Contributions of the Non-Literary Archaeological Materials to the Political and Social History of the Hebrews

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CONTRIBUTIONS OF THE NON-LITERARY ARCHAEOLOGICAL MATERIALS TO THE POLITICAL AND SOCIAL HISTORY OF THE HEBREWS

by

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A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Arts

College of Religion

Butler University

Indianapolis

1933
EXPLANATORY NOTE

In keeping with the Footnote method employed by modern archaeological publications, abbreviations of the Books and Journals are used in this thesis. The completed list for the reader's information is found at the close of this study under the title "Bibliography and Abbreviations."
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which would not be rightly embraced under the scientific name of the term, archaeology, as the modern use of the
word is not meant. Its historical study is more exact and discriminating. This fact is succinctly expressed in
the following definition given by George A. Barton
293: "Archaeology is that branch of knowledge which seeks
knowledge of past civilizations and investigates their
history in all fields, by means of the remains of art,
architecture, monuments, inscriptions, literature, lan-
guage, implements, customs and all other examples which
CONTRIBUTIONS OF THE NON-LITERARY ARCHAEOLOGICAL MATERIALS
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-- INTRODUCTION --

I.
Terminology -- Definition

The term "Archaeology," as is so common with the English language, is a two-fold or composite word. It is the joining of the two Greek terms αρχαιός and λόγος. The former signifies that which is "ancient," "primeval" or "olden," while the latter is more often used with the Greek meaning of "word," "study" or "discourse." Thus when placed together, the English term carries the thought of "the word or study of that which is ancient or antiquated."

That definition, to be sure, is inclusive of a field which would not be rightly included under the scientific usage of the term Archaeology, e.g., the modern fad of the worship of antiques. Its field of study is more compact and discriminating. This fact is adequately emphasized in the following definition quoted by Dr. George A. Barton from the Century Dictionary, Vol. 1, 1903 edition, page 293; "Archaeology is that branch of knowledge which takes cognizance of past civilizations and investigates their history in all fields, by means of the remains of art, architecture, monuments, inscriptions, literature, language, implements, customs and all other examples which
have survived.

It must be admitted again that to the average reader the foregoing definition may still seem too broad and comprehensive for easy usage. Yet when emphasizing the underlined words, it can be reduced to "the investigation of the history of past civilizations by means of their remains." Thus the science in general is limited to a specific and definite study, but one that carries within itself the romance and adventure of the days that used to be.

II

Limitation of scope of thesis

A vast number of volumes have been written relative to the archaeological science, its methods, its fields, and its results. But aside from the published works of the present time, four other primary reasons necessitate a concentrated study upon a more limited field than Archaeology in general, viz; (1) The time involved in the history of archaeological discoveries, (2) the vastness of the geographical area involved, (3) the many peoples whose histories would demand an examination, and (4) the immense store of materials discovered.

1. The time involved.

To catch the full significance of the expanse of time which has opened to study within the last century, it will suffice to mention but three conclusions per-

1 A. B. - Intro. P. 11, 12
taining to the history of three countries.

Egyptian history has been traced quite accurately to slightly beyond 4200 B.C. Professor B. A. Barton of the University of Pennsylvania estimates also that the pre-dynastic period extended from 5000 B.C.

Mesopotamian history has likewise been made available to approximately the same date, i.e., 4200 B.C. It has further been estimated that the prehistoric can be pushed back to 6000 B.C.

The Palestinian dating is summarized thus relative to the earliest history of that land, "The Neolithic or Cave-Dweller period dates from an unknown limit prior to 3000 B.C. down to and after 2000 B.C.

With this brief resume, it is easily understood why the limits of the major discussion should be placed not earlier than the latter part of the thirteenth century before Christ when the dynamic history of the Hebrews seem to begin. The vital Hebraic history terminated with the Greek period and as a consequence, the date will 330 B.C. shall serve as the concluding point.

2. The geographical are included in archaeological explorations.

One of the most effective means of securing a comprehensive view of the countries involved in modern archaeological efforts was found in the American Journal not be undertaken here. The term "escaped people" is

1. A. B. - 24, 25;

1. APA pp. 372 ff., Vol. 34
of Archaeology. In each volume of this publication is a series of news items under the caption, "Archaeological News." The information in each paragraph is preceded by the name of the country from which the news is sent. The following list is the total covered in but forty pages, and, what is more, this enumeration of countries includes the news from July to September only in the year 1932:


While this list is not meant to be an all-inclusive one, it nevertheless is quite adequate to impress the extent of archaeological activities. It is at once evident too, that the majority of these countries, if connected at all, are only indirectly involved in any of the Hebrew history. Hence the field has been narrowed for this study primarily to Palestine. The invasion of the Hebrews will quite necessarily require a slight notice of Egypt but that only as a connecting link in a unified history.

3. The many peoples involved.

The two preceding paragraphs have spoken in no uncertain terms of the many peoples included in scientific archaeological studies. As a result another resume need not be undertaken here. The term "Semitic peoples" is likewise too broad and inclusive. Hence, out of this en-

1. AFA pp. 372 f., Vol. 36
The tire group has been chosen a numerically small but very influential people, the Hebrews.

4. The materials to be studied.

The quantity of materials discovered with the last century has been staggering. Yet with all of these numerous "finds" one fact still remains true, viz: All materials can be divided into two classes, the literal or literary and the non-literal or non-literary. The former have probably seemed the more important on account of the easy connection with the history or religion of any people. But in many ways the latter are just as important as the former, and it must be admitted, much more romantic and interesting.

The special emphasis in this work will be upon the non-literary or objective materials. Occasional reference, however, must be made to the literary materials in order to fully substantiate the points raised for consideration.

III. Brief resume of Palestinian archaeological expeditions

In order that a thoroughly sequential view of the Palestinian activities may be obtained, the chronological method of discussion will here be followed. This is a departure from the methods of Drs. Albright and Barton but the scanning of events in chronological order will assist in synthesizing this entire field. It must naturally...

1. APB Ch. I 91
2. AB Ch. IV
be assumed that there are many expeditions which cannot be mentioned for lack of space. Sufficient evidence will be presented, however, to give a better understanding of the works undertaken by the various organizations, their leaders, and a small part of their results.

1838 - This date is accepted by the scholars of archaeology as the real beginning of Palestinian explorations and discoveries. This in no way minimizes the work of Eusebius of Caesarea who in the fourth century performed a notable piece of work for the later centuries of activity. His list of place names (1) was valuable but not as exact as the excavators of later times had a right to demand. The above date - 1838 - therefore, serves as a logical beginning point.

Edward Robinson, an American from Union Seminary of New York, set forth in 1838 on what has been termed his "epoch making journeys" in Palestine. The motive back of his trips - the latter of which was made in 1852 - was to study the geography, topography, and archaeological remains of that section of country. He was accompanied by Eli Smith, a missionary from Syria, and for seven months they travelled on horseback mapping modern and ancient village sites, studying documents - as well as traditions - and proposing new identifications. His proposed sites have stood all tests. The one contribution of greatest value was his formation of modern Arabic place-names. He

is acknowledged today as the founder of scientific topo-

graphy of Palestine.

1848 — The work of the American, Lieutenant
W. F. Lynch, aided also by Dr. Anderson, a geologist,
brought the Dead Sea into prominence as an object of
study. That prominence has since been revived in the
work of President M. G. Kyle of Pittsburg-Xenia Seminary
who has located, at least to his own satisfaction, the
cities of Sodom and Gomorrah under the waters of that sea.
The special significance attached to the work of Lynch
and Anderson was, however, the interest engendered in
England which in a short time resulted in an English
organization for archaeological pursuits.

1865 — This date marks the organization of the
Palestine Exploration Fund in London. General Sir Charles
Warren who had been surveying in Jerusalem went out under
the auspices of this society and worked from 1867 to 1870
in Jerusalem again. His discoveries were important but
even more so than he knew at that time. His work has been
classified as "prescientific" although his digging methods
were improvements over those that preceded his time.

1870 — The American Exploration Society was orga-

nized in this year, and, under the leadership of Rev. John
Paine of New York, Pisgah of Biblical fame (Deut. 3:27)
was identified.

1. APB - 19
2. AB - 92
3. Ibid - 134, 135
A survey of western Palestine began in this year. Lieutenant Colonel C. R. Conder, along with Lord Kitchener, was engaged in the work. Many archaeological remains were mapped thus adding in a very material way to the value of the survey. It was termed "a monumental accomplishment" upon its completion.

Clermont-Ganneau, a French scholar, was sent out by the English Palestine Exploration Fund, and, in spite of the lack of support by the Turkish government, made many archaeological discoveries in the region between Jaffa and Jerusalem.

This date marked the first work of the American Palestine Exploration Society but about the total accomplishment was the gathering of more information by Mr. Rudolph Mayer, an engineer, and Rev. Selah Merrill, who was later the U.S. Consul at Jerusalem.

Germany had now been aroused to activity and the Deutscher Palastina-Verein was organized. Its work has been too vast for discussion here, but some of the places excavated as well as a list of outstanding leaders are worthy of notice. Jerusalem, Megiddo, Taanach, Capernaum, Jericho, and Balata mark some of the sites excavated by this body while the two scholars who have proved of inestimable value to Palestinian Archaeology are Dr. Gottlieb Schumacher of Haifa and Professor Ernest Sellin of Vienna.

This date is "fateful" in archaeological history. At this time W. M. Flinders Petrie, the man who practi-
cally revolutionized the dating of archaeological "finds", began his work at Tell-el-Hesay in south-western Judah. He worked but six weeks, but by means of his previous study of Egyptian pottery, his new principles opened up an unused door for archaeologists. Much of the data to be used in the more scientific portion of this thesis can be credited to his scholarship.

1891 — Dr. Frederick J. Bliss continued the work of Petrie, being appointed Director of Excavations for the Palestine Exploration Fund. Remarkable and historically valuable discoveries were made under his leadership. He continued his work in Jerusalem through 1894–1897 and returned for work on the Shephelah in 1898 along with R.A.S. Macalister who was soon to engrave his name indelibly on the annals of archaeological history.

1898 — The German Oriental Society came into being in this year. But the addition of two more years was to mark the highest organizational achievement in Palestine.

1900 — In this opening year of the twentieth century the doors of the American School of Oriental Research were opened. From that time, to the present, it has carried forward a constructive program. Men of great scholarly attainments have served as its directors and helpers. Some of the names that have made it famous are W. H. Worrell, B. M.

1. APB — 24
2. AB — 95
3. AJSIL — 219, 229, Vol. 32
4. Ibid — p. 108
L. B. Paton, C. C. McCowan, H. G. Kyle and W. F. Albright. Its method is constructive, for along with its regular archaeological work the leaders are developing a corps of younger men who shall carry on the work when the older ones must resign.

One fact must now be emphasized. The historical view just given is retrospective but not final. Men of various countries are in Palestine today and the work continues. Glorious bits of history still lie under-ground. The above mentioned organizations, in addition to numerous minor expeditions, have opened the doors of Palestinian archaeology, but the future generations must yet thrill at the hidden stories which literally lie at their feet.

-IV-

Value of Archaeology to the knowledge of National Backgrounds

1. Special interest attached to Hebrew history

In spite of the rapid development of education in general and historical emphases in particular in the last several centuries, it is not exceeding actual fact to state that there is probably no nation in all history whose development and background have been so universally studied as those of the Hebrew people. The main reason for this is well known, viz; the close connection of the Hebrews with Biblical history as set forth in both the Old and New Testaments.

One of the members of the joint archaeological expedition to Samaria in 1931 - 1932, but one who was too modest

1. JNES. Jan. 6, 1933
2. AEBLL. Vol. 12. P. 225
to sign his name to the article written by himself, realized this universal interest in Hebrew affairs when he stated, "Naturally, the examination of places connected with Bible history will always excite interest."

2. Blinding effects of tradition.

There is a natural tendency on the part of all peoples to believe those traditions which contain for them a lofty national glory. It is likewise a natural tendency after hundreds of years of repetition for those traditions to crystalize into actual historical facts in the minds of the people. These facts are doubly significant when connected with a people who in their own thinking, as well as in the beliefs of untold millions of others, were the recipients of a god-revealed religion. Two evident results must follow when any history faces the scientific data of the objective science of archaeology: (a) Actual historical facts will be substantiated, (b) Merely traditional elements will be made evident as such.

Professor Leroy Waterman of the University of Michigan offers a criticism of an attitude which, it is hoped shall be completely avoided in this study. His view is that archaeology is handicapped by trying to act as an apologist for the scriptures whereas the archaeologist is supposed to but gather the remains of time and obtain an unbiased view of the past. His criticism now raises the final question as to the contemplated use of the Bible in this special

1. *RBJ* - p. 17
2. *ABHB* Vol. 32, p. 225
consideration.

The Bible, as a literary document, shall be used as supplementary material only. No efforts shall be made to vindicate or condemn its statements, but its connection with the archaeological objects is to be used as an added surety to the Hebraic history. Perhaps no clearer statement of its scientific usage can be found than the following by W. F. Albright, an archaeologist from Johns Hopkins University and one who cannot rightly be accused of religious bias:

"Except for the work of the last century and especially of the last generation, it would be impossible to reconstruct the ancient social, political, or religious history, material civilization, arts and crafts, etc., since our chief documentary source, the Bible, invariably requires archaeological elucidation before it becomes completely intelligible from any of these points of view." 1

As he states, it is not adequate of itself, but contains valuable references which may be used as collateral evidence for historical data.

1. APB - p. 17
2. ANH - p. 18
Chapter One

NON-LITERARY ARCHAEOLOGICAL MATERIALS IN THEIR RELATION TO THE HEBRAIC POLITICAL HISTORY

Introduction:-- Brief ethnological background.

"For, as with the individual the child is father of the man, so in the life of a nation the primeval history has a decisive influence upon the whole following development." 1

True words indeed are these, but one of the first questions to be answered is that of the chronology to be included in the primeval history. Perhaps the Hebrew of the first century can give the best answer, "We are Abraham's seed." (John 8:33). In this brief consideration, therefore, Abraham shall mark the beginning of their historical background.

The dating of Abraham is somewhat uncertain, but thru a study of philology two possible dates have been assigned. If, as the majority of scholars seem to hold, Hammurabi was the Amraphel against whom Abraham fought (Genesis 14:9) his date must be fixed at about 2050 or 2100 B.C. If, on the other hand, Amraphel can be identified with a king of Singara in northern Mesopotamia, the date can be placed at 1800 - 1600 B.C. It is held too that the latter date would place him at about the time mentioned in

1. HPI - p. 16
2. AHH - p. 18
the Hebrew records. This fact will be more fully explained in the following paragraph.

The racial connections of Abraham are fairly certain. Five great waves of Semites swept out of the Arabian desert. The first of these emerged before 3000 B.C. and became the Akkadians. So also emerged the Amorites for many centuries. They continued the conquest of many lands including the Sinai peninsula and the movement on into Palestine. (1800 - 1700 B.C.) Later the Kassites from the mountains east of the Tigris reconquered an already densely populated Mesopotamia. The next step must consequently be a westward migration. This was the movement that swept the Hyksos into Egypt and the Canaanites into Palestine. Here again Abraham must be considered.

According to Hebrew records Abraham lived 430 years before the exodus from Egypt. (Exodus 12:40). If, therefore, the date of the exodus is placed at about 1220 B.C., Abraham's date will be approximately 1680 to 1600 B.C. which would coincide perfectly with the time of the Canaanite influx into Palestine and the surrounding territory.

Archaeology definitely enters Hebrew history proper at this point.

The famous Tell-el-Amarna Tablets were unearthed in Egypt in 1887 - 1888. There were literal or literary records in the cuneiform writing of Babylonia and proved to

1. AHH - p. 9
be letters of kings, princes, and chieftains to the
Egyptian rulers Amenophis III and IV. Many of these
letters were asking for protection from the "Habiri!"
This name challenged the philologists who have in the
main agreed that it referred to the Hebrews who were at
that time pushing their way into the west-land. This
identification, however, of the Habiri and the Hebrews
is still an open question.

The exodus evidently took place under Merneptah of
Egypt who reigned from 1225 to 1215 B.C. This view has
chronological difficulties, but its supporters believe
that the dates can be adjusted satisfactorily through the
fact of the loss of perspective in the composition of
the Biblical documents.

One interesting archaeological discovery relevant
to this early Hebrew history was found in the Egyptian
city of Pithom. Exodus 1:11 states that during the time
of the bondage in Egypt the Hebrews were driven by the
taskmasters and that "... they built for Pharaoh store-
cities, Pithom and Raamses." In the fifth chapter of the
same book is found the record of their gruelling experi-
ences when they were required to make brick without the
necessary straw to hold the clay together. Edouard Naville,
after his excavations of 1883, reported that he had found
the city of Pithom and that some of the corners of the

1. ARB - p. 9
2. ARB - pp. 33, 34
buildings there were constructed of bricks without straw.

The incident of the exodus will close the hurried sketch of the political background, but the entrance into Palestine must be considered because of its valuable and interesting history. The Palestinian archaeological history of the Hebrews begins at once.

Palestinian cities

1. Sizes

The one great fact that must be emphasized, and if need be, reemphasized, is that the invading Hebrews from Egypt came not into an "... unknown wilderness," but into a country "...sparsely populated, with wells, nomads living in tents, caravans of Ishmaelites, settled Arameans and Philistines, and in the distance, Egypt with its glorious cities."

In the foregoing discussion mention was made of the early influx of the Canaanites, so it is not to be an unexpected revelation to find the invaders face to face with what was to them at that time "cities fortified and very great." (Numbers 13:28) It is fitting, therefore, and also quite natural, to inquire as to the actual size of those cities.

The first city which stood as a barrier to the entrance of the Hebrew host into Palestine was Canaanite Jericho. The account of its capture at that time is found

1. MOT - pp. 185, 186
2. ZAW - Vol. 48 - pp. 69, 70
in Joshua chapter 6 but no hint can be found as to its size. Archaeologists, nevertheless, since excavating its site, have estimated that, "All of Canaanite Jericho could be put in the Colosseum at Rome." Similarly, Megiddo which was one of the largest of the early cities of Palestine had a total area of about 11 acres. Even Jebusite Jerusalem which was evidently the city captured by King David (II Samuel 5:6-10) contained not less than nine or more than 13 acres.

As civilizations have developed today to the point where cities are measured in terms of miles, the aforesaid facts are most astonishing. A better perspective is gained, however, in preparation for the consideration of the protection of the Palestinian cities that soon fell under Hebraic dominion.

2. Protective devices.

A crisis confronted the Hebrew People. From a life of slavery some of the Hebrews had emerged into a period of nomadic wandering. That period ended with their entrance into Palestine but the crisis still lay ahead. The predominating questions were not those relative to the size of the cities to be taken but rather - Can the bond of union, the tie of blood relationships which functioned in the nomadic period, still be maintained in a land of permanent dwellings? Will the massive fortifications of that day break down the psychological strength

1. AB — pp. 141, 142

2. And — p. 240
built up by Moses and Joshua? (Deut. 31:1-13; Josh. 1).

The answer to be sure lies in the next few centuries of their political life. But a sociological factor — and one that is also slightly psychological — had already been generating the necessary unity of feeling and purpose. Prof. Alfred Bertholet of the University of Gottingen has expressed this important requirement in these words which, it must be admitted, could likewise be applied to the period immediately following this period of conquest:

"Under such circumstances people were drawn together by the cares and dangers in which they alike shared, and these were more powerful bonds than common descent or lineage." 1

What, then, were the real objective barriers that the Hebrews were facing as they cast hopeful glances at Jericho, as they fronted unknown years ahead, and as they were blocked by the obstructions which they themselves were soon to adopt as protection?

a. Walls

"... the cities are great and fortified up to heaven ... (Deut. 1:28) "... the people shouted with a great shout, and the wall fell down flat.... (Josh. 6:20).

The former quotation is descriptive of the Hebrew's conception of all the Canaanitish walls in Palestine. The latter statement is the record of the fall of the walls of Jericho.

The inquisitive mind, the one with the truly scienti-
fic urge, may properly interrogate at this point con-
cerning the dimensions of the familiar walls of Jericho
and their similarity to other city fortifications. This
logically leads out upon an interesting bit of archae-
ological research.

The Middle Bronze Age which is dated about 1800 B.C.
marked the approximate time for the building of a great
stone wall at Jericho and one which has been designated
as having "cyclopean measurements." Evidence, however,
points to its destruction in about 1600 B.C. A much small-
er wall was then built within the one destroyed, this lat-
ter one because of its apparent destruction in a great
conflagration, has been classified as the structure de-
stroyed by the encroaching Hebrews. So great, indeed, was
the fire at that time that the sun dried bricks had been
burned red with the terrific heat. This wall was about
twelve feet thick.

In order to increase the effectiveness of this twelve
foot wall, which was now the main protection for the city,
another smaller "curtain" wall was built about twelve or
fifteen feet outside the main wall. This "curtain" wall
was about six feet thick. Professor Olmstead calls
attention too to the fact that between the walls at the
northwest corner, about forty feet had been filled to
support a tower.

Nothing so far has been said by way of discussion of

1. DUBB Vol. 1. p. 121
2. LAW Vol. 48. p. 136
1. BASOR No. 41 - 8
2. HPS -- 1973
construction materials or to the height of the walls. The latter feature quite necessarily will vary with the different sections of the walls measured and also with the degree of destruction of the various stretches of the wall.

One other fact of value to the protectors and protected, and one that would add height to the walls of Jericho, was the addition of a parapet to the top of the wall. This parapet was of sun-dried bricks and was about eight feet high. The stony section of the wall upon which this parapet rested was about fifteen feet in height, thus making a total of twenty-three feet.

Professor I. M. Price gives a slightly varying figure but this variance is easily understood and perfectly permissible as previously explained. His figures are found in the following statement: "Carefully guarded by warriors behind parapets on walls 30 to 40 feet high and 6 to 8 feet thick Jericho was thought to be able to withstand a siege of long duration."

Before proceeding to the somewhat controverted question of the means employed in the destruction of the Jericho walls, attention must again be focused upon the two types of materials used in the construction of these Canaanitish walls.

As previously stated, the brick parapet, which comprised the latter part of the wall construction, rested
upon an under structure or wall of stones. These stones, if judged by the precision of modern architectural methods, might seem to be rather loosely bound together with the application of merely mud mortar. This substance, however, was common in all building projects of that land and was amply serviceable on account of the dry, arid atmosphere of Palestine. The solidity of the walls was also intensified by the insertion of chips or pebbles with the mortar into the larger crevices left between the stones. Undressed field stones laid in the mud mortar on the underlying rock surface served as the foundation for both walls.

The facts just rehearsed in the preceding paragraph are emphasized for two important reasons: (1) In the later fortifications bricks disappear altogether in the places where stones can be as easily procured. (2) The type of structural technique found in this stone work is that which is to be adopted by the Hebrews when they too must provide permanent protection for themselves.

In closing the Jericho incident it is not amiss to now consult the archaeologist relative to the possible means of capturing the city protected with such seemingly impregnable fortifications. In this regard it will likewise be enlightening to follow closely the years in which the following data are published and the conclusions reached.

J. Garrow Duncan who was director of excavations in Jerusalem (Ophel), 1923-25, gave the following view in 1930-31:
"Not one of these three sets of walls (referring to all constructions prior to Joshua's time) had been laid flat but the old Testament account merely states that the wall fell 'under itself' and does not necessarily imply that the whole wall of the city fell flat.... As to Joshua's entry, it was found that the south and west sides had been completely broken down and at a later date restored with very rough and hurried masonry. The masonry, as well as the north tower, was probably the work of Hiel." (I Kings 16:32)

In this statement Duncan offers no clue as to the means employed by Joshua in taking the town, but supports the Hebrew version of the city's conquest when he offers the assertion that the walls of the entire city . . . . evidently did not fall. The record in Joshua implies as much when it recounts the removal of Rahab and her family from her own house after the capture of the town. Her house too was "upon the side of the wall and she dwelt upon the wall." (Joshua 2:15; 6:22-23)

Another aspect of the possible means used in razing the walls was offered in 1931 by Fernand de Kely in Revue Archeologique published in Paris, France. The author was arguing from siege operations of later times, and when his view was reported by the American Journal of Archaeology, it was termed a "theory." The gist of his proposed explanation is as follows: The army of Joshua undermined the walls of Jericho but held them in place by means of wooden supports or props. When all preparations were made the prolonged blast of the trumpets gave the signal for

1. DUBH Vol 1, p. 123
firing the structure under the walls. When the fire had consumed the wooden supports the walls collapsed.

Entirely aside from the fact that the foregoing has been termed a "theory" by the author of the American Journal, it may be of interest to consult another report of the same year -- 1931. Its datum relative to the question at hand is found in a terse but at the same time, an adequately comprehensive statement that "there was nothing to explain why the walls fell." This latter statement originated with the American Schools of Oriental Research after their careful examination of the Jericho ruins.

The very latest archaeological report bearing upon the razing of the Jericho walls was published in February of 1932 and thus is the final word from truly scientific sources:

"Archaeologically this catastrophe remains somewhat obscure; signs of an earthquake are noted, but there are also indications that the walls were thoroughly and systematically demolished after the occupation of the city." 3

A more or less irrelevant but humorous incident may be inserted here to add insight into the archaeologist's task of careful discrimination. While excavating and exploring the city of Jericho, bits of burnt thatch and even a piece of rope were found. Someone in the party volunteered the information, perhaps in a humorous or jocular manner, found to be fourteen feet in thickness. The similarity

1. AJA Vol. 36, No. 2, p. 175
2. BASOR No. 41, p. 8
3. BASOR No. 45, p. 28
that this bit of rope now over 3000 years of age might be the one with which Rahab lowered the Hebrew spies over the walls. (Joshua 2:15-18) It is a bit interesting, too, to discover that one or two writers have taken the idea seriously.

The Palestinian history of the Hebrews, as previously stated, began with the Jericho incident, but the "promised land" still lay ahead unconquered. Must the Hebrew conquerors face more walls of the strength of Jericho's? Have the invaders sufficient ingenuity or adaptability to appropriate the fortifications already in the land and improve upon them, or will they allow a general deterioration in their strength?

In order to answer the former question, a brief summary of some of the pertinent archaeological data will follow. Let it be kept in mind that, unless specifically stated as such, these walls are not of Hebrew construction but typical of those which the Hebrews had to face as invaders.

Tell-en-Nasbeth (Mizpah) -- Professor Bade found the west wall to be twenty-six feet thick. This was the thickest and strongest wall yet unearthed in Palestine. While its walls date back to about 3000 B.C., the one which was probably standing at the time of the Hebrew invasion was found to be fourteen feet in thickness. The similarity

1. JBL Vol. 49, p. 170
2. AB p. 140
in measurement with that of Jericho is quite noticeable.

Beth-Zur -- The wall of this city which was estimated as having been built in the seventeenth or sixteenth centuries B.C. was found to be but 2.5 meters wide or approximately eight feet. The tower on the other hand, while constructed in the same century, was 5 meters thick or slightly over sixteen feet.

Tell-el-Hesy (Lachish) -- This site is worthy of special study in view of the fact that eight cities were unearthed in the 60 feet of debris on this site. Lack of space forbids a lengthy discussion. Even the early walls, however, are interesting because of their massiveness. The base measured 35 feet in thickness while the top was from 16 to 20 feet in width.

More illustrations could easily be listed in answer to the foregoing question, Must the Hebrews as they push farther into Palestine face more walls of the Jericho type? The answer is undoubtedly in the affirmative and a clue is thus given to an adequate explanation for some of the Biblical statements relative to the Hebrew intercourse with the previous inhabitants of the land.

Professor Kittel formerly of the University of Breslau, in attempting to set forth his own views concerning the friendly relations between Hebrews and Canaanites, first,

1. BASOR No. 43, p. 6
2. DUBH Vol. 1, p. 131
recites the beliefs of Bernhard Stede, the great German theologian. His opinions may be abridged into the following statements:

The Hebrews entered Canaan not as conquerors but peaceably; they led a nomadic life east of the Jordan; they turned to agriculture and as their numbers increased they pressed westward across the Jordan River; the Canaanites, on account of their superiority, could have repulsed any warlike advances; the Hebrews by dwelling with the native peoples became partially blended with them and adopted not only their culture but part of their religious practices; the towns were only in part overcome by force and continued for some time to resist the peaceful conquest; it was not until the period of the Kings that the two peoples began to be completely estranged and hostile, and the latter condition ends in the subjugation of the original inhabitants.

(a) Not all of the viewpoints grouped in the preceding paragraph can be answered singly, but the main question confronting the student at this point can be at least partially answered thru a verbatim statement of Kittel's own ideas.

A few of the pertinent ones follow:

"Israel did not obtain the country solely by force. This is clearly proved by the many instances in which Israel and the Canaanites are seen dwelling side by side in peace during the period of the Judges.... It is highly questionable whether Israel's immigration into the..."
country west of the Jordan was accomplished at first solely thru peaceable negotiations, and only afterwards in a few isolated instances by force... Israel's inability to drive out the earlier population made it necessary to come to terms with them." 1

Before drawing a definite conclusion pertaining to the Hebrews and Canaanitish walls, a few historical statements of Hebraic origin may help to supplement some of the foregoing tenets of both Kittel and Stade, e.g. "And Manasseh did not drive out the inhabitants of Bethshean and its towns, nor of Taanach, and its towns, nor the inhabitants of Dor... nor the inhabitants of Ibleam... nor the inhabitants of Megiddo..., but the Canaanites would dwell in that land... And Ephraim drove not out the Canaanites that dwelt in Gezer; but the Canaanites dwelt in Gezer among them..." (Judges 1:27f).

The final conclusions, therefore, which connect the Canaanitish fortifications with Hebrew history are these:

(a) The walls of the native cities were too strong to allow a complete conquest of Palestine by the Hebrews in the period immediately subsequent to their entrance into that territory. This conclusion seems to bear an ample substantiation, even tho' it may be only implied, in the rather casual assertion in the Hebrew record that, "when Israel was waxed strong that they put the Canaanites to taskwork." (Judges 1:28) It is evident that they had not

1. HH Vol. 1, p. 296
2. A.B. pp. 139, 140
always "waxed strong." (b) Both peaceable and martial methods were employed in the conquest which in reality extended over at least two centuries of time.

The second question previously mentioned must now be considered. Did the Hebrews adopt, maintain, and improve the protective devices which they found in the land, or did they show signs of decay and lack of stability in the walls which they later built? Only archaeology can adequately give the answer; and, even with the illustrations to be employed, there may still be a slight feeling of dissatisfaction. This attitude arises not from the reports given by the archaeologists, but from the fact that the greater amount of excavating has been done in the more important cities. This must necessarily result in a similarity of results which would probably not exist between the larger and the smaller cities. The importance of this contrast was voiced by Dr. Barton in these words:

"The walls by which the cities were surrounded varied according to the advancement of the different periods and according to the importance of the place." 1

Tell-Beit-Mirosim (Kirjath-Sepher) -- This can be classified as one of the more unimportant cities in the social and political history of the Hebrews and the wall measurements are therefore smaller than those of Samaria or Jerusalem. President Kyle, while giving no exact fig-

1. A.B. pp. 139, 140
ures, states that "the lower half is of old Canaanite construction, the upper half rebuilt, oftentimes of Canaanite stones, by the Israelites. This part is of inferior workmanship and usually of smaller stones." This classification of workmanship and materials is likewise verified by ex-Director Albright of the American School of Oriental Research in Jerusalem who also gives this very enlightening bit of data plus his comment:

"It is very interesting to note that the width of five feet (sometimes six to seven) is absolutely characteristic of Israelite city walls, the exception being due either to the importance of the place fortified, as at Jerusalem, or to the continuance of the Bronze Age fortifications, as at Tell-en-Nasbeh." 2

Tell-el-Hesy (Lachish) -- Petrie has assigned City VI to the reign of Rehoboam who succeeded Solomon in about 960 B.C. It had been a fenced city and its northern wall -- traced by Petrie and Bliss -- was of solid sun-dried brick and rested at one point upon a rough stone foundation while at other points the foundations were of solid brick. This wall measured about ten to twelve feet in thickness, but there is evidence of other walls which archaeologists believe were the ones faced by Sennacherib in 701 B.C. instead of the one built by Rehoboam.

Tell-es-Safi (Gath) -- This city, as with all those excavated, would be worthy of lengthy discussion, but it

1. BS Vol. 85, p. 258
2. APB, p. 102
3. DUBH pp. 170, 171
must suffice to say that its wall was twelve feet thick. It might be interesting too, however, to add that it rested upon debris from six to eleven feet in depth. This was evidently the remains of an earlier Amorite settlement.

Samaria -- Two varying measurements have been given for the walls of this city, and yet it is possible for them both to be correct. J. W. Jack speaks of the wall as of massive construction and lists it as about ten feet in thickness. Duncan on the other hand lists the southern wall as only five feet in thickness. This wall, however, was built on the edge of the cliff which would naturally form a barrier in itself. Hence both figures could be accurate, but giving measurements at different points.

Jerusalem -- The walls of this city are difficult to list accurately because its rather extensive and yet exceedingly changeable, history has thrown a certain haze over many of its structures. This is especially true of the so-called Third Wall. Its identity is not certain but that which is accepted by some as the Third Wall is four and five tenths meters wide or slightly over fourteen feet. The wall was hurriedly built and the foundation was of poor quality. These characteristics suggest Hezekiah's wall which was built hurriedly to prepare for Sennacherib's invasions.

1. DUBH Vol. 1, p. 216
2. SIAT pp. 11, 12
3. DUBH Vol. 1, p. 221
4. TTJW p. 56

1. DUBH Vol. 1, p. 200
vasion. (II Chron. 32:5). The latter wall tho' is usually spoken of as the "outer wall" and is about ten feet wide.

Hezekiah's wall was built on the same principle as the others, but, as previously mentioned it was rushed in construction on account of the expected attack and there was a probable hurried search for any materials with which to build. Some of the Solomonic repairs had been used as well as dirt for packing which had many pottery sherds mixed with it. The statement in Isaiah 22:10 is a terrible comment upon the necessity for more materials -- "... and ye broke down the houses(of Jerusalem) to fortify the walls."

The eastern or so-called "inner-wall" was of Jebusite origin and of massive size. Just how thick it may have been at the top is not known, but its base is forty feet thick. "With the bastions and towers added, the base of the wall must be quite eighty to one hundred feet thick."

The walls of Jerusalem could be discussed at length, but the conclusion for the previous question of Hebrew adaptability must now be drawn. The results of this inquiry seem to be two-fold: (a) Albright's contention that walls of five, six to seven feet in thickness are Israelitish characteristics must apply to the smaller cities since the larger more important cities are characterized by thicker walls. This as previously mentioned

1. DUBH Vol. 1, p. 200
is a proven conclusion of archaeologists. (b) All in all, it can be said that there is no evidence that the Hebrews improved upon the walls, but merely adopted what they found. They seemed to have put forth no effort to enhance their effectiveness. In fact, the general tendency seemed to be in the direction of decay.

The one outstanding exception to this conclusion then was that of Solomon who, by means of "corvee" or forced labor, was able to construct a remarkable miniature kingdom. His method, it must be admitted, was quite modern for, as Cornill points out, along with forced labor, he had borrowed from Tyre until he owed approximately $48,000,000. As a result he ceded a district with twenty cities to Hiram king of Tyre.

b. Towers

No greater commentary is needed to show the importance of the tower in Hebrew history than the statements of their own records. These few must suffice altho' it must be borne in mind that they represent a vast number of similar references.

"When I come again in peace, (Gideon) I will break down this tower." Judges 8:9

"And when all the men of the tower of Shechem heard thereof they entered into the stronghold of the house of Alberith."
Judges 9:46

"Now the watchman was standing on the tower in Jezreel..." II Kings 9:17

1. HPI p. 913
"...Let us build these cities and make about them walls, and towers, gates and bars."
II Chron. 14:7

"Moreover Uzziah built towers in Jerusalem at the corner gate, and at the valley gate, and at the turning of the wall and fortified them."
II Chron. 26:9

Five pertinent questions now confront the investigator, viz: Where were these towers located; of what material were they constructed; what was the arrangement of their internal compartments; what were their customary sizes; and what seemed to be their primary purpose? Archaeological findings must again be consulted to answer these four inquiries altho' certain implications are found in literary accounts.

Let it first be noticed once again that excavations have proven the fact that towers existed in Palestine prior to the Hebrew's invasion. Without taking the space to give a summary of proofs, it can be illustrated briefly by the finding of towers on the walls of Gezer in the Amorite period. These towers, it was found, were located at points ninety feet apart. By way of later comparison, it may be added here also that the dimensions of these towers were 1

24 X 41 feet.

The towers used by the Hebrews have been found to have the following characteristics. First, they were usually rectangular or rounded structures, sometimes extending out away from the walls and usually standing above the walls

1. DURB Vol. 1, p. 177
2. AB p. 140
in height. Ofttimes the outer walls of the towers were built into the city walls thus placing the main structure of the tower within the city proper as at the southwest corner of Taanach. One tower located in Samaria has been found to be unattached to the city wall with a space of about 1.1 meters between it and the main wall. This is an exception to the general rule.

Second, the towers were made of the same materials as those employed in the construction of the city walls. Hence they were mostly of the stone "Cyclopean" type but with more skillful bonding of the stones as in the Hebrew palaces.

Third, the internal arrangement of rooms is difficult to describe definitely because of the variations in different places. However, this general picture can be given. Every tower was the location for an entrance into the city. As a person entered thru the outer wall, the line of passage within the tower invariably turned to the right or left with two or three angle turns before emerging into the city. Cf. Fig. No. 1. On each side of the passage-way rooms had been constructed. The purpose of these rooms will be outlined in the following paragraphs.

Fourth, the sizes of the towers varied as this illustrative summary will show. (a) Taanach - western structure - rectangular - 70 X 62 feet - west wall four feet thick,

1. DUBH Vol. 1, p. 177
2. HES p. 99
13 feet high; north east tower, roughly 70 to 80 feet square -- wall 5 to 6 feet thick. (b) Samaria -- 57.4 x 44.2 feet; Ahab's tower, rectangular, -- 12.5 x 16 meters. (c) Jerusalem -- 57 x 48 feet -- projected 18 feet from the wall at the north end -- wall 8 feet thick in one part and 16 feet in another section -- probably 50 feet high.

Fifth, the chief topic remaining for clarification relates to the purpose not only of the internal rooms but of the tower itself. The construction and location of the towers speak to the observer in terms of military strength only. Protection was their primary use. Even the rooms must have been dedicated to the same purpose. Duncan in relating in detail the finds at Taanach ventures the assertion that "the plastered floors favor the idea that the rooms were small stores. There had been also a central open court, with a well or cistern and the living-rooms of the garrison around it..." This opinion is reasonable, and altogether possible in view of the type of political life of that day. In brief, then, the towers were for the housing of garrisons for defensive measures. The rooms were for store houses as well as barracks for the soldiers. J. W. Jack gives a somewhat

1. DUBH Vol. I, pp. 173 .. 176
2. SIAI pp. 8 .. 10
3. Ibid (2) p. 192
4. DUBH Vol. 1, p. 175
graphic statement of the use of the tower when he says that it "enable[s] the defenders to make the gate a death trap. The attackers would be confined in a narrow space while being attacked from above."  

c. Gates

The previous discussion has given the major view of the Hebraic type of gates. They were open but protected by towers and garrisons of soldiers. There is evidence, however, that swinging doors were also used. This fact is especially true with the Philistines for no more familiar story is found in print today than the carrying away of the gates (doors) of Gaza by Samson. (Judges 16:3.) A remnant of this type of gate or door was found at Gezer (Fig. 2) altho' it was not the common type. The figure referred to shows the socket in which the upright beam of the door revolved.

Was there in the political life of the Hebrews any special significance attached to the gate? Examination of their own records proves to be somewhat edifying, but again archaeological data must be sought as well.

"And Lot sat in the gate of Sodom..." Gen. 19:1

"And Absalom rose up early and stood beside the way of the gate." II Sam. 15:2

"And Hamor and Shechem his son came unto the gate of their city, and communed with the men of their city." Gen. 34:20

1. SIAI pp. 21, 20
"And let her works praise her in the gates."
Prov. 31:31

Quite naturally the gate would prove to be a strategic point at which a crowd could be assembled. Both the incomers and outgoers could be approached on any proposition of importance for all must pass the one special location, i.e. the gate. It is not strange therefore to find Lot sitting in the gate probably conversing with those who passed. Absalom too found this an advantageous position to carry on his nefarious scheme of undermining his father's kingdom. Hamor and Shechem halted at the gate to converse with the men who had gathered there, and the mark of a really great woman would be the voicing of her praises by this type of gathering. So speaks the author of Proverbs 31.

It is not to be wondered at, in view of the foregoing, that such a statement as the following should therefore be voiced by the prophet, but it does add greater significance to what might otherwise seem a drab subject: "Tomorrow about this time shall a measure of fine flour be sold for a shekel and two measures of barley for a shekel in the gate of Samaria." (II Kings 7:1) In other words, the public market was located at the gate. Archaeology again bears proof of this interesting fact in the discovery at Kirjath-Sepher of a number of standard weights in the gateway tower. This tower, it was found, consisted of a large open court with rooms entering from three directions and
abutted directly on the gateway and city wall. In the opinion of Dr. Albright this was the place of public affairs.

Perhaps no more startling event could be found at the city gate than this: "Now the king of Israel and Jehoshaphat, the king of Judah, were sitting each on his throne, arrayed in their robes, in an open place at the entrance of the gate of Samaria." (I Kings 22:10) Strange indeed would be this demonstration if it were not connected with a question of war. This gathering was the council which should decide the future policy of both northern and southern kingdoms. The gate, and not the palace, was the scene of the ultimate decision.

The final contribution to this rather interesting array of facts is contained in another incident relative to the history of Jericho. After the destruction of the city previously discussed, Joshua made what appears to be a statement of prophecy. He laid a curse upon the one who should rebuild the city and expresses the finality of the matter in these words; •••"with the loss of his first-born shall he lay the foundation thereof, and with the loss of his youngest son shall he set up the gates of it." (Joshua 6:26) What appears to be the fulfillment of this curse is found in I Kings 16:34.

The real question confronting the student of Hebrew
history, however, is whether this was meant to be prophetic or whether it was a statement of actual fact relative to one phase of their political, social and even religious life. At this point the archaeologist supplies the needed information, altho' no dogmatic affirmations have been volunteered by way of explanations.

In early times in Palestine when a house was built, it was customary to consecrate it with a sacrifice, oftentimes a human being. In Gezer, for instance, the skeleton of a woman was found built into the walls of a house and numerous skeletons of children were found under the corners of houses. The corners were considered as being sacred.

"Similar sacrifices were found at Taanach and Megiddo. These sacrifices illustrate, some think, I Kings 16:34."

"Joshua 6:26 shows that the setting up of the gates was the last piece of work in the construction of a fort and that it was customary to offer an infant sacrifice at the completion, as well as at the beginning of the work. The gates (of Solomonic Taanach) as in Joshua 6:26, had been left to the last, and the south-west gate was finished last of all. Hence the completion sacrifice was offered beside it." 2

In view of the environment into which the Hebrews had been thrown by their invasion of Canaanite territory, it seems quite probably that the conclusions of the archaeologists were right. If so, it must now become an accepted fact that not only the walls, i.e., their foundations, but also the gates, were completed and consecrated by human sacrifice.

1. AB p. 144
2. DUBH Vol. 1, p. 174
sacrifices. Another bit of history that adds support to the view was the Hebraic adoption of the practice of human sacrifices to the god Moloch. The fact remains nevertheless that there are positive evidences of gate sacrifices in their history.

d. Water supply

Walls, towers, gates and all related devices for protection would be useless unless the water supply was conserved. City sites were chosen according to the location of springs; and as the population increased additional facilities had to be supplied. War operations likewise demanded a safe guarding of any springs or wells, and the following materials are cited as illustrative of some of the measures employed by the Hebrews to withstand not only the dry and arid climate but siege activities as well. Cisterns were generally of a more or less private ownership, so the study of their construction and usage may be found under the heading: "The Social History of the Hebrews." The main interest in this division must therefore center around pools, springs, reservoirs, aqueducts and tunnels.

Perhaps some of the most unique pools in Palestine are the so-called Pools of Solomon. It may be said at the beginning that there is no evidence that they were built by Solomon, but his name has become attached to them solely on the grounds of Ecclesiastes 2:6: "I made me pools of water." Archaeologists are still uncertain as to the ex-
act date of their construction but at least one thing is certain, viz; They were built and used by the Hebrews.

The three reservoirs are located about one and one-half miles southwest of Bethlehem in the Wady Artas. They are partly rock-cut and partly constructed of masonry walls. The highest of these pools is about 127 yards long, 76 yards wide, and 25 feet deep at its lower end. The central pool is 141 yards long, from 53 to 83 yards wide, and 38 feet deep. The lowest, and what is classified as the finest of the three, is 194 yards long, 49 to 69 yards wide, and 48 feet deep at its greatest depth. The water from the neighboring springs was collected and stored here for usage in the dry season but it was necessary to construct two aqueducts to convey the water to Jerusalem where the water supply needed to be augmented. The high level and low level aqueducts, the former which appears to be the older, were consequently built. It may add a note of interest at this point to mention the fact that even in recent times the low level conduit has been repaired and utilized for supplying water at Jerusalem.

Ahab's palace in Samaria consisted of a court with a number of store chambers placed about it. Within this court has been found a reservoir which has evidently passed through a period of repairs in Byzantine times (350 - 700 A.D.) but which seems to have been built originally in early Hebrew

1. AB p. 147

1. MBB Vol. 2, p. 25
times. Originally it measured 34 by 17 feet and was over 16 feet in depth. At some later time it was reduced to 20 by 16 feet, while, by means of a heavy coat of plaster 4 to 8 inches in depth, the level of the bottom was raised. This final pool was built within a basin which was over 40 inches larger all around than the pool and was 3 feet deep. The floor of the pool was levelled by means of a flooring of heavy slabs and walls were constructed of blocks of stone 20 by 23 inches laid in plaster. Corners were constructed by placing the blocks diagonally. More plaster was then placed upon the sides and bottom to a depth of about 4 inches.

It was the constituency of the plaster which led the archaeologists to believe that the reconstruction work was of late origin but the original reservoir may have been of 1 Ahab's time (875 - 853 B.C.).

Upon turning to the subject of tunnels one is somewhat amazed to find the archaeologist leading again into early Canaanite history. Perhaps one of the best illustrations of the work of this early period is the undertaking discovered in Gezer. Macalister has estimated the construction of the tunnel at about 2000 B.C. This fact in itself gives the student of Hebrew history another angle of the type of civilization already in existence before the influx of the Hebrews. For purposes of comparison with later Hebrew underground works this brief description is inserted here.

1. DUBH Vol. 2, p. 25
The Gezer tunnel was cut in solid rock and was entered by a long flight of rock cut steps. The archway at the entrance was 23 feet high and 13 feet 10 inches broad. The entire length of the passage was 130 feet and for two-thirds of this distance the above mentioned height and breadth were maintained. The dimensions were reduced, however, when the rock became more difficult to penetrate. As would be expected, the passage terminated in a large cave, in the bottom of which was found a spring. And of the really astonishing items in this discovery was that the bottom of this cave, or more important still, the spring of water, was 94 feet 6 inches below the level of the rock surface which underlaid the city. Barton says that "the whole tunnel is a remarkable piece of engineering for an early people."

Similar tunnels have been found in Mizpah and Gibeon, many of Jebusite construction in Jerusalem, and one in Rabbah-Ammon in Transjordania which entered into Hebrew history in David's reign. (II Sam. 12:27) In fact, the statement just made relative to the number found at Jerusalem can be made specific with this datum. There are altogether eight tunnels, Jebusite or post-Jebusite, complete or unfinished, around the spring of Gihon; and some of the most captivating pages of archaeological study are those of Duncan's DUBH Vol. II pp. 201 - 215 in which an explanation of the eight tunnels is given. The way to this passage had been discovered thru the cave near the spring, Gihon, and the men were led up thru
undertaken. He justly credits our exact knowledge of them to Pere Vincent who carried on the special explorations in 1910 - 1911.

The Ain Sitt Miriam (ancient Gihon) and the Bir Eyyub (Biblical En-Rogel) are the only two unfailing sources of water in Jerusalem. They are both located in the Kidron Valley with Gihon resting almost directly under the brow of the hill, while En-Rogel is situated in the more open valley. Naturally this geographical arrangement throws Gihon into an advantageous position for defensive purposes inasmuch as it can easily be defended from three sides. It is not surprising therefore that the archaeologists should find that the earliest settlement of the city centered about this spring. In fact, it is not at all beyond reason to surmise that all of the tunnels discovered under Jerusalem were the attempts of Jebusites or Hebrews to make the water accessible from the interior of the city.

This is somewhat substantiated, too, by the accounts of David's capture of Jerusalem, when held by the Jebusites. II Samuel 5:6-8 gives the directions of David at that time: "Whosoever smiteth the Jebusites, let him get up to the water-course." Barton's connection of archaeology with this record is that at some earlier period an underground passage had been cut to permit the inhabitants in case of siege to descend to the spring for water without going outside the city walls. The way to this passage had been discovered thru the cave back of the spring, Gihon, and the men were led up thru
the tunnel to capture the city.

This explanation is probably correct altho' there seems to be only the mere command of David to support it. The same type of explanation is also offered for taking Rabbah-Ammon previously mentioned. Whatever may have been the exact truth, this most significant fact is evident, viz.: that the tunnels, while a means of strength in some cases, were at other times a source of certain defeat.

Perhaps the best known of all waterways is that of Hezekiah (715 - 686 B.C.). This was another effort to bring the waters of the intermittent spring, Gihon, -- spoken of today as Virgin's Fountain -- to the safe confines of Jerusalem. The one feature that has made it so well known is not so much the statement in II Kings 20:20 that "he made the pool, and the conduit, and brought the water into the city," as the inscription left upon the wall of the tunnel. In brief, the inscription which was evidently the work of one of the Hebrew workmen marked the point where the two groups of excavators met. The inscription was not the record of the king as would undoubtedly have been the case with the Assyrian rulers who had a weakness for extolling their own accomplishments. It is not the purpose of this study to discuss the inscriptive phase of any discovery but practically any recent Bible dictionary

1. AB p. 204
2. AB p. 233
or a literary treatise of Semitic archaeology, will contain the translation of this Siloam inscription.

Hezekiah's tunnel, spoken of as Tunnel VIII, was 1777 feet in length. At the spring end it was 24 to 27 inches in breadth while the average height was 6 to 6¾ feet. At a point about 167 feet from the spring entrance, however, it had attained a height of 10½ feet. Someone had evidently reported that the total fall in the tunnel was just one foot, but later examinations such as those of Vincent have shown that there is a fall of 7 feet or an average of one foot to every 254 feet. This eliminates any possibility of stagnation of the water.

Nothing has been said of the receptacle at the end of the waterway opposite the spring. The king had provided for that thru the building of a new Pool of Siloam which, of course, threw the old pool of Siloam into disuse. This accounts for the name often applied to this rather remarkable piece of engineering, "Hezekiah's Siloam Tunnel."

The individual whose mind turns to pursuits of civil engineering would not be content with the foregoing data. He would probably frame two purely scientific, but at the same time, two intensely interesting inquiries, viz: Does archaeology give evidence as to the means used in the Hebrew excavations; and, what has been the judgment of the discoverers as to the mechanical precision with which the

1. DUBH Vol. II, p. 215
2. Ibid. p. 214
work was done?

The first question may be answered as follows: "The excavation of the tunnel was done with wedge, hammer, and pick." 

The second inquiry likewise bears a definite answer, altho' it may not be so satisfactory to one who may be hoping for signs of perfection in that early day. Clermont-Ganneau attempted to explain the many curves and bends in the tunnel as the efforts of the workmen to avoid tombs of the kings. Further research tho' fails to reveal any tombs. So the only conclusion remaining was that, while the whole operation was a notable engineering achievement, the tunnel gave evidence that the workmen frequently cut in directions which they did not intend. In fact, Duncan relates that at one point the tunnel comes "so near to the external surface that in a few yards it would have come out of the side of the hill." The waverings in the line of the tunnel also increased near the middle of the work and this has been interpreted as due to the two gangs "feeling for each other."

The construction of this waterway in itself is interesting political history overlapping to be sure on the social. The military situation at that time, however, intensifies the real significance of Hezekiah's work and binds it inseparably with Hebrew history.

Sennacherib, the Assyrian ruler (705 - 681 B.C.) who

1. DUBH Vol. II, p. 215
2. Ibid p. 214
3. DUBH Vol. II, p. 214
was previously mentioned under the topic of "Walls," was making an invasion into the westland during Hezekiah's reign. Not only Hezekiah's wall but this provision for water for Jerusalem must be linked with this event. The view is held that the Assyrian's activities were responsible for Hezekiah's preparations in the first place, i.e. that word had reached the Hebrew king of Sennacherib's intended conquest of Palestine; and, as a result, not only the wall but the Siloam tunnel was built. The records of the Hebrew writers give support to this view. Cf. II Kings 18:13f; II Chron. 32:1f; Isaiah 22:9-11; etc.

Seals

1. Their political significance

Seals may be thought of as a purely paleographical study, but as Barton points out, in the later periods of Hebraic history they consisted of various figures and devices carved on stone. They might or might not contain the name of the owner. The lion stamps or seals illustrate the latter type, i.e. those with no name or names inscribed. The lion stamps or seals are figures of a lion in a threatening attitude with mouth wide open and evidently roaring. The tail is curved above the back of the animal, and this seemingly insignificant fact has demonstrated for the archaeologist Duncan the influence of Assyria upon life.

1. JE Vol. VI, p. 380
2. AB p. 170
of Palestine in the early post-Exilic period. This rather peculiar characteristic of the lion's posture is typically Assyrian and this accounts for the scientist's conclusions. The dates for these stamps are rather uncertain, but the jar-handles upon which the seals were found were made of materials which pointed to about the fifth century B.C. or later. As just suggested, the seals were found upon jar-handles that were unearthed from the debris on the east wall of Jerusalem.

There were but six of these lion stamps and their dimensions must necessarily be rather minute. Three of the seals are three-quarters inch, one seven-eights inch, and two are one inch in diameter.

One of the most famous of the lion seals was the seal of Shema, unearthed by Schumacher of the German Palestine Society in Megiddo in 1903. This seal bore the figure of a lion and the name of the owner, but it seemed to have been stamped upon the clay and not written by the man himself. The full statement of the seal reads as follows, "Of Shema, servant of Jeroboam." This mention of Jeroboam provides no criterion by which to judge whether Shema was a servant of Jeroboam I or Jeroboam II. It does connect definitely, however, with the northern kingdom of the Hebrews, and since the archaeologists are inclined to assign this seal to the approximate date of 780 B.C. it would thus

1. DUBH Vol. II, p. 143
2. BS p. 184
1. APH pp. 124, 125
refer to the reign of Jeroboam II of the northern kingdom.

Albright in his interesting discussion of the unearthing of Tell-Beit-Mirosim (Kirjath-Sepher) recounts the discovery of two other types of seals. The first of these were of especial value to the archaeologists for use in dating the ruins in which they were working. The political situation of that time was likewise recalled by the impression, "Belonging to Eliakim steward of Yohim." Since there were two of these discovered at this point and another had been discovered by Grant at Beth-Shemesh in 1930, there are now three of the Eliakim seals in archaeologist's hands.

Yohim is but a shortened form of Jehoiakim, so this seal automatically carries the student back to the days of Jehoiakim, or Joakim, and the Chaldean ruler Nebuchadnezzar (604 - 561 B.C.). Jehoiakim, who was king of Judah (608 - 597 B.C.) had rebelled against Nebuchadnezzar who then controlled Palestine but died before the Chaldean invasion. Jehoiachin, a lad of eighteen years, Jehoiakim's son, then became ruler on his father's throne. He was king for but three months (597) before Nebuchadnezzar captured him and carried him captive to Babylon.

Zedekiah was then appointed king by the king of Babylon and it is at that time that it is thought Eliakim "Must have been charged with the administration of the personal property of Jehoiachin." 2 Cf. II Kings 23:34--24:20.

1. ABP, pp. 124, 125
The other type of stamped seal is that with the impression, "Belonging to the king -- Hebron." At the present time nearly 200 stamped jar-handles of this type have been found, and altogether four different city names have been listed: Hebron, Sooch, Ziph, and Mamshath. What then is the special significance attached to these stamps?

These four cities served as administrative centers for four fiscal or state treasury districts probably established by Hezekiah. The wine and oil which were paid as taxes were placed in standard jars which probably, holding a "bath", were stamped with the official seal, and were then circulated as official measures of value.

The fact just recounted is not only enlightening economically and politically, but it raises another point worthy of consideration in view of some of the conclusions already drawn relative to the lack of Hebraic originality. Nothing resembling such an arrangement of political machinery has been found outside of Judah or the southern kingdom. As a result Albright is willing to give them full credit and states that, "it appears that the idea was original there -- another illustration of the originality of that little country in the days of the great prophets."

One rather illuminating passage from the Hebrew records of their own history is found in I Kings 21:8. Jezebel, the Phoenician wife of the king of the northern kingdom, had

1. APS p. 124
been assisting him in his scheme to obtain the vineyard that lay close by their beautiful palace. Nothing was too dastardly for her to plan, "So she wrote letters in Ahab's name, and sealed them with his seal, and sent the letters unto the elders and to the nobles that were in his city." Let it be said that her scheme was not only brutal but politically crooked because of the deceit typified in her use of the king's seal. This official use of the seal smacks of the twentieth century political governments.

-III-

Palaces-

To extend the discussion of this topic into the Canaanite period would be an easy matter on account of the many discoveries unearthed. It is the plan, however, to hold strictly to the Hebrew structures in this division.

1. Mere mention is going to be made, first of all, to a building unearthed by Sellin in Jericho, and, on account of its pretentiousness, it has been ascribed the residence of Hiel the rebuild of the city in the days of Ahab. (I Kings. 16:34) It contained a number of large rooms and was constructed of fairly large but irregular stones.

2. The second palace of interest in the Hebrew period is located in Megiddo. It is a structure of enormous size as the following figures will show: The court mea-
sured about 200 feet from north to south and 110 feet east to west. The wall encompassing this is three and one-half feet thick and is made of large blocks of limestone. Another building about 36 feet square, containing three rooms, had been built near the center of the north wall of the court. Its walls varied from three to four and one-half feet in thickness.

The masonry of the large court was of the type that reminded the archaeologists of Ahab's famous palace. In fact, it is rather surmised that Ahab first built this court in Megiddo. After it somehow suffered destruction, it was later restored with different masonry. It has been suggested also that, since it resembles so closely the great court extension in Ahab's palace in Samaria, the use or purpose of each may have been the same, i.e., for the collecting and storing of the revenue of the district which was paid in corn, wine and oil. Naturally too the revenue official and probably the garrison of soldiers all resided somewhere within this building.

In attempting to describe in even a meager way the palace attributed to Ahab in Samaria, it is first necessary to scan its predecessor the palace of Omri. In I Kings 16:24 the record of Omri's purchase of the site of the city of Samaria is given and in conjunction with that brief statement is added the seemingly insig-

1. DUBH Vol. I, pp. 247, 248
nificant reference to the fact that ... "he built on
the hill, and called the name of the city which he
built ... Samaria." His date is fixed at 887 - 875
B.C. but in spite of the span of centuries a logical
question is, What did he build at that time? Due credit
must be given to Harvard University for a thorough an-
swer to that question as a result of their recent exca-
vations.

The site of the main section of the city was found
by archaeologists to be as stated by the Hebrew histor-
ian ... "built on the hill." More than one building
worthy of the name "palace" was found on this hill and
careful discrimination has been necessary to properly
assign these structures to the proper period and conse-
quently to the proper men as builders. As previously
mentioned, the first palace was evidently that of Omri.

Cf. Fig. 3.

The plan of Omri's palace was the one common to
Oriental countries, i.e. a series of open courts surroun-
ded by smaller rooms. The largest court was found to be 17
meters long, 8 meters wide at the east end, and 9.5 meters
wide at the west end. The other rooms varied in size as
shown by these figures: Room listed as No. 6 was 8.4 meters
by 9.2 meters. The passageway connected with this room was
3.2 meters wide and 5.3 meters long. One other room, list-
ed as No. 2, was 4.2 meters by 5.3 meters. All other rooms

were compared with these and their sizes showed but a slight variance. This general plan has been assigned or likened to the palaces at Kalhu and Babylon.

The building was constructed of stone blocks quarried from the native rock, a soft yellow limestone which hardens on exposure. The outside wall was set about twelve inches back from the edge of the scarp on which it rested and was over eight feet thick. The inner wall was six feet in width. The care and scientific exactness used in its construction are described by Olmstead in his statement ... "Headers and stretchers were laid skillfully, sometimes dovetailing into each other, joints were broken by alternate use of header and stretcher, stretchers were employed for the corners, intersecting walls were carefully bonded." The Harvard Expedition recognized the value of this type of construction and included in its report a drawing of the bonded stones. The replica is found in Fig. 4.

Two other facts of interest were discovered and are worthy of special notice. (a) A sanitation system was provided by small channels cut under the rooms and draining into a larger canal. (b) Mason marks were found on some of the stones and were thought to be Phoenician or Hebrew characters. They were probably scratched on the stones by the workmen as they rested.

2. Hes p. 371
3. SIAT pp. 12 - 15
4. SIAT pp. 12 - 15
Many details must be eliminated. This general conclusion, however, was reached by one of the members of the Expedition of 1931-1932 and both phases of his statement bear upon the political history of the Hebrews in the period 887 - 875 B.C. "Omri must have been a man of wealth and organizing powers."

4. In close connection with Omri's palace was found another much larger structure which was attributed to Ahab (875 - 853 B.C.). Of all the Hebrew palaces this one is probably the most famous. To the Hebrew historian this building was of special significance for in closing the record of Ahab's life it was thought to be quite fitting to make mention of his work as follows, "Now the rest of the acts of Ahab and all that he did, and the ivory house which he built, and all the cities that he built, are they not written in the book of the Chronicles of the kings of Israel?" (I Kings 22:39). It is altogether probable too that the prophet Amos whose work was subsequent to Ahab's period may have had this "ivory house" or palace of Ahab's in mind when he stated, "and the houses of ivory shall perish." (Amos 3:15).

Omri did not live to complete his palace, and, as a consequence, Ahab completed even greater additions than those planned by his father. The "Ivory House" was extended westward down the slope of the hill and the palace platform was made by a massive retaining wall 315 feet long.

1. MGW - Jan. 6,
from north to south. The outer wall was about 2 meters thick and a space varying from 2 meters to 2.3 meters separated it from the inner wall, to which it was tied by cross-walls at regular intervals. The inner wall was from 1 meter to 1.3 meters in thickness. Within this retaining wall the surface was raised by a filling of chips and debris to form the foundation for the palace. In the northwest section of the paved court, which was about 180 feet broad, was found a pool 33 x 17 feet, floored with heavy slabs and covered by a cement that was as solid as the rocks themselves. From this pool came water for the bath, a sunken room paved with large square blocks. A tower 41 x 53 feet was located just south of the retaining wall, and this, as previously explained, probably served as the domicile for the soldiers who were permanent guards. Another interesting structure was also found in the southwest corner of the court; and its interest is attached (a) to the type of materials and construction work employed, and (b) to the "finds" relating to the political life of that time.

This building was constructed of "left-overs from the quarrying, broken blocks, undressed and unfitted, mixed with chips and held together by mud mortar." From these facts alone, one is left in the dark as to its purpose of use; but when it is termed "the Ostraca House" by the arch-

2. HES p. 372
aeologists, the awareness of its value is heightened, Herein lies its significance.

Eighteen rooms had been constructed as store-chambers for the wine and oil and the other revenue in kind which was brought to the palace. This fact was ascertained thru the "ostraca" or potsherds found within this structure, which, when translated, proved to be records or memoranda of the jars of wine and oil received. Olmstead adds that "thru these ostraca we learn the tax system and follow a tax reform."

One seemingly peculiar and yet pertinent question has yet to be explained, viz: Upon what grounds was this palace of Ahab's termed an "Ivory House?"

G. A. Reisner, director of the Harvard Expeditions of the years 1908 - 1910, explained this terminology on the ground that the yellow limestone with its light shade may have accounted for the ideas of the people that it looked like ivory. He likewise suggested that it may have even been whitewashed and referred to Ezekiel 13:10 f. — as possible proof: ..."and when one buildeth up a wall, behold, they daub it with untempered mortar."

Thru the work of the scientists another dramatic event in Hebrew history is made to live. In 1 Kings 22:1-28 is found the incident in which the prophet, because his advice runs counter to the desires of the king

1. DUBH Vol. I, p. 257
2. HPS p. 372
is thrown into the prison. Ahab was the ruler.

J. W. Jack in his discussion of Samaria tells of a tunnel running from Ahab's palace to Omri's, where it terminates in an underground chamber. This he suggests may have been a treasure house, a cistern, or a prison and perhaps the one in which the prophet was incarcerated.

In concluding this fascinating bit of Hebraic history the student is forced to account some way for the splendor of Ahab's palace with its component parts. Why was it built? Was it merely a tendency of the northern kingdom; was it a move to overshadow the southern kingdom; or, was Ahab ruthless in his desire for luxury? To be sure, an answer must in part be speculation, but along with the angles of the question already mentioned another still exists. Laura H. Wild sets forth her view and it bears worthy consideration, even tho' the coincidence of her sex with her answer may at first seem queer. To her Ahab's wife, Jezebel, was the prime mover of the whole enterprise. Her explanation states that, "She (Jezebel) insisted upon her foreign (Phoenician) ideas, that the kingdom was for the benefit of the rulers and that they were to live in luxury and display and have every whim gratified." Whatever may be the reason for this structure, archaeologists have shown to the world a really marvelous piece of constructive achievement by a man who somehow controlled

2. EHP p. 200
the requisite resources for the task.

5. Jeroboam's palace (781 - 740 B.C.), i.e. Jeroboam II, as shown in Fig. 3 was an addition to and alteration of Ahab's building. The western wing was extended about 58 feet farther west and rooms similar to Ahab's were constructed. The outer wall of this addition measured about 5 feet in thickness while the inner wall was about 3 feet 10 inches thick. The space between totalled about 8 feet 8 inches.

The provision for military protection centered in the large round tower at the southwest corner. This tower was 49 feet in diameter with a wall 7 feet 10 inches thick thus leaving an interior space of 33 feet in diameter. It probably contained rooms and served as the customary armory for the soldiers. The masonry, according to the Harvard report, of Jeroboam's structures was better than that of Ahab's. It was altogether probable too that some of the rooms located in this extension were used as the headquarters for the revenue collector and his store of taxes in kind.

The term 'social' then will be used as synonymous with history relative to family, domestic life, and social intercourse in general.

1. DUBH Vol. I, pp. 262 - 263
Chapter Two

NON-LITERARY ARCHAEOLOGICAL MATERIALS IN THEIR RELATION TO THE HEBRAIC SOCIAL HISTORY

Introduction:— Explanation of use of term "social".

As was suggested in the study pertaining to the Political History of the Hebrews, various topics discussed, naturally have the tendency to overlap on to some other closely related subject. For instance, the discussion of seals overlapped slightly into not only the literary field but also the economic as well; the study of palaces pertained not only to the political but to the social history. In like manner, therefore, the following discussion will occasionally include topics that might relate to religious or economic history and yet are logically social. Again, it might seem advisable to distinguish between objects that were primarily private or public socially. One topic alone seems to be so distinctly private, however, as to be worthy of segregation, viz: Ornaments. But even with the closest discrimination this topic carries its strictly social determinants of a public character.

The term "social" then will be used as inclusive of history relative to family—domestic life and social intercourse in general.

-1-

Hebrew Dwellings

1. 1. Canaanite influence

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One factor in the Hebrew civilization which was emphasized from the beginning of this thesis was the influence of the Canaanitish inhabitants of Palestine. It was only a natural accompaniment of the transition thru which the Hebrews were passing. It is not at all strange then to find archaeologists, who have unearthed dwellings of many periods and many peoples, assuring the reader even in the opening sentence of a sketch on Hebrew Houses that, "Hebrew houses were much the same as the Canaanite." In fact a comparison of the two types of dwellings would be most convincing of the truth of the above statement. But the purpose in the following will be to picture the Hebrew houses; and the inferences concerning the pre-Hebraic structures will have to be drawn from the data listed in the following discussion.

2. Walls and foundations.

The walls were composed of stones or bricks. Those constructed of stones were often of the rough unhewn type and these stones were of a variety of sizes from the small pebbles to large boulders. The mortar used was mud and often the joints were wide and irregular, thus leaving crevices into which scorpions, insects, or even serpents might crawl. This was undoubtedly the picture in the mind of Amos, the prophet, when he speaks of the man who, ..."went into the house and leaned his

1. DUBH: Vol. II, p. 9
hand on the wall, and a serpent bit him." (Amos 5:19)

Many times the walls were found to be of brick construction, e.g. the walls of the Bethshemesh houses. The bricks in this case were 20 x 15 x 4 inches, thus harmonizing with bricks found in Lachish, Jericho, Gerar, and elsewhere, and showing affinity with Babylonia rather than with Egypt. Most of the brick walls for private dwellings were constructed out of sun-dried bricks that had previously been used by some earlier people in building a city wall. Those in Bethshemesh house, for instance, are ascribed to an Amorite wall of that city.

The foundations in most cases were stone. But in view of the findings in Taanach, there seemed to be a disagreement between Sellin and Duncan as to whether the walls of one type of house found there were of mud and rubble or whether these materials constituted nothing more than the foundation. There seemed to be an agreement that most brick walls must have had a stone foundation.

3. Roofs and floors.

The roofs consisted of heavy wooden beams covered with straw, reeds, and mud, and the extent of the average span of the beams was about 13½ feet. This roof could be listed as a covering for a small dwelling-house, but Duncan holds that this was the prevalent size.

The houses generally had no floor except the earth,

2. Ibid p. 12
and this, after being smoothed, was packed hard by some means. This procedure was often varied by mixing lime with mud, and by spreading this upon the floor and permitting it to harden. Thus a fairly compact and smooth surface was obtained. Floors of cobble stones or stone chippings mixed with lime were also found.

4. Rooms and doors

While there seems to be a dearth of data on the size of the rooms in the dwellings, there were unearthed in Taanach and Jericho houses having the 13 foot span in some of the rooms. The house in Jericho contained five rooms. Of these one was a small hall for entering, one an open court, and one a small store-room. Another seemed to be a large living or sleeping room and the fifth may have been a bed-room. The open court, as would be true in all Oriental houses would serve as the reception room.

It adds a note of interest to account for the conclusion that the one room was probably a store room. The archaeologists found in this room a large quantity of cooking-pots, jars, plates, cups, pedestal bowls, fragments of large amphorae (jars or vases), clay weights, pottery lamps, and a stag's horn handle. No trace of a fireplace was found so the weight of the evidence was in favor of the storeroom. Discoveries in other places have shown the custom of having these bins or storerooms in the private dwellings as well as in the palaces. In fact, in one of the Bethabara houses,
previously mentioned, a room containing a heap of burned beans of Egyptian origin was found.

The store-rooms in the houses from 2500 B.C. downward have been grouped in four classes, and, if Duncan's statement is correct, and it is accepted as such, then the Hebrew houses must be included in the grouping. His statement is that, "the plan of the ordinary dwelling house remains the same from the earliest Amorite times at 2000 B.C. down to late Greek times at 100 B.C., the only difference consisting in elaboration of rooms, and specially the collecting of rain-water from the roofs in cisterns."

The store-rooms in the houses were of the following types:

a. One or more chambers designated for that purpose.
b. Rooms fitted with or divided into bins.
c. Circular corn bins built within the house.
d. Secret cupboards in the thickness of the wall.

It seems most likely that not only ease of securing the food stuffs but also safety from theft accounted for the interior store-rooms, i.e. within the dwelling itself.

The doorways to the rooms were usually just an opening made by the vertical sides left in the masonry. At a later period they were sometimes lined with standing
stones. While the doors themselves have long ago disappeared, many houses still to be seen in Palestine have given evidence that the doors were made fast to a post, the lower end of which was set in a hollow or perforated stone. Cf. Fig. 2. When the door swung the whole post would turn in its socket.

5. Foundation sacrifices

The custom of sacrificing a human being at the laying of the foundation of a structure applied not alone to city walls and palaces, but was true also for private dwellings as set forth in Chapter One.

In closing this discussion of the private houses another relevant fact must again be recalled. Statements have hitherto been made concerning the small size of the Hebraic cities. Albright, in his account of Tell Beit-Mirsim, relates how that at one point the city wall had been torn out from the inside in order to make room for the dwellings. The wall, he says, was "nothing but a shell" at that place. This fact when applied to other cities, Jericho in particular, may account for the fact that occasionally someone lived upon the city wall. It has previously been noticed that this was Rahab's abode in Jericho. (Cf. Walls -- Chapter One)

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Cisterns

1. Locations

Perhaps there was no more important factor in
Hebraic social life than the cisterns. The cistern must be distinguished from the reservoir primarily on the ground of size and consequently from the standpoint of ease of construction. Most of the cisterns were privately controlled altho' it is tho't that some of the larger ones were open to public use.

No definite type of location can be chosen as the one most used. If this statement were open to modification in anywa'y, however, it might be on the ground that most of the cisterns were rock-cut and hence were mostly located in the vicinity of rocky hills. In the main this was true, but the type of cistern known as the "Built Cistern" could have been constructed anywhere, as will later be explained.

Sennacherib, the Assyrian ruler, (705 - 681 B.C.) was well aware of some of the social problems centering in the cisterns when thru his spokesmen, Rabshakeh, he promised the defiant inhabitants of Jerusalem that, if they would but surrender to him, they could all not only eat everyone from his own vine and fig-tree but also, "... drink ye everyone the waters of his own cistern." (II Kings 18:31) Thus the public use of the cisterns would be eliminated and each family could have its own situated beneath its living quarters.

Countless pits, caverns, or cisterns have been found in Palestinian hills, and many have been unearthed beneath the structures of private dwellings. And, in spite of the
span of centuries, it has been found by archaeologists, who have spent years in that land, that even today the most common location for the cistern is under the newly constructed building.

2. Types of cisterns

This phase of the question again necessitates somewhat of an overlapping of chronological periods because of the previous construction of cisterns by the Canaanites. One type of cistern that has seemed to have been adhered to thru all periods was the so-called "bottle-shaped." It can be described as an excavation, usually circular although sometimes square, varying in depth from 16 to 23 feet. The floor varies in width from 11 to 26 feet. The sides rise vertically to a certain height and from that point begin to narrow to the shaft opening. Often the sides taper from the floor to the roof in the likeness of a cone. The shaft which is the only opening is generally a circular hole about three feet in diameter and 4½ feet deep.

Limestone until exposed is soft and porous, and it was to be expected, therefore, that those removing the debris from the many cisterns would discover a type of plaster on the walls similar to that used on house floors, i.e. a mud-plaster in which powdered limestone predominated. Even this was easily affected by water, and it is not without reason that fires were built within the pits until the latter were used by earlier inhabitants of the country, and when many feet of l. DUBH Vol. II, p. 27
was hardened to a sort of pottery. One of the really striking similes used by the prophet Jeremiah was his accusation against the Judeans that they had so lived that their lives had equalled the building of "...broken cisterns that can hold no water." (Jer. 2:13) That figure needed no explanation for the Hebrew.

Two other types of cisterns which were probably built by the Canaanites are the so-called "Cave Chambers" and the "Double Bowl." These are mentioned here because they were probably taken over by later inhabitants of Palestine including the Hebrews. They were then improved and used.

The first was, as the name implies, nothing more than the chamber of some early cave-dweller converted into a cistern.

The second type, i.e. the double bowl, is best understood by an examination of Fig. 5. This cistern was of the likeness of two rather deep bowls placed above each other, with mouths turned down. As with most of these water containers, there was the narrowing at the top of the cavity which terminated in the cylindrical shaft. This was constructed not only for safety but for alleviating the difficulty of withdrawing the water vessel when filled.

When the most advantageous locations were employed by earlier inhabitants of the country, and when many feet of

1. DUBH Vol. II, p. 22
debris were accumulated, not only on suitable rocky locations, but even in many of the older cisterns, the only recourse left for the Hebrews was to reline the older with stones and plaster.

Originality was used in the size and shape of the "built cistern." After the hole was excavated to the shape and depth desired, a wall of stone was laid in mud mortar and used as the lining for the excavation. This wall was later plastered with two or three coats of mud plaster.

The built cisterns at Gezer were credited to the Hellenistic period. (ca 330 - 60 B.C.) Many of the step cisterns, which were characterized by lateral steps along the small rectangular excavations, were found in Jerusalem. These, however, were ascribed to the Byzantine and Crusader periods which lie without the era included in this study. (ca 1220 - 330 B.C.)

3. Uses of cisterns

Quite naturally the first that connected with a cistern is a receptacle for drinking water. That is the most common designation. In the dry Palestinian climate another related employment has been devised, viz: the collection and retention of irrigating water.

The latter usage is at least illustrated by Duncan when he relates how in recent years, when the archaeologists were excavating in Ophel, ... "the owners of the fields,
which are now market-gardens, begged us to leave at least one cistern open for them for the collection of surface drainage, and the watering of the crops." There was good evidence that one of the tunnels at Jerusalem had been used for irrigating the king's gardens, but other proof for cistern irrigating seems to be lacking.

Other services for the cistern have been discovered in its use as a store-room, bin, sepulcher, treasure house, or even a prison.

Albright records a most interesting and somewhat dramatic incident which occurred in one of the narrow tunnels under Kirjath-Sepher. The Arabs, after ascertaining by means of candles the real type of tunnel thru which they were passing, became somewhat overjoyed at the prospect of finding a treasure. A plot was then laid out to kill the archaeologists as soon as the treasure was located. Albright then pictures the terrific anti-climax for the Arabs, when it was found that the place "had been used for nothing more romantic than storage bins for grain and straw, oil, etc."  

In the same chapter, Albright recounts another incident relative to Hebrew cisterns or caverns. The archaeologists were pushing along thru a rock-cut tunnel under the city when they suddenly emerged into what they had hoped would be a necropolis. Instead, and with much dis-

1. DUBH Vol. II, p. 19
2. AFB p. 73
appointment, they found the cavern to be a great empty cistern or group of cisterns. The explanation offered by Albright for this unexpected "find" was that ... "The Israelites, in digging a cistern, had broken into the Canaanite sepulchral caverns, which they had cleared, plastered, and used as a cistern..." This incident, while it seems to reverse the general trend of the argument being set forth, prepares for the discussion of a definite cistern burial discovered in Gezer.

In a cistern in Gezer fifteen bodies were found. Much speculation followed this discovery, but Macalister offered a conjecture that the men had died of a plague and the one young lady had been offered as a sacrifice to their god. The explanation is more or less irrelevant but this is a marvelous illustration of the sepulchral usage of the cisterns.

Under the topic of "Ahab's Palace" mention was made of the cavern or cistern found beneath that structure. It was suggested too that in all probability, it was used as a prison or treasure house.

III

1. Non-Jebric influences

Many pages could be written upon the practices of the Cave Dwellers and the Amorites in the disposal of their dead. Barton dispenses with the customs of the Cave

1. APB p. 72
2. AB p. 196
dwellers with one brief statement, "The Cave Dwellers of Gezer burned their dead." The discovery of a cave in Gezer containing human bones and ashes, furnished proof for Barton's assertion. In addition to this method of body dispositions, two types of burials were likewise discovered, viz: (a) The full length of the body, i.e. the body fully extended within an enclosure; (b) The contracted burial with the bodies doubled-up as they died but merely thrown into a cave.

It may be said, before leaving this section of the study, that cremation was rarely adopted by the Hebrews. One example of their attitude is found in Amos 2:1 where the prophet exclaims, "For three transgressions of Moab, yea, for four, I will not turn away the punishment thereof; because he burned the bones of the king of Edom into lime."

Achan's body was burned but that seemed to be done as an added punishment for what he had done. (Josh. 7:25)

The two types of burials previously mentioned seemed to have survived the ages between the Cave Dwellers and the Hebrews for they were practised by the latter after their Palestinian settlement, as will be noticed later. The period from about 2500 B.C. to 1200 B.C. was characterized by reused caves, chambers with round and rectangular shafts, and many kinds of burial deposits.

This sketchy resume of the pre-Hebraic background,

1. AB p. 195
2. DUBH Vol. II, pp. 149 - 157
3. DUBH Vol. II, pp. 157 - 165
while insufficient, may provide a better understanding of the Hebraic practices.

2. Types of Hebraic tombs.

Duncan's opening sentence in his discussion of the Hebrew period in Burial Customs states that, "Early Hebrew burials are much the same as those of the preceding period. At the close of "the preceding period" and overlapping into the Hebraic era, he discussed the Built Graves of Tell Fara (Bethpelet). (1400 - 600 B.C.)

These tombs were merely pits that were dug into the ground with walls built up of bricks and stones. All these graves were roofed over with rough stone slabs. No chambers were utilized. It was admittedly a new type of tomb, but one that was thought to have been used by both Canaanites and Hebrews.

Barton, in following the descriptions of Rock-hewn Tombs given by Bliss and Macalister in the 'Excavations In Palestine', sets forth the fact, however, that the rock-hewn type of tomb can really be divided into (a) Shaft and (b) Doorway tombs.

The shaft-tomb was constructed of a tomb chamber or chambers which were cut in the rock and approached by a perpendicular rock-hewn shaft which was usually rectangular. This shaft was usually closed at the bottom with slabs, and then the shaft was filled with earth. This type of tomb
was usually constructed in an earth ledge so that it could easily be covered over with soil. Then, when a hole leading to the rock-cut shaft was filled, the tomb was effectually concealed.

The doorway tomb was often cut into a ledge that left the grave completely under ground. In that case, a flight of steps was cut down to the door. In other places, the tomb was cut in a ledge on a sloping hill and thus the doorway was approached from the level of the ground. Niches have been found cut in the rock for the latches and bars of the doors. So it can be said that doors were fitted into the crevices prepared for them.

These tombs were sometimes one room only and sometimes several. Sometimes the bodies were laid on the floor of the tomb; and sometimes ledges, shelves, or "divans" were cut into the rock sides of the tomb, and upon these the bodies were placed. The bodies were laid on the divans or shelves on their left sides, with knees drawn up to the chin (contracted burial) and no special attention was paid to preparation of the body. It was laid on the rock and covered with earth and small stones, and that was all.

Another type of tomb which was specifically Hebraic was classified as the thrust grave. This tomb was usually in the group known as single chambers. From the single room of the tomb many shafts or tunnels were excavated into the rock walls and were of sufficient dimensions to allow the bodies to be thrust in horizontally.

1. Ibid p. 198
2. JE Vol. XII, p. 186
3. DUSH Vol. II, p. 166
4. Ibid
To the Hebrew Rabbis these tunnels were "kok," or "kokim," in the plural. In some of the tombs discovered there are only two kokim on each of the three sides thus making provision for six burials. One tomb in Gezer provided for eight by having four shafts on each of two sides. It was found too that where there was sufficient depth of rock, kokim were dug horizontally on the door side of the chamber. The conclusion can therefore be correctly drawn that it was the space available, and the needs of the family, that eventually decided the number of the kokim in a tomb.

The famous "Tombs of the Judges" and the "Tombs of the Kings" are of the kokim type. It has been shown, however, by the archaeologists that the "Tombs of the Kings" could not have been such in reality, since the kokim did not come into existence until after kings ceased to be. The "Tombs of the Judges" too was not strictly a kokim type, for there were found ledges or shelves in it also. It was of sufficient capacity tho' to provide for seventy bodies.

At the beginning of the topic on "Tombs" mention was made of caves, their use by the cave-dwellers, and their later reuse by the Hebrews. One famous incident in the story of Abraham is a classic example of this.

Sarah the wife of Abraham had died, and Abraham, who at that time had never settled permanently in any place, was faced with the question of the disposal of his wife's body. The account given in Genesis 23 sets forth the
typical Oriental bargaining, but, at its consummation, Abraham, had secured the cave of Machpelah for his wife's tomb. "And after this, Abraham buried Sarah his wife in the cave of the field of Machpelah before Hebron (the same is Hebron), in the land of Canaan." (Gen. 23:19)

The kind of burial inferred in Genesis 23 is the same type that scientists have concluded was employed also in Gezer. The mouth of the cave could be closed and opened at will and could, as a result, be used for later burials. This was amply proven to be the case with the cave of Machpelah for, "there they buried Abraham and Sarah his wife; and there I buried Leah...." (Gen. 49:31) These were the words of Jacob just before his death, but the finality of it all was that "his sons carried him (Jacob) into the land of Canaan, and buried him in the cave of the field of Machpelah...." (Gen. 50:13)

3. Jar burials

a. Locations

Jar-burials of infants were found by archaeologists in strata from the earliest to the latest. They were found in walls and under walls; they were found under foundations and occasionally beside completed buildings; they were found between the two walls of a fort; and many were discovered in the high places or sacred enclosures. They were found in Megiddo, Jericho, Taanach, Gezer, and Tell el-Hesay (Lachish). Consequently what means this
universality, or probably to most readers, what is meant by jar burials?

Jars sufficiently large to contain a new born babe were the caskets of an untold number of Hebraic and pre-Hebraic children. The body, in those cases where certainty could be secured by the examiners, was found to be placed in the jar with the head resting on the bottom. Children of all ages have been found, altho' it seems that probably a ten year old has been about the maximum. The really striking phase of this discovery was the fact that this ten year old was found near the corner of a fort at Taanach, and this only makes more plausible the tho' that it was entirely possible for Hiel to lose both his oldest and his youngest children when Jericho was rebuilt (I Kings 16:34).

It is only fair to the archaeologists, however, to state at this point that there is not perfect agreement among them upon the question concerning the purpose of these jar burials. Some facts tho' are agreed upon and these will be stressed. In some cases there are questions whether the burials were placed in cemeteries or were meant as sacrifices for some special occasion. This broaches another angle that follows logically the point just raised.

b. Purpose of jar-burials

There seems to be but little doubt that the practise of human sacrifices seized upon the Hebrew imagination and resulted in practices which were condemned

1. DUBE Vol. II, p. 170
by the later prophets. In the early period, Abraham
felt called upon to sacrifice Isaac, his only son. (Gen.
22) The firstborn of man and beast were to be sacrificed,
according to Exodus 13:13. Micah likewise supports the
main proposition before the student when he asks, "Shall
I give my first-born for my transgression..." (Micah 6:7)
Jeremiah too was bewailing the customs of the Hebrews
around Jerusalem. The sacrificing of their sons and
daughters to Molech was tearing the prophet's soul.
(Jer. 32:35)

These practices were real, and it is not surprising
then to find child sacrifices for the commencement and
completion of walls, buildings, etc. Neither is it sur-
prising to find many of these burials near altars and high
places of the worship of the non-Hebraic gods. Jeremiah
was quite specific in his statement just referred to where
he accuses the people of his section of the country of
having ..."built the high places of Baal..." and then to
have caused their sons and daughters to pass thru the
fire.

The conclusion to all of this, however, is found in
the clever means used to meet the requirements of sacri-
fices, and, at the same time, saving the children. The spirit
of the custom was met, but a substitute was offered in the
form of pottery which may have contained blood, oil, water
or wine. This conclusion concerning blood, etc., was rea-
ched because the pottery had been made artificially non-
Let it be made clear just here that many of the infant sacrifices or burials were placed in corners of rooms or under thresholds and usually against the lowest stone of the wall. In these same places were found lamps with bowls placed above them, and sometimes the lamp with a bowl or saucer both above and below. Where the pottery was found, however, no infant skeletons could be unearthed anywhere.

4. Tombs and Hebraic eschatology

The custom of pottery substitutes for actual infant life is closely akin to another Hebrew practice, which furnishes a final clue as to the Hebrew's original conception of the life after death. Tomb No. 5 of Mizpah will furnish the illustration that will form the basis for the conclusion.

In this tomb were found 183 objects. Unique among these was a terra cotta bottle-jar which, "simulates, with incised spirals, a bee-hive built up in blunt cone by means of coiled ropes of straw. A spirally incised bottle neck on the side makes a doorway for the bees." A wax deposit was found inside, and, while not analyzed at the time of the report, it was thought to have been honey. Thus a food offering for the dead was provided. Scores of small black juglets, equal numbers of saucer lamps, and a brazier or

2. DUBH Vol. II, p. 167
incense burner were also found in this tomb. Many more similar tombs could be added, but this sets forth the main point to be considered. As with the Egyptians, Babylonians, and Canaanites, the tomb was that of as the dwelling place of the departed soul. Since the life after death was but a continuance of the present life, food, drink, lamps, clothing, etc. would be necessary. Hence they were provided. Just what was the eschatological conception of infant deaths there seems to be no archaeological proofs. Evidently it was that the babes would be well pleasing to God and would consequently be well cared for.

-Pottery-

1. Its use in Hebrew life

One of the earliest or most primitive arts discovered in any or all parts of the world was the making of clay receptacles. Their importance in Palestine was certain to be intensified because of the necessity of carrying water from the springs or wells. Just as was the case in some of the preceding topics, to give an adequate background for the Hebrew usages of pottery would be too vast a study. The chief influence which bore upon the Hebraic settlers will be discussed briefly at the proper time. It may be said right here, however, that, "Though the Hebrews were in Palestine by 1200 B.C., there is no ware known to
us of the period 1200 - 1050 B.C. which we can set down as distinctly Hebrew." Nevertheless it can be taken for granted that the Hebrews used pottery and that the type of the ware was taken second-hand from some other people.

Even in Abraham's time definite reference was made to pitchers, e.g. Gen. 24:14 ..."Let down thy pitcher, I pray thee, that I may drink." Likewise in the early period of the Judges, Jael the enemy of Sisera desired to retain him, so ..."she opened a bottle of milk." (Judges 4:19) Again, in Judges 6:19 is found the statement that Gideon "made ready a kid" and that ..."the flesh he put in a basket, and he put the broth in a pot." Leviticus 24:2 contains the command that Moses should tell the children of Israel ..."that they bring unto thee pure olive oil beaten for the light, to cause a lamp to burn continually." These references, as can readily be surmised, could be multiplied many times.

2. Philistine influence

As previously pointed out, archaeologists do not always coincide in all their opinions, but, when two or three agree with no apparent collusion or effort to make their records correspond, their conclusions must bear weight. This was the interesting coincidence of Albright and Barton in reference to the influence which bore upon the Hebrew ware. They were agreed that the pottery styles

1. DUBH Vol. I, p. 238
2. AASSR Vol. XII, p. 58
3. Ibis p. 160
were Philistine or Cretan which Barton ascribed to the coming of the Philistines. Albright, by tracing back certain relevant phenomena, came to the conclusion that the Philistine occupation of the Palestinian Maritime Plain started about 1170 B.C. The logical consequence then was that the Philistine pottery had filtered into the neighboring towns by 1150 B.C. What then, it may be asked, were the predominating styles of that time?

Barton, in attempting to clarify the periods, has divided the era from 1800 to 600 B.C. into four Semitic periods. The Third Semitic period, in his estimation, extended from 1400 to 1000 B.C. This is the era in which Philistine influence was the most pronounced. His description of the wares of this period includes the following characteristics:

- A general deterioration in style when compared to the preceding period.
- No differences in the kinds of clay employed.
- Jars had a less pointed bottom than in the preceding era.
- The combed decoration and burnishing of jars were both less frequent and less skillful than the preceding examples.
- An increase in the tendency to use painted ornamentation which frequently consisted of zigzag lines.
- Rough, conventionalized representations of palm trees were common.
- A clay funnel or bottle filler was found in the stratum of this period. (Fig. 6)
- The variety of vessels made was as great as in the earlier period.

1. ABT p. 160
2. AJA Vol. XII, p. 58
3. Ibid p. 160
It will assist in clarity of thinking if again it is asserted that, while the Hebrews up to 1000 B.C. had been in Palestine approximately 220 or 250 years, no wares were found for the period 1200 to 1050 B.C., which could be strictly classified as Hebraic. At the point of 1050 B.C., however, the Philistine influence ended and the Hebrew wares began. On this last point Albright and Duncan agree perfectly, and Barton's date, i.e. 1000 B.C., also places him in accord with the others.

In closing the discussion of this transition period, i.e. the age in which non-Hebraic wares were to be gradually succeeded by the Hebraic classes, another a-fore-mentioned item can be recalled. Pottery proves beyond all question of doubt that the Hebrews settled alongside of the former occupants of the towns which the Hebrews captured. Wares of the older Canaanitish styles and the same articles in Hebraic modes were found side by side.

3. Characteristics of Hebrew Pottery

a. Pre-Exilic (1050 - 597 B.C.)

In order to clearly comprehend the significance of this period in the Hebrew life story, the narrative style will be followed instead of the outline, sketchy form. The entire span of this period adds no lustre to Hebraic originality or workmanship. So fairly complete discussion is necessary.

The latter statement is worthy of authoritative data.
The following verbatim declarations can therefore be considered:

"Hebrew ware of the pre-Exilic period is very easily recognised. It is a totally distinct type and inferior to the Canaanite in workmanship, though the forms of vessels are largely borrowed from them. The ware is lumpy, badly baked, and clumsy. There is none of the fine crispness of III Bronze Age (1600 - 1200 B.C.) Canaanite ware. It is inferior to it in composition, baking, and in form. In place of the finely ground white flint, which gave hardness to the Canaanite ware, Hebrew Potters seem to have used ground limestone. The surface of the vessel is therefore covered over with white particles of limestone which wasted away under the action of water, and left the vessel pitted." 1

"It cannot be said that the Hebrews showed any marked originality in introducing new methods or forms. On the contrary, they imitated badly, and such new forms as they introduced show deterioration." 2

Duncan then continues to relate that there was also the tendency to straighten curved lines and thus produce a stiff angular appearance. Barton too supports the entire general trend of the foregoing when he rather curtly remarks that ...."There seems, however, to have been a steady decline in excellence." 3 His application of this remark relates to the period which he listed from 1000 to 600 B.C.

Albright, who has likewise set forth enlightening data, on the subject of pottery, adds this word which is somewhat more positive altho' he limits his application primarily to method of workmanship in but one phase of the

1. DUBH Vol. I, p. 239
2. Ibid p. 240
3. AB p. 161
Pebble-burnishing improves greatly in technique (in the tenth century), and the wheel is employed for the burnishing operation as well as for moulding of the vessel itself. By holding the tool firmly, and moving it slowly down the inside of the bowl, the potter produced a continuous spiral, which gives the superficial effect of concentric rings, whence the term "ring burnishing."

Some of the features of this period were the pedestal bowls or incense vases, cooking pots with rounded base, red pebble-burnished water jugs with loop handle, store jars with cylindrical bodies and pointed base, three footed bowls, flat bottomed jugs, (Fig. 7) and imitation saucer lamps of Canaanitic style. Ornamentations of this period consisted of painted rings, zigzags, and triangles. Rosettes, trees, and occasional animals also were painted. Bird ornamentations, however disappeared in this age.

b. Post-Exilic (597 - 330 B.C.)

The deterioration was more pronounced in this period than in the former. The political situation in Palestine detracted from any native artistic endeavors. So the influx of Greek modes was only a natural consequence. Greece was on the up-grade, the Hebrews were declining. No distinctive Semitic characteristics were prominent.

Personal Ornaments


The coordination of Hebrew records and the ob-

1. APB p. 106
jects of archaeological research is most striking. When the tone of the messages of the prophets was condemnatory of social customs of their times, the dove-tailing of their statements with scientific findings enhances the efforts of student investigation. Perhaps one of the most drastically censorious passages relative to social customs is found in Isaiah 3:16-24. It reads as follows:

"Moreover Jehovah said, Because the daughters of Zion are haughty, and walk with outstretched necks and wanton eyes, walking and mincing as they go, and making a tinkling with their feet; therefore will the Lord smite with a scab the crown of the head of the daughters of Zion, and Jehovah will lay bare their secret parts. In that day the Lord will take away the beauty of their anklets, and the caul, and the crescents; the pendants, and the bracelets, and the mufflers; the headtires, and the ankle chains, and the sashes, and the perfumebottles, and the amlets; the rings, and the nose-jewels; the festival robes, and the mantles, and the shawls, and the satchels; the hand mirrors, and the fine linen, and the turbans and the veils. And it shall come to pass that instead of sweet spices there shall be rottenness; and instead of a girdle, a rope; and instead of well set hair, baldness; and instead of a robe, a girding of sackcloth; branding instead of beauty."

What expressive terminology! Berthalet remarks that the foregoing passage is worthy to be placed beside those of Amos in which he is condemning the women of Jerusalem and Samaria for their evil conduct. (Amos 4:1)

The problem now facing the student is to discover archaeological substantiation of these conditions. The first authority to be consulted is Dr. G. A. Barton who has given a very concise list of some of the ornaments connected with Hebrew history.

1. RHC p. 233
2. AB pp. 172 - 173
a. Anklets, or at least some instruments that "tinkled," were mentioned by Isaiah. These anklets have been found in many places. They were of both bronze and silver composition, and, while no definite statement is made concerning the type worn mostly by the Hebrew ladies, it seems evident that they would probably be influenced by their financial conditions. The rich could wear the silver, the poor could afford the bronze.

b. Bracelets, too, were found. These, with armlets, were found in great abundance in strata representing nearly all periods. They were made of bronze, iron, glass, and ivory. These ornaments are mentioned in many places in Biblical accounts. Some of the familiar ones relate (a) to Laban and Rebekah, his sister, where "...he saw the ring, and the bracelets upon his sister's hands..." (Gen. 24:30) (b) to the donors of jewelry and ornaments for the tabernacle when they "...brought brooches, and ear-rings, and signet rings, and armlets..." (Exod. 35:22) Many more incidents could be recorded but these will illustrate the commonness of this ornament.

c. Rings were found in profusion. Most of the finger rings were simple circles of metal, usually of bronze. Some iron rings were used; but the silver and gold rings were small, and, as would be expected, were few in number. Several signet rings were found in Gezer, and these usually designated the wearer as a noble of some standing. Pharaoh, for instance, placed his signet ring
upon the finger of Joseph (Gen. 41:42); Haman, too, had the Medo-Persian decrees stamped with the king's ring.
(Esther 3:12) - Cf. Fig. 8.

d. Combs were the most universal of all toilet articles. They were made of bone and ivory. They were both curved and straight, ornamented and unornamented.

e. Beads were found in all strata, and were mostly made of various colored stones. Glass beads were found in some of the later strata.

f. Necklaces consisted of beads, small cylinders and irregularly shaped pendants. In Isaiah 3:19 the translation uses the word "pendant," while in the Song of Solomon 1:10, the idea is carried on with the thought of "strings of jewels."

g. Perfume boxes are denounced in Isa. 3:20, and archaeological excavations prove to the curious person today that the ancients were evidently very fond of perfume. The boxes are found quite frequently in the various cities excavated. Present day prices give a clue, however, to the possible motive for the condemnation of the prophet. The Hebrew women probably needed the money for domestic necessities instead of luxury. The elegantly dressed person mentioned by the poet was "Perfumed with myrrh and frankincense, with all the powders of the merchant." (Song of Solomon 3:6)

h. Spatulae for eye-paint were little tools for lifting small quantities of cosmetics to the eyes. The prophet Ezekiel mentioned this custom when he said that,
... "ye have sent for men ... for whom thou didst wash thyself, paint thine eyes, and deck thyself with ornaments..." (Ezek. 23:40)

Albright in his report on the work in Kirjath Sepher (Debir) (1932) gives an interesting bit of data on this subject. About a dozen cosmetic palettes were found. These palettes were circular, with a small flat base, a rounded cavity in the middle of the top, surrounded by a broad flat rim. Some of the palettes were decorated, but one was not decorated at all. This was the most interesting one of the twelve. It exhibited twelve rounded holes on the rim, in two of which there was still found some powdered copper ore or malachite.

The explanation for this queer article was found, Albright believed, in the social customs of the Hebrew women. The Palettes were employed to prepare the mineral substances contained in face-paints. A bone, metal, or haematite spatula was used to reduce the paint ingredients into powder in palettes. The archaeologist inserted a parenthetical statement at that point in his report, in which he said that spatulae had likewise been found in Debir. The further explanation showed how that powdered "kuhl" (kohl) was used to paint the eyebrows and eyelashes black. In those days it was made of manganese or antimony. The use of this kuhl must also have had a certain prophylactic value in keeping infections out of the eyes. The
powdered malachite or turquoise was employed to paint the lower eyelids green. Finally, the scientist concluded, that as in Egypt, powdered haematite clay, or red ochre, was used to color the lips.

One other illustration of this practice was found in the report of the Harvard University Expedition to Samaria. Other palettes or stone saucers were found there. The description of those articles was almost identical with Albright's. But the scientist who was relating concerning the finds released the powers of his imagination and volunteered to suggest that the palettes they had discovered may have belonged to Queen Jezebel and her ladies. II Kings 9:30 proves to be enlightening at this point, "And when Jehu was come to Jezreel, Jezebel heard of it; and she painted her eyes, and attired her head, and looked out at the window."

1. Fibulae, or crude safety pins, were found in abundance in all the excavations of ancient cities.

2. Ivory carvings might well be looked upon as household decorations in place of personal ornaments. Nevertheless, the ivory inlaid objects spoken of by Duncan could just as well have been worn by individuals.

3. Perhaps the most interesting bit of history pertaining to the ivory carvings was that unearthed in Samaria. The account found in the Manchester Guardian Weekly from

1. APB pp. 122-123
2. MGW Jan. 6, 1933
3. DUBH Vol. I, p. 135
London, dated Jan. 6, 1933, expressed the belief that one of the most important discoveries in Samaria was a number of small ivory carvings. They were of low relief and were that to have been attached to furniture before the destruction of the city. They were dated, by archaeological judgments, in the ninth century B.C.; and thus it was most natural to connect them with Ahab's ivory palace. These ivories closely resembled those found in Tell Minrud in Assyria, and the next conclusion was, therefore, that probably the ones found by Layard in Assyria were part of the loot carried from Samaria by Shalmaneser V in 722 B.C.

These latter facts are historical, but there is a delightful coordination of the social history along with the purely historical data.

- VI -

Industrial Implements and Domestic Utensils

1. Industrial Implements.

It is not the purpose of this section of the study of the Hebrew social life to launch out into a detailed study of the trades and callings of those peoples. Neither is it the desire to show the development of their industrial abilities. The object in this phase of the study shall be to enumerate archaeological proofs of Hebraic industrial and domestic practices. Occasional reference too will be made to the Hebraic records in order to make some of the inanimate objects seem to really live.
"The first iron tools and weapons appeared in this level (the early Israelite occupation). Iron sickles and ploughshares, or rather plough-tips, illustrate the commencement of the Iron age. The relatively high cost of iron is perhaps shown by the small size of these instruments... It is, however, possible that the small size is simply due to imitation of bronze or copper models. As is well known, the Philistines maintained a monopoly of the importation and forging of iron, and their "corner" was not broken until the reign of Saul (cir. 1020 B.C.)." 1

The paragraph just quoted discusses the materials found in Tell Beit-Mirsim (Debir) in the expeditions of 1926 - 1930. Consequently the discoveries are late. There will be found a close harmony, however, with the earlier expeditions.

a. Hoes and plows, as a result of the nature of the materials of which they were made, were quite likely to have mostly perished. However, two different types of hoes were found at Gezer, but they must have been used for cultivation of small garden tracts. (Cf. Fig. 9) A number of plowshares were found in Megiddo in the ruins of a blacksmith's shop. It was thought that a diamond shaped iron ring from Gezer may have been used to attach the oxen to the plow. In addition to these, several points of ox goads were found.

b. Sickles were mentioned, along with plowshares, as having recently been found in Tell Beit-Mirsim (Debir)

1. APB p. 111
2. AB pp. 150 - 151
The sickle, which in all probability was used mostly, was constructed of flint teeth set in an animal's jaw bone or in a curved piece of wood. In the earlier periods, they were made of flint; in the later times, they were made of bronze and iron. The sickle, as well as the plows, were very similar to the Egyptians. "Put ye in the sickle; for the harvest is ripe." (Joel 3:13) Duncan speaks of the early use of flint sickles in Gerar.

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l. Saws made of thin, flexible strips of metal were in existence in Hebrew early days, but very meager fragments of these have been found. The ribbon-flint knives, whose edges had become irregular, soon passed into the classification of saws.

"And he (David) brought forth the people that were therein, and put them under saws, and under harrows of iron, and under axes of iron." (II Sam. 12:31)

d. Chisels were quite common in all strata in Gezer after the introduction of bronze. Some iron chisels were found, but bronze prevailed.

e. Awls were very useful to the Hebrew, partly because there seemed to be no instruments such as the modern brace and bit. By heating the awl, it was possible to make a hole thru any piece of timber without splitting it. The handles of the awls were bone.

f. "Axes of iron" were mentioned in David's in-

1. AB p. 151
2. DUBH Vol. I, p. 137
3. AB p. 168
4. Ibid p. 168
human treatment of the Ammonites in approximately 1000 B.C. (II Sam. 12:31) These were probably of bronze, while the later ones were of iron. In II Kings 6:4 - 5 is found the account in which, "... when they came to the Jordan, they cut down wood. But as one was felling a beam, the axe-head fell into the water..." The answer to this incident was found in a few of the axe-heads where the butts were perforated to receive a thong by which the head could be lashed to the handle. Deut. 19:5 sets forth the law to be followed in case the axe-head flew from the handle and killed someone who was nearby.

6. Adzes were not as numerous as some of the smaller tools. One that was found was made of bone. Judging by modern usage, this implement would be used by carpenters to smooth the timbers. Olmstead, however, gives a useful bit of information at this point. When discussing Omri's stone palace -- previously described -- the historian makes this statement, "Work began at the corners. A marginal dressing with the broad adz fitted the side next the following stone." In other words, the adze was used not only to hew wood but also to chip off projecting bits of stones.

(Cf. Fig. 10)

h. Hammers of stone were numerous, and, according to Barton, were found in every period of Palestinian history. Bronze hammers were rare. It seems probably, then, that the

1. AB p. 168
2. HPS p. 371
3. AB p. 169
same type as those which are used by the peasants of that land today. The oven consists of a cylinder of baked earth about two feet in diameter and about one and one-half inches in thickness. It is closed by a cover of the same material, and the handle for the cover is provided by the insertion of a stone or lump of clay into the moulded lid before it was baked. After the baking process was finished the handle was as solid as the cover itself. The earth usually served as bottom for the oven. As a result, clean pebbles were often provided as a covering for the spot where the cakes were to be placed. The baking trays were often used also in the cooking procedure. Not uncommonly the cakes were placed on the outside of the oven, which necessitated the building of a grass fire within. If the cakes were placed within, the fire was heaped up about the outside of the utensil and the fire was often made of dried manure. In speaking of the wickedness of Ephraim and Samaria, Hosea remarked that, "They are all adulterers; they are as an oven heated by the baker..." (Hos. 7:4)

b. Flesh hooks were not to be used as forks at the table, but were to serve as a means of handling meat while it cooked. The very direct bearing of I Sam. 2:13-14 is sufficient evidence to the above statement. "...the priest's servant came, while the flesh was boiling, with the flesh-hook of three teeth in his hand; .... and he struck it into the pan, or kettle, or caldron, or pot..."

2. Ibid p. 163
3. Ibid p. 166
and "all that the flesh-hook brought up the priest took therewith." (Cf. Fig. 16)

c. Needles of both bone and bronze were found. Fig. 13 will show the structure of the eye. "The work of the embroiderer" is mentioned in Exod. 38:18.

d. Mortars were so numerous that it is rather thought that these were used more by the Hebrews than the mill stones. The latter were large stones resting one upon the other. The grain was placed between them and the upper stone revolved, thus crushing and grinding the flour. The mortar, tho', was smaller but also of stone. Usually the grain was placed in a depression in the rock and pounded into flour or meal by means of a pestle.

e. Knives of flint, bronze, and iron were found in the various strata and each represented, according to Barton, a distinct period, e.g. flint in the ages before 2500 B.C., bronze from 2500 to 1800 B.C., and iron in the centuries thereafter. The Hebrew rite of circumcision demanded the use of a knife as is shown in the following: "Then Zipporah took a flint and cut off the foreskin of her son..." (Exod. 4:25) ..."Make thee knives of flint, and circumcise again the children of Israel..." (Josh. 5:2)

F. Spoons seemed to consist of two different materials, i.e. shells and metal ladles. In caring for the Tabernacle, the following order was given: "And upon each other. The lamps were discussed briefly and will be noted, viz: Each Hebrew

1. AB p. 152
2. Ibid p. 168
3. Ibid p. 166
the table of showbread they shall spread a cloth of blue, and put thereon the dishes, and the spoons, and the bowls and the cups..." (Num. 4:7)

g. Bowls were mentioned in the immediately preceding reference in addition to spoons. As suggested under the topic of "Pottery" the bowls, as well as most of the other pottery, were made of clay. Various forms or shapes were used in their manufacture, and the thousands of sherds bear testimony to their prevalence in the daily routine.

h. Baking trays, consisting of baked clay discs were found. They were about 10 inches in diameter, and were turned up at the edges. Likewise, they were perforated in order to make the tray more easily accessible by the heat. One tray was found that had been completely burned thru by constant use.

i. Files suggest that this name should be discussed under "Industrial Implements." That would be true if the name meant to the Hebrew what it means now in the twentieth century. The file in the Hebrew experience was a bronze tube which had been perforated, and the rough edges made in the perforation were left to serve as the scraping agency. Hence, it must have been true that they served for crumbing bread and not for sharpening tools. (Cf. Fig. 14)

j. Lamps and lamp stands logically supplemented each other. The lamps were discussed briefly under "Pottery," but this addition will be noted, viz: The Hebrews changed
the form of the lamps which they involuntarily inherited from the natives of Palestine by lengthening the spouts where the wicks rested. The lamp stands were bronze tripods, the tallest being 13 and 14 inches in height. They could have supported either bowls or lamps.

k. Feeding bottles, (?) if such they were, were curiously shaped jars with spouts and were found in Gezer. The scientists are still at a loss to explain their use. Sellin suggested that perhaps they were for pouring oil. Macalister, on the other hand, was of the opinion that they might be lamps or possibly feeding bottles. (Cf. Fig. 15)

1. Toys have the tendency to tie together any people from any land at any time. Albright states that "toys did not come into general use until the Iron Age, the period of Israelite occupation." Barton tells of the finding of a series of clay rattles in Gezer, along with many grotesquely shaped animal figures, which were probably meant for the children. An interesting little human touch was added to his account of the Gezer excavations, when he stated that, "The workmen who removed the earth sometimes begged for permission to take them (toys) home for their own children to play with."

Albright introduces another phase of the realm of toys, when, after discussing the Astarte figurines, he emphasizes

1. DUBH Vol. II, p. 228
2. AB p. 167
3. APB p. 98
4. AB p. 171
the fact that, "... these figurines are all of religious or magical character, and none of them toys." It seems probably that someone had looked upon them as dolls.

1. See Bechtel in reconstruction were the religious practices.

In the introduction in this thesis, a word or two given relative to the opinion of the scholar in the subject just, are quoted, and outlined in various pronouncements. The first aim, stated above, in its various forms, must

2. The fact of the existence of this particular group of people forms, i.e., the Hebrews, etc. Palestine until their presence felt of national power, there seems to be but very little, if any, structural remains that could possibly argue one as about constructive. This conclusion has grown out of a study of city fortifications, city water supplies, temples, dwellings, all lesser, trade, industrial and important commercial, etc. If there were any exception to this rule. The course would probably rest with King Solomon as a result of the Jehovistic temple in Jerusalem. From then, however, foreign help from Phoenicia was weakened. On the basis, majority of articles, which date from the Hebrew age, there is a manifest background alien to the Hebrews themselves.

1. APB p. 98
CONCLUSION

I

Canaanitish influence upon the Hebrews more powerful than the Egyptian

1. Demonstrated in construction work and religious practices.

In the introduction to this thesis, a word was given relative to the ambition of the author to be fair, just, open-minded, and unbiased in drawing conclusions. The first deduction, stated above, is one which all evidence seems to force upon the investigator. From the time of the entrance of this particular group of Semite invaders, i.e. the Hebrews, into Palestine until their ultimate loss of national power, there seem to be but very few, if any, structural remains that could possibly brand them as adept constructionists. This conclusion has grown out of a study of city fortifications, city water supplies, palaces, dwellings, cisterns, pottery, industrial and household implements, etc. If there were any exception to this rule, the honor would probably rest with King Solomon as a result of his Jehovistic temple in Jerusalem. Even then, however, foreign help from Phoenicia was employed. On the vast majority of articles, which date from the Hebrew age, there is a manifest background alien to the Hebrews themselves.
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Hence the logical explanation for this condition must lie with their co-inhabitants, the Canaanites.

Bertholet has also attached this foreign influence to the Hebrew non-Jehovistic religious practices as a result of mixed marriages and alliances of various kinds. He holds, too, that it seems to be, "an unchangeable"law, verified in the history of all religions, that religion somehow clings to the soil of a country. Whoever enters a new land is bound to do homage to the gods of it. Woe to those who fail to do so!" Archaeological discoveries have sanctioned this decision beyond doubt when applied to those of Hebrew lineage. Child sacrifices and the adaptation of Canaanite high places into Hebrew worship give ample proof.

2. Exceptions to the above rule.

Two logical and natural exceptions can be mentioned. The two, which would seem to be most likely, would apply to those phases of Hebrew life which were cultivated mostly before leaving Egypt, i.e. some Egyptian religious and industrial practices. It may seem just here that there is a repetition of religious facts, but this is not the case. Under the discussion of "Tombs and Hebrew Eschatology," the practices relative to Egyptian customs were explained; and those were evidently carried into Palestinian burial services, i.e. the deposition in the graves of articles for human comfort. This in no way eliminates the
Canaanitish influence.

The one industrial implement, which Barton classified as Egyptians, was the plow. As just suggested, this was natural. Coming from a land where grain crops prevailed, it was to be expected that the effective means of production used in that land would be transferred to the new home of the immigrant.

Outstanding examples of Hebrew originality

1. The Judean tax plan

Reference has already been made to Albright's conclusion that the payment of taxes in wine, and oil, and their consequent placing in jars which were to represent a standard value, were original measures. Without further discussion, it can at least be said that such a bit of originality is in perfect accord with all the modern trends of that people. Their origination of an economic measure of some sort, at least saves both investigator and reader from disappointment.

2. Social ideals.

It is not the purpose in this study to enter into an elaboration of the question as to where the Hebrews secured their high ideals of social intercourse. Archaeology furnishes evidence that society was not holding to the standards which their prophets had preached.

1. APB, p. 124
The question then as to the source of the prophetic vision is still open. The prophets claimed supernatural guidance; and their utterances seem to be so far above the general trends of those days that it is not surprising to find archaeological verification of the practices that were pronounced wrong.

"The Hebrews stood head and shoulders above their contemporaries in social thinking.... The social ethos of the Hebrews was born of group suffering.... Ultimately, Israel created social concepts which have won for her the distinction of being the leading social teacher of the human race." 1

The prophet Jeremiah gave voice to his lofty concept when he applied correct social ideals to even the building of their own private dwellings which archaeologists have unearthed and scientifically analyzed.

"Woe unto him that buildeth his house by unrighteousness, and his chambers by injustice; that useth his neighbor's service without wages, and giveth him not his hire." (Jer. 22:13)

3. Political ideals

"But let justice roll down as waters, and righteousness as a mighty stream." (Amos 5:24)

No effort has been made to develop a study in Hebrew economic or religious history as found by archaeologists. Nevertheless, items of economic interest and historical significance have been found. Money, weights,  

1. HST p. 52
and measures speak plainly not only of the Hebrew social necessities, but likewise of trade that probably developed among the nations. How appropriate then was the prophet's question, ..."saying, when will the new moon be gone, that we may sell grain? and the sabbath, that we may set forth wheat, making ephah (the measure) small, and the shekel great, and dealing falsely with balances of deceit," (Amos 8:5)

The social, economic, and political history of the Hebrews is involved in the content of another verse that must be examined. The Hebrew leaders had been pleading for justice. Many of their own people had not been receiving it at the hands of the richer class. None of them, of course, had received it from their periodic conquerors, the Philistines. One of the very familiar passages which sets forth the injustice heaped upon the subservient Hebrew states that?

"Now there was no smith found throughout all the land of Israel: for the Philistines said, Lest the Hebrews make them swords or spears: but all Israelites went down to the Philistines, to sharpen every man his share, and his scythe, and his mattock; yet they had a file for the mattocks, and for the scythes, and for the forks, and for the axes, and to set the goads." (Sam. 13:19 - 21)

Injustice shines forth in that passage. Archaeology, however, steps to the front with more enlightenment, and the injustice in the preceding verse is only intensified. The crux of this later explanation rests upon small weights
found by Barton and Macalister in Jerusalem.

On these small weights were found inscriptions of the word □ 1 ○ (pim) or (payim). This word has been quite puzzling to translators, but Clermont-Ganneau has finally interpreted it as meaning "two-thirds." Thus he designates it as two-thirds of a shekel. The real meaning, then, of the above quoted passage is found in its latter part and must read as follows,...

"But all the Israelites went down to the Philistines to sharpen each his plowpoint and his coulter and his ax and his mattock; and the price for the plow-points and the coulters was a payim (pim) and a third of a shekel for the axes and for setting the goads." (Cf. J. H. Powis Smith's, The Bible, An American Translation)

This latter translation seemed to increase the thought of injustice as it rested upon the Hebrews. In spite of all, however, the Hebrew somehow gave to birth to an original concept in his plea for higher political ideals. The discovery of some seemingly insignificant objects have helped to add meaning to his efforts.

-III-

Archaeological bearing upon the Hebraic Biblical records.

It seems fitting at this point to voice a sincere note of regret at the inability of this thesis to include even a slight cognizance of Mesopotamian influence upon Hebrew history. The reason for the absence of this material was explained in the Introduction and could not be
avoided. Many references could have been made to the Babylonian, Assyrian, and Neo-Babylonian historical records in their direct bearing upon the Easterner's contact with the Hebraic people. Practically all of those records, however, were of the literary type, such as the cuneiform accounts of Tiglath-pileser III (745 - 727 B.C.) and Sennacherib (705 - 681 B.C.), and had to be eliminated from the non-literary discussion.

The Mesopotamian influence could likewise have been related to the Hebrew religious history. The famous Babylon-Assyrian stories of the Creation and the Deluge were such that striking similarities were found between them and the Biblical accounts.

In spite of these possible additions to archaeological data, sufficient materials of Palestinian origin were listed and explained to clarify political and social phases of Hebraic life. True to the nature of all life, political and social discussions naturally bind within themselves economic and religious customs. These were mentioned only when related to the two former items of discussion i.e. political and social. It is fair, however, to mention the fact that, along with all the materials uncovered by the archaeologists, which relate to the military, constructional, industrial, and domestic life of the Hebrews, simultaneously were found objects which clarify for the student.

1. EOT p. 162 note 113
2. Ibid p. 181
of Hebrew religion much of their cult history (Cf. Canaanite Astarte figurines). Objects, too, relative to the Hebraic economic life were found; and these have proved instrumental in the edification of those who were uncertain of the weights and measures of that period. (ca. 1220 - 330 B.C.) Even the approximate time of the entrance of iron into Hebraic history was somewhat clarified, (ca. 1145 B.C.) and Biblical statements were thus checked and consequently illuminated, e.g. "But if he smote him with an instrument of iron, so that he died, he is a murderer:..." (Num. 35:16)

The latter point may be stated with a slightly different emphasis. Textual criticism, which has for its field the establishing of an original text, has laid special stress upon the critical examination of Biblical texts. All literary archaeological discoveries are studied diligently, if in any way pertinent to the Biblical records. It stands without question that the purely objective studies would be of little, if any, value in that type of work. The objective archaeological discoveries, nevertheless, have value in relation to the Biblical text. As hinted at in the illustration concerning iron, a study of the history of some object or material must provide not only text correction, but also a means of dating the writing of the text. Any text, which referred to any object,
could not accurately make the reference until the object was at least in existence. Non-literary archaeological discoveries have proved, and are still proving, invaluable at dating and correcting Hebrew canonical, as well as Hebraic non-canonical, records.

The value of archaeology cannot be denied. It reaches into every land and touches the background of every people. But, for the Christian world, its value is magnified, because of its inherent tendency to cast light upon the people who have bequeathed to all men the commanding example of the Galilean.
PLATES

An expression of indebtedness to Olmstead, Barton, and Harvard University Expedition to Samaria.
Fig. 1  Tower.

Fig. 2  Door socket from Gezer.

Fig. 3  Palaces
Fig. 4 Bonded walls

Fig. 5 Double bowl, cistern - 2500 B.C.

Fig. 6 Clay Funnel

Fig. 7 Flat bottomed Jug

Fig. 8 Signet rings

Fig. 9 Hoe
Fig. 10 Axle
Fig. 11 Nails
Fig. 12 Fish hook

Fig. 13 Needles
Fig. 14 File
Fig. 15 Feeding Bottles

Fig. 16 Forks or Flesh-hooks
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