل يعدل من دراهم الصغّار ستة دراهم
و خمس درهم.
و المتباق من الذهب [الذي] به الوزن
و المعاملة في جميع بلاد الصحراء المعروفة عندهم بالقروى
يعدل سبعة أثمان الدينار و نصف ثمان دينار من دنانيرنا.
و سبب ضرب دراهمنا اليعقوبية التي في الأوقية الواحدة
منها تسعة و ستون درهمًا أن الدراهم أول هذه الدولة
المربية أسعدها الله و سددها كانت مختلفة الوزن
و السكينة فمنها القرطوبية و البحائية و الجنوية
و المرابطة و الطبرية و الزرخانية و الهودية
و الفهميدية و المؤمنية، وكان يقع التخصيص بين الناس
بسبب ذلك.

و لما أشتدت و استوثقت خلافة مولانا
أمير المسلمين المجاهد في سبيل رب العالمين
أبي يوسف يعقوب بن عبد الحق كرم الله و جله، سمعت
همته إلى ما يصلح ملكه، و يعلم دينه
و ينسكه، أن نظر فيما ليس [منه]
بدع من تحقيق الدينار و الدرهم و الفنطاس
و الرطل و الأوقية و الوسق و الصاع و المد،
و منع أن يجوز من النقود إلا ما كان عليه
سكته، أو على قدر ذلك و صفته و جودته، و اختار
من جيد تلك النقود الفهميزة المنسوبية فيما زعموا
لمحمد الناصر، التي في الأوقية الواحدة منها ثلاثون و عشرون درهما،
و نفذ أمره، بَرَدَ اللَّهُ ضَرِيحه، أن يجعل من الدرهم الواحد
منها ثلاثة دراهم صغيرة ليسهل التباعي بما بين
الناس، و ثلاثة في ثلاثة و عشرين بتسعة و ستين.
و فدم أمينا و ناظرا عليها

بدار سكته بفاس جدنا الحكم على بن
محمد الكومي المديوني لمعرفته بالنقود،
و سائر ما يتعلق بها، فتباين الناس بذلك
و سعدوا، و ما زالت سكته كذلك و على
مذهب، و ذلك في سنة أربع و سبعين و ستمائة.
و كانت هذه الدراهم محكمة العمل، معتدلة
الصنجة، متقنة الخط، وأقام فيها خوا
من خمسين عاماً، و عجز عن القيام بما
لكبر سنّه، و تقدم بذلته من لا يعار على أعمالها،
فدخل الفساد في أحوالها.
الباب السابع

في التعامل بحماص صرفًا أو مراطاله
و تحذير الربا في ذلك
إذا كان [ردًا] أو نقضيًا أو مراطاله

و لما كانت هذه الفصول يُحتاج إليها عند التعامل
بالذهب والفضة اقتصرنا على بِنِذ من الحاجة بِما،
و فروعه في كتب الفقه كثيرة.
و اعتمدت في أكثر مانقلته على كتاب "النهائية و التمام"
للقاضي أبي الحسن المتنيطي، رحمه الله.

فأما الصرف [فهو] من أضيق أبواب الربا، و التخلص من الربا على من كان عليه
الصرف عسير إلا من كان من أهل الورع والمعرفة بما يحل فيه و يحرم منه.
و قليل ماهما.
قيل لمالك رحمه الله: أيكره أن يعمل الرجل بالصرف؟ قال: نعم، إلا أن يكون يبقى الله في ذلك.

و لما بين الرسول عليه السلام من وجهه الربا أن الذهب بالذهب و الورق بالورق،

و لا يتباع إلا مثلًا يمثل يداً بيد،

و أن الذهب بالورق لا يباع إلا يداً بيد. و لا يجوز في الصرف ولا في بيع الذهب بالذهب و الفضة بالفضة،

مواعدة ولا خيار ولا كفالة ولا حواله،

و لا يصلح إلا في المناجرة الصحيحة. لا يفارق صاحبه و بينه و بينه عمل.

و قال الرسول عليه السلام: لا تبيعوا الذهب بالذهب إلا مثلًا يمثل و لا تشيروا بعضها على بعض، ولا تبيعوا الورق بالورق إلا مثلًا يمثل،

و لا تشيروا بعضها على بعض، ولا تبيعوا منها شيئاً غابياً بناجز. قال عمر بن الخطاب، رضي الله عنه:

و إن استننظرك إلى أن يلج ببيه فلا تنظر،

إبن أخاف عليكم الربا.
و النَّظرة في الصرف تنقسم على ثلاثة

أقسام: أحدهما أن ينعقد الصرف بينهما

على أن يُنظر أحدهما

صاحب بيضاء ما اصطربوا فيه، و إن قل،

فإذا وقع فسخ جميع الصرف بالاتفاق

و الان تعقد على فساد.

و الثاني أن ينعقد الصرف

بينهما على المناجرة، ثم يرجى

أحدهما صاحبه بيضاء ما اصطربوا فيه، فهذا

ينقض الصرف فيما وقع فيه التأخير بالاتفاق،

و إن كان درهما لانقض صرف دينار واحد [لدلرهم

فما فوقه إلى صرف دينار] بينه و بينه

أو يكون الذي وقع فيه التأخير أكثر من صرف

دينار، فينقض صرف دينار [آخر]، كذا

أبدا على هذا الترتيب.

و اختلف هل يجوز من الصرف ما

جُهلت فيه المناجرة و لم يقع فيه تأخير أم لا على
قولين: أحدهما أن ذلك لا يجوز لأحهما

يُتهمان على القصد لذلك و العقد عليه

و هو مذهب ابن القاسم في المدونة و قول

محمد بن المواز. و الثاني أن ذلك يجوز،

و هو قول ابن القاسم في كتاب ابن المواز.

و القسم الثالث أن يتعقد الصرف بينهما

على المناجرة، فيتأخير شيء مما

وقع الصرف عليه لنسبان

أو غلط أو سرقة من الصراف و ما أشبه

ذلك مما يغلب أن أحدهما [وقع

فيه]، فهذا يمثّل فيما وقع فيه التناجر

و لا ينتقض باتفاق.

و اختلف: هل ينتقض فيما جُهل فيه

التناجر إن يُتجاوز من النقصان مثل أن

يصرف منه دراهم بدنانير، فيجد درهما

ناقصا فيقول: أنا أتجاوزه، و لا ينتقض من

الصرف شيء على قولين: أحدهما قول

ابن القاسم أن ذلك لا يجوز، و ينتقض من الصرف
80 دينار واحد، إلا أن يكون القدر الذي نقص أكثر من صرف
81 دينار، ينتقض صرف دينار آخر، كذا
82 أبدا على هذا المثال و الترتيب، و النائب
83 قول أشهب: إن الصرف يجوز
84 ولأنتقض منه شيء إن تجاوز منه [عن]
85 النقصان كالإقطاع إذا رضى به.
86 وقد روى عن ابن القاسم مثل قول
87 أشهب في النقصان البسيّر كالدائم و الدائمين،
88 وقال أصبع: في الدرهم من الألف درهم، و ذلك أن
89 الموازين قد يتلف في مثل هذا القدر.
90 قال بعض الشيوخ: و ما يتلف عليه الموازين لا اختلاف فيه
91 عندى في جواز تجاوزه، وليس ما روى
92 عن ابن القاسم في هذا اختلافاً من قوله،
93 و إنما المعنى في ذلك الدائم و الدائمين،
94 مده رأى أن الموازين لا يتلف فيه،
95 فلم يجز التجاور عليه. و أما
96 إن أراد أن يرجع بالنقصان فيأخذ
97 فلا يجوز إلا على مذهب من أجاز
98 البديل في الصرف، و رأى أن الغبطة على
99 التأخير فيه بالنسان و الغلط و السرقة
و التدليس و ما أشبه ذلك لا يُبطل
الصرف و لا يفسده، فإن وجد فيما صارفة فيه بعد
الاقتراص زائفاً أبدلله و إن وجد نقصاناً أخذ
و إن استحده منه شيء أخذ عوضه،
و هذا كله على مذهبهم في المجلس ما لم يفترقا
على معرفة ذلك.

ولا يجوز أن يقترن بالصرف عقد بيع,
إلا أن مالكًا رحمه الله أجاز
أن يكون مع العَرَض [اليسير]، فيباع
بالدنانير و الدراهم اليسرة لتكون أقل من صرف
دينار إذا كان كله معجلا لا يتأخر شيء.

قال القاضي أبو اسحاق: و إما أجاز ذلك
لحاجة الناس إليه في بيوتهم، لأنم لم يكونوا يقطعون
الذهب و الورق. قال مالك: فإن كثرت الدراهم
لم تخز و دخله البيع و الصرف,
و إن كان الذهب دينارا واحدا بعرض و دراهم
فهو جائز، قلَّت الدراهم أو كثرت، إذا كان ذلك
نقدا، و هذا كله قول مالك و ابن القاسم.
والعولما به.

و قال ابن القاسم في كتاب محمد إنا
يجوز ذلك في أقل [من] الدينار مثل أن يشترى الثوب
بثلاثين درهما أو ثلاثة أرباع الدينار، فيدفع ديناراً
و يأخذ فضله ورقا، ولو كان الورق أكثر من الدينار
لم يكن فيه خير، وقاله أيضا مالك
و غيره.

و قال الشيخ أبو إسحاق التونسي وغيره: في
المدونة ما ظاهره خلاف هذا
[و] أنه أجاز النصف ورقا و النصف سلعة.

و عند ابن حبيب: وإذا كثرت الدرهم
وقلت السلعة كان ذلك جائزا، وقال القاضي أبو
محمد عبد الوهاب: لا يجوز البيع و الصرف في
دينار، إلا أن يكون يسيراً، مثل أن
يصرف دينارا بعشرة دراهم، فيعجز الدرهم أو النصف
فيدفع إليه عوضاً بقدره أو يزيد
الدرهم أو النصف، وكسره غير جائز، فهاهنا
يجوز للضرورة، لأنه يعلم أن البيع
غير مقصود.

وقال محمد بن عبد الحكم: لا يجوز في الدينار الواحد البيع
و الصرف إلا أن تكون الدرعهم البق مع
العرض أقل من نصف دينار، لأنه تبع.

و أجاز أشهب في مدونته الصرف و البيع،
و المالك في كتاب محمد مثله. فإن وقع البيع
و الصرف في شيء كثير انتقض ذلك
ورد السلعة، إلا أن تفوّت
بتماء أو نقصان أو حوالة
سوق، فتلزم المشترى بقيمتها يوم القبض
و يتراذاً على وعنه، قاله
ابن القاسم في العتبة.

ومن الواجب على من جعل الله إليه
شيئاً من أمور المسلمين أن يأمر
مختساً بالتوقف لأحوال
الصرافين، ولا يترك منهم في سوقهم
إلا من فقه في دينه، كما قال عمر بن الخطاب رضي الله عنه: لا تبيع الأعاجم في سوقنا حتى يتفقهوا في الدين. و الصرف أحق التجارات بأهل العلم و الفضل.

فالبيع تعلق [بأمور] ثلاثة: الثمن و المتمون و ما يتناول البيع به من المكيل و الوزن. و الثمن أولا. و أصل الأمان الذهب و الفضة و مرجهما إلى الصرف في الغالب. فمن النظر ألا يُستعمل فيه ذمى و لا مته كسبه، و من كان جاهلا بجميع أسبابه و حاله و حرمه من تجارته و التصرف فيه. و يمنع الصفتون من الصرف بالنظرة و الخيار و المشورة و الحوالة، و أن يحالقضاء الذي حيل عليه على ما فدمناه.

و كذلك يمنعون أن ينفدوا الردى مع الطيب،
اشترطوا ذلك أو لم يشترطوا، و هذا الذئ
يسمونه السمح، و ألا يبيعوا ذهبًا بفضة ثم
يشترعوا منه ذلك الذهب بغيرها، و يمنعون من
ذلك إلا أن تقل المدة بين الصرفين
كاليومين أو الثلاثة، و يتهون أنضاً عن البلد في المصارفة
على قول من لم يجزه و رأى
أن يفسخ الصرف. فان قال له في
حين الصرف: ما ردَّ عليك أبدلته
مَجتَّمع عليه أن ذلك لا يجوز.

و يمنعون أيضاً من التفرق في الصرف
قبل المناجرة، و أن يصرف أحد عندهم ذهبًا بدرارهم
يمسكونها لكي ينقوها عند
الصرف عنهم. و كذلك يمنعون من شراء
الذهب بالذهب و الفضة بالفضة إلا ما [لا]
خطر له.

و من الغش خلط دنانير الذهب الطيبة
بالرذية، و إن بَيَن له، لأن المشترى
لا يدرى قدر ما يأتيه من كل صنف.
و أما المراطلة فإن الذهب و الورق صنفان مختلفان. كل واحد منهما صنف منفرد بنفسه، [لا يباع أحدهما] بالآخر منفصلًا [ولا يباع إلا] يدا بيد، لقوله عليه السلام: الذهب بالذهب ربا إلا هاء و هاء، و الورق بالورق ربا إلا هاء و هاء. وقال:
لا يبيعوا الذهب بالذهب إلا مثلاً مثلاً، ولا يبيعوا الفضة إلا مثلاً مثلاً.
بغائباً بناجر، فإذا اعتدل لسان الميزان فقد تمت مراطلتهما وصح بيعهما ما لم ترجح في الوزن إحداهما إما لمساحة أو لأجرة صناعة، و سواء كان الذهبان أو الفضتان مصغتين أو مضروتين أو مكسورتين أو كانت إحداهما تختلف الأخرى في ذلك فيجوز و إن كانت إحداهما أجود من الأخرى وأكثر عددًا بخلاف الاقطاء، لأنه قبل المراطلة لم يجب لأحدهما قبل الآخر شيء فيتهما فيما بدل له.
脱颖而出 
و في الاقتباس إن كان وجب
له ذهب مسكون أو مصوغ فإن أخذ تبرا أجود منه
يتهم أن يكون ترك السكة
أو الصياغة لفضل الذهب الذي أخذ.

قال مالك: و كل مالا ينبغي التفاصل فيه من جنس
واحد، عينًا كان أو طعامًا، فلا ينبغي - و إن
كثر - أن يجعل مع الصنف الجيد منه شيئا
دنا يُستحل به التفاصل.

قال ابن القاسم و ابن حزم: إذا كان الذهبان مسكونين
أو أحدهما فلا تجوز المراطلة هما في
كلفتين إلا بعد العرفة
بوزن أحدهما، لأن ذلك من باب
بيع المسكوك جزافا وهو خطر لا يجوز.

و قال محمد بن المواز: وجهه المراطلة كلها
جائزة إلا وجهين: أحدهما أن يأتي
هذا بذهب و الآخر بهبهان إحداهما أجود
من المنفردة في عين أو إتفاق، و الأخرى أدنى منها، فلا يجوز.
هذا، والوجه الآخر أن يرجع ذهب أحدهما فيأخذ لذلك شيئًا عرضاً أو ورقًا، فلا يجوز لأنه ذريعة للربا، وأما إذا كانت المنفردة أحوذ منهما أو أدنى أو مثل إجدىهما وأجود من الأخرى أو أرداً فذلك جائز.

و يقسم الورثة على الذهب والفضة مراطلة أو مصارفة فإن وزنه أحدهم على نفسه وأعطي الباقيين زنة حصصهم من ذلك الصنف حاز عند ابن القاسم إن [كان ذلك نقداً.

و و من راطل صاحبه بالمثاقيل، فجعلها في كفة و الذهب في الأخرى حتى تعتدل، و فعل الآخر مثل ذلك تحريه للعدل، لولا يكون في الميزان غش، فلا بأس به. رواه أشهب محمد عن مالك.

ولا يجوز أن يقترن مع المراطنة عقد بيع في شيء من الأشياء، سواء أكان ذلك
منهما أو من أحدهما، و يدخل في ذلك الفضل بين الورقين والذهبين.

و لا يجوز أيضاً بعد تمام المراطالة أن يشترى أحدهما من صاحبه ببعض الورق ذهبًا أو عَرْضاً، لأن آخر أمرهما آل إلى أن أعطى أحدهما لصاحبه ورقاً و عرضاً بورق، فدخله التفاضل بين الوزنين.

و لا يجوز بيع ذهب و فضة بذهب، و لا أن يكون مع أحد الذهبين دراهم و لا عرض و لا طعام، و كذلك الدراهم بالدرارهم. و لا يجوز ذهب و فضة - و إن اتفق الجنسان - بذهب و فضة، كما لا يجوز أردب حنطة و أردب شعير بأردب حنطة و أردب شعير.

و أما المبادلة فتجوز بالمعدد من الدنانير فيما قل منها كالدينار و الدينارين و إن كان بعضها أدُوَنَّ من بعض على سبيل المعروف و التفاضل معاً، و لا يجوز فيما كثر.
وأما إذا كان الأذون أورن فلا يجوز،
لأنه يأخذ فضيل ذهب صاحبه في زيادة
وزن ذهبه، وإن كانت الوازمة أفضل
فذلك حائز عند ابن القاسم وكرهه مالك.

ومن أتي بفضة إلى أهل بيت الصرف
فراحطهم بما دراهم مضوية وأعطاهم
أحدهما قال مالك رحمه الله: لا أحبه، وما يفعله أهل
الورع. وخففة
للمسافر لا حتياجه إليه، قال ابن القاسم: ومضطر وذوى
الحاجات. وقال أشبه عن مالك: إنما كان هذا
 حين كان الذهب لا يعشق و السكة واحدة، وأما اليوم
ففي كل بلد سكة، فلا يجوز إلا أن
يعطيه حملة و يضرب له دراهم.

قال ابن حبيب: و ما يفعله أهل السكة من
جمعهم لذهب الناس، فإذا فرغوا
أعطوا لكل واحد مثل وزن ذهبه،
فلا يجوز هذا عند من لقيت من أصحاب مالك.
قال مالك: و لا تخير في [أن] تبادل الصانع،

خلايا بورقك و تعطيه أجره، و لا أن تقول له: اعمل لي بعضه من عندك حتى أعطيك.

و يجوز بيع الذهب بالورق متفاضلا يداً بيد، كما ذكرنا سابقاً، لقوله عليه السلام: الذهب بالورق ربا إلا هاء و هاء ... الحديث.

و لا يجوز في شيء من الصرف تأخير ساعة و لا حواله و لا ضمان، ولا عهدة ولا خيار.

و كذلك لا يجوز أن يتصارفا في موضع و يتقابضا في غيره، و لا أن يتواري أحدهما من صاحبه، و لا أن يدخل الصراف al-dawHa al-mushtabika fi DawabīT dār al-sika

Chapter Seven Arabic

527

و أما اعتبار السكاة و الصياغة في الاقتضاء فنقل ابن شاس أن الشيخ أبا الطاهر قال:
لا خلاف في المذهب أن السكة و الصياغة في الاقتضاء معترتان، ثم حكى عن أبي الحسن اللحمي أنه يجري ذلك على قولين إذا جرى الاختلاف في الاقتضاء: هل بابه باب المراطلة أم لا؟

وعول على روايات منها قولهم: إذا أسلم القائمة بمعنى أو باع بقائمة وزها كذا، فإنه يجوز أن يقتضي مجموعة مثل ذلك الوزن وإن كانت أكثر عددًا، قال: و هذا أحد القولين: أن الاقتضاء كالمراطلة. قال الشيخ أبو الطاهر: و ليس كما ظنه، و الأصل أن العدد إنما يعتبر إذا لم يكن التعامل بالوزن، و إذا تعامل بالوزن فهنا العدد طرح.

و أما الرد في الدرهم فقال أبو محمد صالح: الرد في الدرهم يدور على خمسة فصول:

الأول: جواز الرد فيه.

الثاني: في شروط جواز ذلك.

و أما الرد في الدرهم فقال أبو محمد صالح: الرد في الدرهم يدور على خمسة فصول:
الثالث: في وجود الياب في أحد ثلاثة أشياء الياب هي
السلعة و الدرهم و المردود.

الرابع: في انصراشه الابتداء ببعض الأجزاء
من غير دخول سلعة.

الخامس: في ترك بعضه عند البيع حين يأخذ به
سلعة.

فأما الفصل الأول، وهو جواز الرد فيه، فذهب ابن
القاسم إلى جوازه، وهو مذهب في المدونة، وذهب
سحنون إلى منهجه، وهو ظاهر ما
وقع في المدونة في باب البيع و الصرف، وهو قوله.
و أصول مالك أن الفضة بالفضة مع
إحدى الفضتين أو مع كل واحدة منهما
سلعة أنه لا يجوز، كانت السلعة كثيرة أو بسيرة,
إلا أن يقال إن معين ذلك ما فوق الدرهم.
و ذهب إلى جوازه في بلد ليس فيها فلوس،
حيث يضطر الناس إلى ذلك. و أما بلد فيه
فلوس، فلا ضرورة تلخيء إلى ذلك.
وَ وَجَهُ إِجَازَةُ ابن القاسم ذلك مع أن التفاضل فيه ظاهر على أصل مذهب أنه راعي الخلاف في بيع فضة و سلعة فضة.
والله: نقطع للفضة من الفضة قدرها و يبقى للسلعة الباقية، فلما رأى خلافهم في الكثير من ذلك سمحت في القليل لضرورة الناس، وقاله ابن رشد في "البيان":
و الفصل الثاني، و هو جواز الرد فيه، فأما على مذهب ابن القاسم، على ما حكاه الشيوخ فلا يجوز إلا بستة شروط:
أحدهما: في الدرهم الواحد فاقل.
الثاني: أن يكون ذلك يبدأ خوفاً من التأخير بين الفضتين.
الثالث: أن يكون المردود النصف فاقل، و أما أكثر من النصف فمكروه. و روى عن أشهب جوازه
و إن كان أكثر من النصف.

الرابع: أن يكون في البيع لا في القراض. و اختلف هل يجوز في القضاء من مين بيع أو لا.

الخامس: أن يكون المردود مسكوراً، لأنه إن لم يكن مسكوراً صار بيع فضيحة بفضحة من غير مراطة.

السادس: ذكره ابن الكاتب، وهو أن يكون الدرهم معروف الوزن، وكذلك المردود، فعله هذا لا يجوز الرد في المقايض الجارية اليوم بفاس. قال ابن يونس:

و هذا في بلد ليس فيها خراريب، و أما بلد فيها الخراريب فإن الضرورة تلجئ إلى ذلك، و هذا ينحو إلى مذهب أشهب.

و أما الفصل الثالث: وهو وجود العيب بأحد ثلاثة أشياء، فذكر الشيخ أنه وقف في بعض التعليق لبعض المتأخرين على جواب استحسنه في ذلك، و هو: أن الأمر في ذلك لا يخلو من أحد وجهين: إما أن يكون بيعه
على شرط الرد، أو بيعه من غير إشتراط الرد. قال: فإن بائعه على إشتراط الرد. فلا بد من فسخ الصفقة، و يرد إليه درهمه إن كان قائما أو مثله إن كان فائتا، و يرد إليه هو أيضا قيمة السلمة أو مثلها إن كانت من ذات الأمثال. وأما إن باعه من غير إشتراط الرد، فإنه يرد إليه المردود أو الدهم أنهما وجدما، ويتنقص الصرف خاصة، و يبيعه البائع بما بيعه به السلمة. ولا يجوز البديل في ذلك على مذهب ابن القاسم، وإنما اختبئ على مذهب ابن شهاب الذي أجاز في صرف الذهب والفضة أو لا.

وأما الفصل الرابع: انصرف الجملة بالأجزاء، كأن يعطيه ديناراً و يأخذ نصفين، ففي "العربية" جواز ذلك في الدينار، و ذكر ابن رشد في "البيان" أنه كرهه مالك وأجازه ابن القاسم، فإذا جوز ابن القاسم ذلك في الدينار، فأحري [أن] يجوز ذلك في الدرهم.
و أما الفصل الخامس: و هو ترك المردود عند البيع [إلى] حين يستنققه، ففي المدونة في كتاب الصرف عن مالك، فيمن اشترى سلة بنائى دينار، فقال له بعد البيع: هذا دينار، فاسترف منه ثلاثة، و أمسك ثلاثة عندك أنفع به، أن ذلك جائز إذا لم يكن في ذلك شرط ولا عادن ولا إضمار فعلى هذا يجوز ذلك في الدرهم، لما لم يتعاقدا على المصارفة أولا، و أما إن تعاقدا عليها فلا يجوز أن يترك لأنه صرف مستأثر. فإن تركه على أن ينفقه من عنده فيما يستقبل، فذكر في السليمانية أنه جائز إذا كان عند البائع سلع كثيرة، و إن لم يكن عنده إلا سلة واحدة فلا يجوز، حتى يبين مقدار لما يأخذ كالسالم، و أنه يشترط فيها ما يشترط في السالم، إلا أنه لا يحتاج إلى ضرب أجل، لأنه لا ينقطع من عنه، و إن اشترط غيره فلا بد من ضرب الأجل كالسالم في وجوهه.
قال الفقيه أبو يحيى بن حماد في تأليفه من البیع: ولا يجوز بدل درهم بقریاط، ولا بدل قریاط برجع درهم، ولا يجوز بدل الدرهم الناقص بالوازن، وإنما يجوز ذلك في ثلاثة دراهم فأقل، أو في ثلاثة دنانير فأقل، ولا يجوز في أكثر من ذلك، و يكون ذلك من نوع واحد، و يكون النقش سدساً فأقل، قال: ولا يجوز بدل درهم بقریاطين ولا دينار كبير بدينارين صغيرين إلا بالوازن، و أجاز ذلك ابن القاسم من غير وزن، و رآه معروفًا كبدل الناقص بالوازن، ولا يجوز أن يرد قریاطا ناقصاً في درهم وازن، ولا ربعاً ناقصاً في درهم وازن، ولا يرد قریاطا وازناً في في درهم ناقص، ولا يرد فرقاً في درهم ناقص، ولا يجوز أن يرد ناقصاً في ناقص، قال: وإذا اشترى منه سلحة بخمسة و عشرين درهماً حالتة فقبض السلعة، فلما كان من الغد أتاه بدينار ورد عليه باقيه دراهم جاز. قال: ولا يجوز أن يشتري بنصف دينار، فيدفع دينارًا و يرد عليه البائع دينارًا صغيرًا، قال: إذا بعت سلحة بدينار ذهبًا أو دراهم، فدفع لك ديناراً ناقصًا فلا يجوز أن تأخذ منه.
او غير ذلك عوضًا عن النقص، خلاف ما لو

اشترى حلماً فوجدته به عيباً جاز

أن تأخذ منه دراهم عوضًا عن العيب من جنس

دراهمك. قال: و من دفع لرجل دينارًا يصرفه

له، و دفع له آخر دراهم يصرفها له

جاز أن يصرفها من هذا إلى هذا و هما

غائبان. و إن أراد أن يصرف الدينار لنفسه لم

يجز.

وقال القاضي عبد الوهاب في "تلقينه": و يجوز اقتضاء

الورق من الذهب، و الذهب من الورق

و تصارفهم صرفًا. قال أبو عمر بن الحاجب:

و الصرف على التصديق في الوزن أو الصفة

ممنوع خلافًا لأشهد.
باب الثامن

ما يجوز استعماله منها للحلوى والقنية وغير ذلك

وبيع الصحاب و السيف

و الخاتم المجلاة بما

و تسويغها للمالك

نقل ابن شاس: أن أواني الذهب والفضة محرمة الاستعمال على الرجال والنساء للحديث الصحيح. قال القاضي أبو الوليد: و وجه تحرمه ما فيه من السرف والتشبه بالأعاجم.

و أما اتخاذها من غير استعمال، فقال الشيخ أبو القاسم بن الجلاب: اقتناها محرم. وقال القاضي أبو محمد: لا يجوز استعمالها بل اتخاذها. وقال أبو اللوليد: لو لم يجوز اتخاذها لوجب فسخ بيعها. وقد أجازه في غير مسألة من المدونة.

قال أبو بكر بن سابق: هذا غير صحيح، لأن ملكها
يجوز احتمالًا، بخلاف اتخاذها، وإذا يلتفت فائدة
الخلاف بأن لا يجد الاستئجار على عملها،
ولا نوجب الضمان على من أفسدها
إذا لم يتفت من عينها شيئاً،
و الخلاف يوجب الاستئجار و يوجب الضمان.
قال: ولو عمل الآنية من ذهب و غشها
برصاص أو غيره مما يجوز اتخاذ
الأنيئة منه، أو اتخاذها من ذلك
و وَمَوْهَهَا بِالذِّهَبِ، فَحَكَى ابْنِ سَابِقٍ فِي
ذلك قولين، و تَزِلْهُمَا عَلَى الخلاف
في تحقيق العلة هل هي الزينة و الفخور أو عين
الذهب، قال: وإذا وُصِبَت الآنية بذهب أو فضة
في شعب أو تضبيب فقال القاضي أبو بكر لا يمنع
ذلك من استعمالها، قال: لأنه تبع فلا يبر عليه
حكم المقصود.
وقال القاضي أبو الوليد: استعمال آنية فيها تضبيب بذهب
أو فضة ممنوع.
و في "العِتيبة" قال مالك: لا يعجبين أن يشرب فيه إذا كانت في حلقتها فضة أو تضيب شعبة بما، و كذلك المراة تكون فيها الحلقة من الفضة لا يعجبين أن ينظر فيها الوجه.

و نقل الشيخ أبو الحسن المتيطي أن ما يجوز تحليته مثل السيف والمصحف فإنه يجوز بيعه من جنس ما هو محلة به من ذهب أو فضة إذا كان الثلث فأدن نقداً، ولا يجوز إلى أجل، فإن بيع إلى أجل فسح البيع ورعد، إلا أن يفوت بتفصيل حليته، فيمضى و لا يرد. هذا قال ابن القاسم و مالك في المدونة و غيرها.

و قال أشهر في كتاب محمد: يكره ابتداء فإذا نزل مضى و لا يرد.

و أجاز ربيعة و سحنون ابتداء أن بيع بجنس حلته و تعبيره نقداً أو إلى أجل، قال:

و لو استحقت الخلية ما كان له أن يرجع عنها بشيء،
لأِفْحَا لا حصة لها من الثمن، و هي كمال
العبد، قال فضل: هذا خلاف مذهب ابن القاسم.

و قال محمد بن عبد الحكم: لا يجوز عندي
أن يبايع سيف فيه فضة بفضة نقداً،
و إن كان تبعا، و هو قال ابن عمر.

و حكم حلي النساء المباح لمن أتخذها في ذلك
حكم السيف.

و أما الخاتم فما أبيع أتخذها
للنساء و الرجال، إلا أنه لا يكون للرجال إلا من فضة، لأن
الذهب محرم عليهم، و يكون للنساء من الجنسين.

و أُخَق ابن حبيب بالسيف
و المصحف و الخاتم للرجال المناطق و الأسلحة
كلها التي ينتفع بها في الحرب و نفوذه.

و المالك في "ختصر ماليس في المختصر" في
المنطقة: فإن تجاوزت الخلية فيما ذكرناه
الثلث، فهو في حكم الكثير، فلا يباع
ذلك إلا بخلاف جنسه من ذهب أو فضة نقدا أو بالعرض
نقداً أو إلى أجل. و إذا يعتبر الثلث
في ذلك بالوزن لا بالقيمة وإن رفعتها الصياغة،
و يعتبر المخلة بالقيمة، وفي الموطاً
لمالك ذكرُ الخلية والقيمة، وذلك عندهم تجوز
في عباره: و إذا يباع الذي في ذهبه أو فضته تبع لما هو فيه
بذلك الجنس إذا كان لا يستطاع نقضه إلا
بترعه وإفساده مثل الناتج والقردُون والحوام
والابا [ريق] و نحوها. و أما ما كان فيه من الذهب
و الفضة مزايا لما معه من الجوهر مثل
العقود والجوهر والقلائد والأقراط فلا يباع
إلا بخلافه أو بنقض فيباع الجوهر
ناحية والذهب مراطلاة أو مصارفة.

فإن كان في الحليّ الذهب والفضة معاً، و هما
في حكم التبع، ففني ذلك عن مالك روايتان
رواهما ابن القاسم عنه، إحداهما:
أنه يباع بأقلهمما إذا كان الثلث
فأدن يدا بيد، و إن نقاربا
بيعا بعرض، و به قال ابن عبد الحكم،
و الأخرى: أنه لا يبيع بورق ولا بذهب، وإلى هذا
رجل مالك، و به أحد ابن القاسم، وقاله في المدونة
و غيرها.

و ما لا يجوز اتخاذه من الأواني المفضصة
و السكاكين والسرج واللحم والمهاميز والمزاهر
و الأكتشاف، فلا يبيع شيء من ذلك بفضصة، وإن كان تبعا فيه،
بلا أن يكون شيئا لا بال له كحلقة في قدم أو صفحة
أو شيء يسير في أطراف السرج واللحم،
فلا يراعى ذلك فيه. و في رواية عن ابن الفرج عن مالك أن حكم
السرج واللحم حكم السيف والصحف والمحاتم،
قال: و حكم الحمات تكون فيها الأعلام على قسمين: أحدهما
يتخرج منه عين عند السبك و هذا
بمزلة الحلى فيجري على حكمه، و الثاني ما لا يخرج منه شيء.
قال بعض المتآخرين، و هذا هو المختار. و قد تردد أبو الحسن اللحمي
في حكمه: هل يبلغ لأنه انفصل منه عين، أو
يلتفت إليه لأن المقصول الذهب؟ و ذكر اللحمي عن المتآخرين
قولين و ينسهما ما تقدم،
قال: و سئل أبو المطرف بن سلمة عن بيع الذهب
المزوّل المحمول على الجلد هل يجوز بيعه بالذهب، فقال:
لا يجوز، لأن فيه التفاضل بين الذهبين،
و يجوز بيعه بالفضة بدأ بيداً [قال] أبو الأصغ:
و هذا عند صواب.

قال: و إجارة الحلي إذا عرف بعينه جائزةً،
و يوصف بأبلق ما يقدر عليه و يذكر وزن ذهب و عدد جوهره و ياقوته.
و لا يد من تسمية الإجارة و مدة الكراء و قبضه.
قال: وعارية الحلي من فعل المعروف
يجوز، والله الموفق للصواب لا رب غيره.
الباب التاسع

فيما وعد الله من الثواب [ملفقهما]
و أعد من العذاب لكانزهما
و مقدار ما يجب أخذه من مصوغهما و معادهما
و ركازهما

قال الله تعالى "خذ من أمواهم صدقة تطهرهم وتزكيهم
بما" وقال: "إنه الذين آمنوا و عملوا الصالحات و أقاموا
الصلاة و آتوا الزكاة .." الآية.

و في البخاري قال ابن عباس، رضي الله عنه، حدثني أبو سفيان،
فذكر حديث النبي صلى الله عليه و سلم قال: كان يأمرنا بالصلاة و الزكاة
و الصفة و العفاف. و في [سند] أبي داود، قال عليه السلام:
ما فرض الله الزكاة إلا لطيب أموالكم,
فإذا لم تخرج كان خبيئةً.
و قال في كاترهما و منع
زكاءهما: "و الذين يكررون الذهب والفضة
و لا ينفقونها في سبيل الله فبشرهم بعذاب
Alice" إلى قوله: "فدوقوا ما كنتم تكررون".
وي في البخاري: قال رسول الله صلى الله عليه وسلم:
من آثاره الله مالا فلم يؤد زكاته مثل له
يوم القيامة شجاع أقرع له زبيتان يوطقه
يوم القيامة ثم يأخذ بهما، يعين بشدقته، ثم يقول: أنا مالك، أنا كترك،
ثم تلا "و لا يحسب الذين يدخلون بما
آتاهم الله من فضله". وقال أبو بكر الصديق رضي الله
 عنه: والله لأقاتلن من
فرقة بين الصلاة والزكاة.
و أما مقدار ما يحب أحده منها، فإذا كان عين الذهب
والفضة أو خليهم التخذه
للتجارة ملكا للحر المسلم، فكلما جاز
عليه حول سنة أخذ منه ربع العشر. و مثله
يأخذ من كل من ملك من المعدن شيئًا إن اتصل
نيله من غير حول.

و نصاب الذهب في ذلك كله سبعة عشر ديناراً و سبعة دينار من دنانيرنا الآن. وفي الفضة من ثمانية عشرة أوقية من أوقيتنا الآن.

ومصرف ذلك مصرف الزكاة. و الركاز هو دُفْنُ الجاهلية يوجد بغير نفقة ولا كبير عمل، فبني قليله و كثيره الخمس يوم أخذته و يصرفه في مصالح المسلمين.
الباب العاشر

في تسمية ما أحدثه المفسدون
من غش السكة و قرضها
و ماذا يجب من العقوبة
على مرتكب هذه المخالطات أو بعضها

و ذلك أنه قد علم بالنقل والاستقراء من
كتاب الفقه والتراث أنه كان في الزمن
القدم لا يشتغل بصرف الدنانير
و الدراهم إلا من وُلّه به من أهل الإسلام، و لا
يدخل في ذلك الأعاجم ولا أهل الديمة من اليهود وغيرهم,
ممن يُتهم في كسبه أو كان جاهلاً
بسببه، لا سيما و قد قال عمر رضي الله
 عنه: لا يدخل الأعاجم سوقنا حتى
يتفقهوا في الدين، يريد - و الله
أعلم - فقه ما يلزم في خاصة
نفسه.

وقال بعض العلماء: لا يجوز لأها
الدمة أن يكونوا صيارة و لا جوزرين:
و يقامون من الأسواق كلها، فإن الله تعالى
أغين منهم بالمسلمين.

و كره مالك رحمه الله أن يكون أهل الدمة
صيارة في أسواق المسلمين لعملهم
بالغش والربا، و رأى أن يقاموا.

و كثيرا خص أمراء الأندلس الصرف
في الذهب والفضة و ضرب الخيلى منها
و النظر في الأحجار الفنية كالياقوت
و الزمرد والجوهر و ما جانس ذلك [بالمسلمين]
و لم يكن يشغب به عندهم إلا من
و ثق به و أمانته و معرفته و ديانته.

و سوق الصرف هو من أحوج
الأسواق فيما ي يجب من إعمال النظر
و التزام التأني - لموافقة الربا فيه -
و الحذر. و المصارفة كثيرة كرثة التردد
فيه. و المعاملة من الملتزمين له قل
ما تخرج على ما يوجه الشرع و يقتضيه النظر.
و يتولى عليه - الحاجتهم إليه - الرجال و النساء،
و ينتش فرصة في المحادثة هم
الحوان، و صار الحبث فيه كثيرا، و حدثت فيه
بسبب الإغفال مناكر [لا] يضبطها تقدير.
و كتب بديع الزمان لأحد
 أمراء و قتنا [رسالة] بينه فيها على فساد
النقود، و يخص على الأخذ فيها بالحق المعهود
و نصها:

[بسم الله الرحمن الرحيم] إن رأى الأمير
الجليل، أطل الله بقاءه و أدام
تأييذه و نعماه، أن يتداركنا
بجميل نظره، فقد بعثنا إليه
وفود آمالنا، و كشفنا له وجهه أحوالنا،
و علفنا رقاب آمالنا على
همه، و شيمته بوارق كرمه، و انتجنا مصاب شيمه،
لينظر لنا نظرا كريما، فقد صار الناس أجمع صبارة,
و النقود زائفة، و التجارة واقفة، و نحن
نتضرع إليه في أن يخط هذا الكُلُّ

عن أهل الدين، و يرفع هذا التقل

عن ظهور المسلمين، فإذا حرى الأمير، أدام

الله تأييده، في أيديه، على مقتضى

آمالنا فيه، كانت آثاراً ترشق لها بطون

المحاجر، وتُمشق بما وجوه الدفاتر، وتقرع لها ظهور

المنابر، و تملأ بما صدور المحاضر

إن شاء الله.

فصار الأمر في ذلك على قدر الإمكاني، و مساعدة

الزمان، و اهتام السلطان، لا يصلح

أحدهما إلا بالآخر لأكثما أخوان.

قال عبد الله بن المبارك:

الله يدفع بالسلطان [نقمته]

بفضله، رحمة منه و رضوAna

لولا الخليفة لم تأمن لنا سُبُلُ

و كان أضعفنا نحب أقوان

وقال آخر:
إن الخلفاء و الملكون معاشر
قامت بحمي أركان دين محمد
لولاهم وظائف أساليبهم
و هاهم كالبرق ذات توعد
لطفت ماعلم ديننا و تناقصت
تلك القوى و استؤمنت بتبدل
و قال رسول الله صلى الله عليه وسلم:
إن الله يزع بالسلطان مالا يزع بالقرآن.
و إذا استقامت السكة استقر نصاب
الركاوة و تقدير المعاوضات
والترعيات و قيم المستهلكات
و ارتفعت الخصومات.
ثم أعمل النظر فيها، و اتخذها أهل الدمة
و من لا خلاق له من المسلمين،
و لا مراجعه للدين [حتى] كثر الرباء،
و اختلت العقود، و كثرت الخصومات في المعاوضات
و العقود.
و قد لعن رسول الله صلى الله عليه وسلم آكل الربا مؤكله ومأكله وكاتبه و شاهده. والمعلوم من الفقه أن من استحلل الربا فهو كافر حالاً الدم، فإن تاب و إلا قتل.

و أما من باع بيعاً وأرتب فيه غير مستحلل الربا فعليه العقوبة الموجعة إن لم يعذر بجهل. قال ابن حبيب: إن الغالب عليهم الربا، و إذا كان ذلك كذلك فتحرم معاملته و معاملة من الغالب على ماله الحرام. ذكر الحكم فيه أبو الوليد بن رشيد ورتبه أحسن ترتيب، ونظمه الفقيه المدرس أبو عبد الله محمد بن عبد الكريم الأغصاوي المشاور بفاس رحمه الله فقال:

المعاملة الإنسان من جعل ماله حالاً حالاً لست فيها بآثم وقال ابن وهب بالكرهاء وانتهى.
لأصبغ مختاطا لأجل المحارم
و إن كان جل المال فاعلم محرماً
فإمنع، و إن يكره يقول ابن قاسم
و إن لم يكن في المال حل فإنه
حرام على ما قاله كل حازم
و قيل مباح أن يعامل بقيمةٍ
بغير محاباة على رأى علم
و قيل استبح ما نيل بالإرث و
العطاء
و ما ابتاعه فاترك بلا لوم لائم
و سوّع الزهرى و ابن مزينة
فحذ و احتفظ نحواً من كل ظالم
حكى ذا الذي قنناه في النظم كله
سليل ابن رشذ ذي العلا و المكارم
و كان سبب دخول أهل الدمّه في
الصياغة و المصارفة أنه لما أتسع نطاق ملك
المغرب، و سمت همة أمرائه
أن يتميز مكافهم بالأمتعة و الأسلحة
المصوغة من الذهب و الفضة و المموهة
141. بهما، و المكللة بالأحجار

142. النفيسة الرفيعة، أبداً للإسلام و نكأية لعبداً

143. الأصنام، استدعوا الصياح من سائر الأفاق

144. و الأصقاع، و اجتمع منهم جملة و افرة،

145. فأبدعوا الصناع العميقة الفاخرة، فدخلهم

146. إذ ذاك أهل الذمة من اليهود،

147. و خادعهم بالخدمة الظاهرة و الباطنة،

148. و سرقوا لهم صباعتهم

149. و صباعتهم. و قدر باقراً

150. القادمين، و لم يرض المسلمون أن يكون أولادهم

151. [حثاً لأهل الذمة] فانفرد أهل الذمة

152. من اليهود بصناعة الصياح

153. و اختلفو فيها، و أقاموا لها سوقاً

154. لأنفسهم بعد أن كانوا في الخرف الممتهنة كالصياحه

155. و الدباغة و الصبارة و المهارة،

156. و أكثرهم حملين و خياطين

157. و كبابين.

158.

159. و لما استولوا على الصياحه احتاجوا

160. لشراء الذهب و الفضة، فدخلوا
أنفسهم في الصرف والتردد لدار
الضرب، وقادمهم مع ذلك الوُلُة والعمال
لقبض الجبايات والأموال في سائر
الأعمال، فعظم بلاؤهم في الدين وضررهم
بالمسلمين، حتى أن أحبارهم يبيعون ضم
العشي، ويكذبون ضم على أنبيائهم في وجهه
إباحته، وهو حرام في مذهبهم القديم - ويقولون ضم
في مجالس وعظامهم: اعلموا أن آبا الناس نبي
العرب قال لأمه: من غشنا فليس منا، فإن
غششت فلست منهم، وإن لم تغشوا
فأتموهم، وفي هذا من محاورة الغل والكذب
ما لا يخفى.
و لما كان سنة ست و ثلاثين و سبعمئة تشكي الناس بضررهم
في ذلك لمولاتا أمير المسلمين،
كرم الله وجه وبرد ضريبه، وثبت
عنده غشوه أمر بضرب أبشارهم
و الشدة في نكاحهم، ونفذ أمره
الكريم بأن يعتمد من يقف عليه من
المشتغلين و الخدام و ولاةً
القصبة و سائر الحكام بكل بلد تحت إيالته

على أن يرفعوا أيدي اليهود عن الاشتغال

بالصباغة و الصرف القبض و كل ما فيه

غش للمسلمين رفعاً كلياً. و لا سبيل لهم

من الصباغة إلا ما كان عريعاً عن الخيط

و اللصاحماً ما يكون سالمأ من الدلسة

و الغش، و لا سبيل لهم إلى غير ذلك، كما لا

سبيل لهم إلى أن يكلفوا مغرما

و لا ملزماً و لا يطعِّبوا بشيء من الوظائف و التكاليف،

ما عدا الجزية و الأعشار اللازمة شرعاً لأهل الديم.

و من تجر منهم بسوق من

أسواق المسلمين، و تجرف بحرف من

الحرف فيلمه ما يلزم المسلمين في ذلك من

غير حييف و لا طلب بايد.

"... و ليعلم أن الأقطار التي تجب فيها

الأعشار من بلادنا هي خمسة:

حضرة فاس و ما والاها من

البلاد من سلا إلى تازا قطر واحد.
و سبعة و ما و الاها من البلاد إلى الريف
و الهبط إلى قصر كتامة قطر ثانٍ.
ومراكش و ما و الاها من البلاد إلى
السوس قطر ثالث.
و درعة و سجلماسة و ما والاها من
من البلاد قطر رابع.
وتلمسان و ما و الاها و ما وراءها من
البلاد إلى الجزائر قطر خامس.
فمن أراد [آداء] العشر قطر منها
فلا يؤده في الآخر. و ذلك في السادس
عشر المحرم عام سنة و ثلاثين و سبعمائة".
كذا و قفط عليه بعلامة يد مولانا الصالح المجاهد المرحوم
المقدام أمير المسلمين رحمه الله.
فلم بلبوا إلا قليلاً و رفضوا ما
أمروا و رجع الفساد في الدهانير والدرهم.
ولا يوجد الخارجي والمقروض إلا بأيديهم.
و رفع ذلك مولانا المرحوم أبي عنان رحمه الله،
فمنع أن يجوز من الزائف
و المقرض شيئاً ولا من الخارجي,
و هم يفتح الضرب بدار السكة,
فبدروه بأن التزموا ألا
يبيعوا شيئاً من المصدوعات من الحلى وغيره
إلا بعد عرضه على آمين دار السكة,
و طبع ما يقبل من ذلك، و ألا ينتصب للصرف
إلا من يوثق به ولا يغش المسلمين ولا
ينكرهم ولا يعاملهم بالرباء، و ألا
يعاملوا مسلمًا مما أباحوه لأنفسهم
من المداينات بالمالعل ولا بما
 أمسكوا لهم رهانًا، و أن لا يدخل عندهم أحد
من يتهم بشرب الخمر و غير ذلك من
الفواحش الممنوحة شرعا، و أن لا يبيعوا الخمر من
مسلم و لا يظهروا به. و أنه إن
ظهر عليهم شيء من ذلك، أو انتصب لما
التزموه من الأعمال من لا يوثق به في ذلك
فنهم الواحدون والمعاقبون عليه العقاب
[الشديد]. و التزم ذلك أشياخهم
و أقلوه سائر أهل جريتهم، وأشهدوا به
على أنفسهم عدول المسلمين في رسوم
في رابع ذي الحجة من عام سته و سبعين و سبعمائة.

فوقع بمولات الإغفال عنهم،
و سارعت أيديهم لما نحوا عنه وأخلوا بما
التزموه، و تفاحش الفرض في الدروهم حين
صار التعامل بالدرهم إلى في الأوقية منها أحد عشر
ديناراً، و فسنت المعاملات و التجارات
إلى أن رحم الله المسلمين بما نفذ به
الأمر الجزيم من مولاتنا الخليفة أمير المسلمين
و ناصر الدين أبي فارس عبد العزيز أطاف الله أيامه
و نصر ألوته و أعلامه من إقامة الدين
و كف أيدى المعتدين. و منع من
المعاملات بالدرهم الزائفة الناقصة، و أنه
لا يتعامل إلا بالمسكوكات الوازمة الخالصة، و اشتد
علي من يتعامل بالناقص منها لدوران
الربا و فساد النقود الناشئين عنها.

و أما عقوبة من ارتكب المحظور في إفسادها

فقال الإمام أبو بكر محمد بن عبد الله بن العربي المعافري

رحمة الله في "أحكام القرآن" له عند قوله

تعالى "قالوا يا شعيب أصلألك تأمرك

أن ترك ما يعبد آباؤنا و أن نفعل في

أموالنا ما نشاء إنك لأنت

اللهم الرشيد". وقال ابن وهب: قال مالك: كانوا يكسرون

الدنانير والدرایه، و كذا قال جماعة من الفقهاء

المتقدمين و المفسرين [إن كسرها] ذنب عظيم، لأها الواسطة

في تقدير قيم الأشياء و السبيل إلى معرفة كمية

الأموال و تزيلها في المعاوضات، حتى عَرَب عنها بعض

العلماء إلى أن يقول: إما القاضي بين

الأموال عند اختلاف المقادير أو جهلها،

و إنه من حبسها و لم يصرفها فكأنه

حبس القاضي و حجبه عن الناس.

و الدنایر و الدراهم إذا كانت صحاحا قام معناها

و ظهرت فائدة، فإذا كسرت
و صارت سلعة بطلّت الفائدة فيها،
فأضر ذلك بالناس، فلا جرّم
حِرّم. وقال ابن المسبّب: قطع الدينار والدرهم
من الفساد في الأرض، وكذلك قال زيد بن أسلم
في هذه الآية وفسرها به. و مثله عن يحيى بن
سعيد من رواية مالك عنهم كلهم.

و قد قال عمر بن عبد العزيز إن ذلك تأويل قوله
 تعالى: "ولا تفسدوا في الأرض بعض إصلاحها"
و قد قيل في قوله تعالى: "و كان
في المدينة تسعة رهط يفسدون في الأرض و لا
يُصْلِحُون": قال زيد بن أسلم: كانوا يكسرون الدينار
و الدرهم. قال أصبغ، قال عبد الرحمن بن القاسم بن خالد العتّقي:
من كَسَرَها لم تقبل شهادته، لأنه أتى
كبيرة، و الكبائر تفسد العدالة دون الصغرى.
و أما قوله أنه لا يقبل عذره بالجهالة، فلا لأنه
أمر بّين لا يخفى على أحد,
و إنما يقبل العذر إذا ظهر الصدق فيه أو خفى وجه
الصدق فيه، و كان الله أعلم به من العبد كما قال مالك.
و اختُلف في عقوبته على ثلاثة أقوال، فقال

و�، يعاقب السلطان من فعل ذلك، هكذا مطلقاً من غير

تحديد للعقوبة، الثاني: قال ابن المسبب وقد مرت

برجل يُجلد: ما هذا؟ قال: رجل كان

يقطع الدرایم، فقال ابن المسبب: هذا من الفساد

في الأرض. و لم ينكر جلده. و نجوه عن سفينان.

قال أبو عبد الرحمن التميمي: كنت قاعداً عند

عمر بن عبد العزيز، و هو إذ ذاك أمير المدينة، فأتأتي

برجل يقطع الدرایم فشهده عليه فضربيه

و خلقه، و أمر به فظيف به،

و أمر به أن يقول: "هذا جزاء من يقطع الدرایم"، ثم

أمر به أن يرد إليه فقال [له]: إنه لم يستعين

أن أقطع يدك إلا أني لم أكن تقدمت في ذلك قبل اليوم،

فقد تقدمت في ذلك، فمن يشاء فليقطع.

قال ابن العربي: أما أدبي بالسوط فلا

كِلام فيه، و آما حلقه فقد فعله عمر

كما تقدم، و قد كنت أيام الحكم بين الناس أضرب

و أجمل، و إذا كنت أفضل ذلك، مث نوَّن

شعره عونا على المعصية، و طريقا إلى التحمل به ف
السوق، وهنا هو الواجب في كل [من سلك] طريق
المعصية: أن يقطع ذلك غير مؤثر في البدن. أما
قطع يده فإما أخذ ذلك عمر، و الله أعلم، من فصلٍ
السرقة، وذلك أن قرض الدراهم غير كسرها، فإن
الكسر إفساد الوصف، والقرض ينقص
القدر، فهو أحد مال على الاحتفاء. فإن قيل:
ليس من جرزة، والحرز أصل في القطع، قلت:
يدم أن يكون عمر رأى تقييها للعمل
بين الناس دينارًا أو درهما حروما، و حروز كل شيء
على قدر حالة. وقد أنفذ ذلك ابن الزبير، فقطع
يد رجل في قطع الدنانير والدراهم. وقد قال علماؤنا
المالكة إن الدنانير خواتم الله عليها
اسم الله، و لو قطع على هذا التأويل من
كسر ختما للملك لكان أهلا لذلك، إذ
من كسر خاتم سلطان عليه اسمه
أدب. وقد كنت أفعل ذلك أيام تولين الحكم
إلا أن كنت غير با [طش] بالجهال، فمن
قدر عليه يوما من أهل الحق فليفعله
احتسابا الله سبحانه.
و ما حکي أن مروان قطع يد رجل قطع
درهماً من دراهم فارس قال الماوردي رحمه الله
فيما فعله مروان من قطع اليد إنه
عدوان [و] ظلم مضمون ليس له في التأويل
مساغ.

و يحكى الواقدي أن أبان بن عثمان كان على المدينة
فصلب من قطع الدراهم و ضربه ثلاثين سوطاً،
و قال الواقدي: و هذا عندنا فيمن قطعها
ودس فيها المفرغة و الزروف، فإن كان الأمر على ما قال
الواقدي، فما فعله أبان ليس بعدوان،
لأنه خرج عن حد التعزير، و التعزير على
التدليس مستحق.

قال الماوردي: و أما الخير المروي في النهى
عن كسرها يتعاذ تيرا، و جمله آخرون على أن يتخذ
منها أوزان و زحرف، و جمله آخرون على أخذ
أطرافها قرضاً بالمقارض، فإذا خلص العين و الورق
من غش كان هو المعترف في النقود المستحقة،
و المطبوع منها بالسكة السلطانية، و الموتوقُ
361 بسلامة طبعها الأمون من تبديلها هو المستحق
362 دون نقر الفضة وسبائك الذهب، لأنه لا
363 يوثق فيها إلا بالسبك والتصفية، والمطبوع
364 موثوق به، ولذلك كان ثابتا في الدفع فيما لا يطلق
365 من أمان البيعات وقيم المثلفات،
366 فلو كانت المطبوعات مختلفة القيم مع اتفاقها في الجودة،
367 فطلب عامل الخراج بأعلاها قيمة نوع،
368 فإن كانت من ضرب سلطان الوقت أطيب
369 إليها، لأن في العدول عن ضربه مبانيته له في
370 الطاعة، وإن كانت من ضرب غيره نوع، فإن كانت
371 هي المأووذة فقل أطيب إليها.
372
373 فأما مكسور الدنانير و الدرهم فلا يلزم أخرى
374 لا لتباسه و جواز اختلاطه، ولذلك
375 نقصته قيمته عن المضروب الصحيح.
376
377 و الدنانير والدرهم لا تجعل
378 حرمتهما، فإما صيانة
379 للنفوس، ولولا حرمتها لما قطعت
380 يد السارق فيما قيمته ربع دينار أو ثلاثة
381 دراهم، واليد ديتها خمسماه دينار.
382
383 قال المعزى: لأسألت القاضي عبد الوهاب في بيتين،
384 فإن أجابين بثلاثة فآنا أشعر مه، و إن
385 أجابين ببيتين فهو مثل، و إن أجابين ببيت
386 فهو أشعر مين، فكتب إليه هذين البيتين:
387
388 يد بخمس مئات عسجد قطعت
389 ما باها قطعت في ربع دينار
390 تناقض مالنا إلا السكوت له
391 فستعيد بارينا من النار
392
393 فأجابه عبد الوهاب بقوله:
394 صيانة النفس أغلها، و أرحصها
395 حياة المال، فافهم حكمة البارى
396
397 * * *
398
399 و هنا انتهى القول فيما أوردته و نقلته
400 من كلام العلماء و الحكاء.
و الله ينفع بما نوينه. فرحم الله امرئاً

تصفح فضفح، ولمح فسمح، سبحانه المؤفق

للصواب، والمنعم الرحمن الوهاب،

لا رب غيره ولا معبد سواء، وهو المستعان على

الخير، والخيرة فيما قضاه، ومنه

تعالي تستوهب الإعانة على ما فيه رضاه،

و الهدية إلى إقامة الحق والعمل

مقتضاه، والامر كله لله، ولا حول

ولا قوة إلا بالله. و الحمد لله الذي هدانا

لهذا، وما كنا لنتهتدى لولا أن هدانا الله،

و الصلوات الزاكيه، و البركة النامية على سيدنا

ومولانا محمد المصطفى و على الله و صحبه

خير الورى وسلم كثيراً أثراً إلى يوم الدين، و الحمد

لله رب العالمين.

انهت الدوحة المشتبيكة في ضوابط دار السكة

و الحمد لله حق حمده

و صلى الله على سيدنا محمد

نبيه و عبده
APPENDIX E: 2003 Questionnaire for the Metal Artisans of Medina Fès, Morocco

1. Occupation
   1. What is your occupation?
   2. What is your position within this workplace?
   3. How long have you been engaged in metal working or metal vending?
   4. How many days do you work each week?
   5. On which days do you typically not work and why?
   6. At what times of the day do you work?
   7. For what reasons do you take a break from work during the day?

2. History of Involvement in Metal-related Activities
   1. What or who influenced you to work with metals?
   2. Do you have any other family members involved in metal-related activities?
      and what are their relationships to you?
   3. What were these family members’ metal-related specialties?
   4. For how many years has your family been involved in metal-related activities?
   5. For how long have you worked at this establishment?

3. Location of Metal-related Activities
   1. How long have you worked in this location?
   2. Have you ever worked in another location? In what activities were you engaged at that time?
   3. What are the advantages of the location of your current establishment?
   4. Would it be more advantageous to be located elsewhere and why?

4. Family History
   1. How long have you lived in Fez?
   2. Do you live in the old or new Medina, or in the Ville Nouvelle?
   3. How long have your other family members worked in Fez?
   4. Have any of your family members who are involved in metal-related activities ever worked at another location, outside of Fez, within Fez, or at a different establishment? Why did they move?

5. Craft Specialization
   1. What is your specialty within metallurgy?
   2. What types of metals do you work with?
   3. Why do you choose to work with these metals?
   4. How do the products you craft or vend reflect your location within the Medina?
   5. How do you feel about the objects you craft or vend? Do you enjoy working with these objects?
6. If you could work with another type of metal, which metal would you choose and why?
7. What innovations in equipment or technique have you utilized since you started working with metal?

6. Apprenticeship and Influences
   1. Who or what had the greatest impact on how you work with metals today and what is your relationship to this person or thing?
   2. How many years ago did you apprentice?
   3. For how many years did you apprentice?
   4. With whom did you apprentice and what is his or her relationship to you?
   5. What was the specialty of the person under whom you apprenticed?
   6. What fundamental ideas about metallurgy did you gain from your apprenticing experience?

7. Beliefs
   1. Are there any habits or customs that you follow when you engage in metal-related activities?
   2. Did you learn these habits or customs from someone else, and if so what is his or her relationship to you, or have you created them yourself?
   3. What advantages do these habits or customs give you?
   4. Are there any absolutes in metallurgy, for example that certain objects should only be created from certain types of metal, or that certain metals should be worked on certain days of the week or during certain times of the year?
   5. Who and what are your major influences in life in general?
   6. What role does your culture play in how you engage in metal-related activities?
   7. Do you know of any preferences or mandates or that your culture has in dealing with metals, and what are they?
   8. Do you know of any proscriptions or restrictions that your culture has in dealing with metals, and what are they?
   9. What do you know concerning the history of metallurgy within your culture?
  10. Do you know of any stories that make reference to metals or metal objects? Please relate those stories.
  11. What is your analogy for the transformation of ore into metal?
  12. What is your analogy for the transformation of metal into object?

8. Additional Information
   Do you have any additional comments about metallurgy or metal-related activities, and your role in them?
APPENDIX F: Human Subjects Approval

10 June 2003

Martha Morgan, Ph.D. Candidate
Advisor: David Killick, Ph.D.
Department of Anthropology
P.O. Box 210030

RE: BSC B03.98 INTERVIEWS WITH METAL WORKERS AND METAL VENDORS IN MEDINA FEZ, MOROCCO

Dear Ms. Morgan:

We received your research proposal as cited above. The procedures to be followed in this study pose no more than minimal risk to participating subjects. Regulations issued by the U.S. Department of Health and Human Services [45 CFR Part 46.110(b)] authorize approval of this type project through the expedited review procedures, with the condition(s) that subjects' anonymity be maintained. Although full Committee review is not required, a brief summary of the project procedures is submitted to the Committee for their endorsement and/or comment, if any, after administrative approval is granted. This project is approved effective 10 June 2003 for a period of one year. Note: Approval is granted with the understanding that governmental approval will be obtained and submitted and translations of consenting documents and interview questions will be submitted for approval prior to initiation of project.

The Human Subjects Committee (Institutional Review Board) of the University of Arizona has a current assurance of compliance, number FWA00004218, which is on file with the Department of Health and Human Services and covers this activity.

Approval is granted with the understanding that no further changes or additions will be made either to the procedures followed or to the consent form(s) used (copies of which we have on file) without the knowledge and approval of the Human Subjects Committee and your College or Departmental Review Committee. Any research related physical or psychological harm to any subject must also be reported to each committee.

A university policy requires that all signed subject consent forms be kept in a permanent file in an area designated for that purpose by the Department Head or comparable authority. This will assure their accessibility in the event that university officials require the information and the principal investigator is unavailable for some reason.

Sincerely yours,

Theodore J. Claudek, Ph.D.
Chairman
Social and Behavioral Sciences Human Subjects Committee

TJG:tl

cc: Departmental/College Review Committee
Enclosures
APPENDIX G: Kingdom of Morocco, Ministry of Culture, Research Authorization

The Director of the National Institute of Archaeology and Patrimony, miss Madra E. MORGAN, authorized member of the Moroccan-American team, to conduct archaeological surveys on the site of Ataur, in the city of Fès, from July 7, 2003, as part of a doctoral research on metallurgy in Morocco.

This authorization was delivered to miss M. E. MORGAN, on June 12, 2003,

Fait à Rabat, le 03 JUIN 2003

Signed: [Signature]

Place: Rabat

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