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The Archaeologist's Dilemma
On Some Aspects of Archaeology as a 'Destructive' Scientific
Discipline

The ancient sites in Israel (as well as in Jordan, Syria and other areas in the Near East), and particularly those dating to the range of 3000-500 BCE, are stratified mounds - sites repeatedly inhabited over the centuries, varied structures built and rebuilt successively, with the new overlaying the ruins of their predecessors. This brought about the creation of 'tell's, (mounds) in which layers over layers of building remains, artifacts and debris, are found in stratified position, one over the other. Many mounds bear evidence of over twenty stratified strata.

The archaeological method of excavation of such sites is the excavation of remains from top of the mound downward, one stratum at a time. At the same time the architectural components are recorded, and their relation to the adjacent layers of debris, as well as the artifacts are studied. Subsequently, the remains of each stratum, all or part, are dismantled to facilitate excavation of the following (i.e. earlier) stratum.

In the past, it was often the intention and aim of the archaeologist to complete the excavation of a stratum on the ancient mound. The most well accomplished example in Israel of this feat is that of the complete and exhaustive excavation - and subsequent removal - of the three uppermost strata (I-III) of Megiddo, one of the most prominent ancient Biblical cities in the country. This excavation was carried out by the Oriental Institute of the University of Chicago in the years 1925-1939. The preconcieved strategy called for a 'total' excavation of the entire site (!). This was meant to present a comprehensive view of the ancient site: all the available archaeological data that survived since antiquity would have been uncovered and recorded. Such a plan would have resulted in the total dismantling and removal of the entire site. Over 50 m high and ca. 15 acres large in area, the mound would have gradually been reduced in height, removed, and a new 'mound', this time made up of debris and scattered stones, would have formed nearby, on the dumping site.

The complete removal of the upper Megiddo strata not only left the archaeologist unable to recheck the context of a given stratum or the stratigraphic relation between two adjacent strata, or employ modern techniques (e.g. the use of C14 dating), but destroyed rare types of buildings, such as the Assyrian city of Strata II-III, unparalleled at any other site, including the Assyrian mainland. Evidence is irreversibly lost, although detailed excavation reports had been published on the Megiddo dig. Some of the recording techniques then employed (e. g. the plans) are considered nowadays inadequate; consequently, part of the information is useless. Seemingly, even from the point of view of Archaeology as a scientific discipline, the concept of total excavation was improper.

The Megiddo example of total excavation is thus considered today a scientific malpractice. Archaeologists intentionally excavate only limited segments of mounds, leaving their greater parts for future recheck, possibly equipped with new methods of recording and of the possibility to obtain more information. Recent years have indeed witnessed the return of the archaeologist to sites excavated in the past - e.g. Lachish, Gezer, Shechem, Jericho, Shiloh and others - with the purpose of obtaining new data to complement the existing bulk of information obtained in the earlier excavations; these are now checked, reevaluated and corrected accordingly.

In recent years archaeology is confronted with a new problem concerning the excavated area of a site. As the archaeologist usually makes use of public funds - the taxpayer's money, and, as he 'produces' with these means monuments of touristic value, he is expected, in many cases, to leave behind, in situ, authentic architectural remains for the public - tourist sites. The archaeologist must therefore cope with a dilemma: scientific stratigraphical excavation yields full knowledge of the site but will probably leave behind an uninteresting pit. On the other hand the decision to preserve a certain stratum will halt the progress of the excavation in that particular site and prevent access to further study of the earlier, yet unexcavated strata.

The Israel Law of Antiquities regulates archaeological excavations in the country by means of the Israel Department of Antiquities. Only archaeologists working on behalf of a recognized institution are given a permit to excavate. Past experience has brought about the situation by which a permit to excavate is issued only for limited areas within the antiquity site. No longer do we witness a total excavation as was the practice in the past.

However, once a permit has been granted, the archaeologist has a free hand to exercise his scientific judgement, in the areas

the above mentioned committee, and not on the archaeologist alone. This action would be somewhat analogous to the view expressed in article 11 of the Venice Charter, which is dealing with the preservation of historical monuments. That particular article expresses a view according to which the importance of a certain architectural element, as well as the decision as to what architectural elements should be retained and what may be destroyed, cannot rest solely on the individual in charge in the work of restoration. It seems to me that some version of this attitude should also be adopted concerning archaeological excavations and the architectural remains uncovered in them.

But even a tighter control on the 'destructive' attitude and action of archaeologists can only minimize somewhat the dilemma, but not eliminate it. There is, theoretically, a solution to this dilemma, although of rather an utopian nature. This would involve an action to dismantle a building and remove it to nearby virgin soil and reerect it there, thus giving way to subsequent excavations of the site. Such operations can be afforded only for the rescue of endangered buildings of outstanding cultural value, the best known examples of this kind being the Nubian Temples of Egypt and Sudan. A few small scale operations of this type were exercised in Israel, such as: The removal and reassembly of the Tomb of the Nazirite on Mount Scopus in Jerusalem. This type of operation is extremely costly and tremendously difficult to carry out. It may be applied chiefly to solid constructions of ashlar stones, backed bricks, timber etc. The dismantling and reconstruction of buildings made of rubble, mud-brick and earth constructions, is virtually impossible.

Another possibility that might give solution, in part, to this dilemma, is to leave untouched the walls of a building intended for preservation, while digging only the space below its floors. In this way the archeologist might obtain some archaeological information from the stratum predating the building in question. Subsequently the floor might be restored by filling in the excavated pit and replacing the floor itself. In this way the ancient building is not left as a meaningless complex of walls. It is the present writer's opinion that in preserved buildings the pair of architectural elements: 'wall and floor', should always be kept, since only both elements, together, can easily be perceived by the untrained eye of the tourist. A good example carried out in such a way in the biblical 'City of David' in Jerusalem, is the excavations carried out below the floors of 'The house of Ahiel'. Since the discussed house is located on a steep slope, it was possible to excavate below its floors and finally, instead of filling in the pit, to reconstruct the simple beaten earth floor with a large steel plate, covered with a thin layer of earth. This left the house with a complete floor and with a view to the space below it. In this way the 7th century BCE house

allotted to him, in dismantling and removing, after proper recording, any architectural element, in order to proceed to excavate the following stratum. It should be asked whether this academic freedom is, indeed, fully Justified? Why is it that the archaeologist's freedom to expand his excavation laterally is restricted by the Law of Antiquities, while his aims on the vertical dimension, i.e. depth, are solely defined by him?

It is a well known fact that any archaeological observation obtained by excavation is unique, unparalleled; contrary to most other experimental sciences, in which a certain experiment might be repeated endlessly, producing, every time, the same results. This brings about the situation that the archaeological experiment (i.e. excavation) can be performed only once on every ancient locus. For this reason archaeologists dig with much caution and record their findings in a way as detailed as possible, as they will not have a second chance at the same locus. But the moment the locus has been excavated and recorded, no more scientific data might be obtained from it. The freedom of vertical operation granted to the archaeologist might cause the following: an archaeologist, might consider the dismantling of a certain building, which he has previously excavated and recorded, to match his own scientific interests (like the interest in a certain period, in a certain phenomenon which underlies the building in question, etc.), overlooking the fact that the building being destroyed has some value (other than scientific) that may justify its safekeeping. It goes without saying that the question whether to keep a building or permit its destruction cannot be valued only on the basis of the findings on the site involved, but has to be examined on a national scale.

As an archaeologist is returning to a site to excavate, season after season, he is applying each year for the renewal of his permit for excavation. It is suggested here that in this occasion, the archaeological authorities should examine carefully and in detail the architectural findings of the previous season, and particularly discuss those buildings which are intended to be 'sacrificed' for the sake of deepening the dig in a certain field for further archaeological knowledge. The question whether to permit the dismantling of a building or order its preservation, should be considered by the committee for excavation permits every year, and the building in question should be weighted against the quantity of other buildings of the same type already exposed and preserved, either from the site in question or from other sites in the country (of which the archaeologist applying for the discussed permit, might be unaware of). It should also be weighted against the quality of state of preservation of the other buildings of the same type, with an intention to keep the originally better preserved specimens. The responsibility of destroying a certain ancient building should, therefore, rest on

was kept in situ, easily understood by the untrained eye and the archaeologist was satisfied with archaeological data predating the house (down to the 14th century BCE), obtained.

Another attitude to this problem is the example of the new excavations in Tell Lachish. The excavators intentionally restricted themselves only to one narrow section located on the rim of the mound, where they expressed their wish to carry out a total excavation, notwithstanding the architectural nature of the building remains that they were bound to encounter. This plan is indeed being carried out in the last dozen of years. In all other excavation fields on Tell Lachish, the dig came to an end as a result of the nature of the architectural elements found. In one occasion, when the city gate was located, the excavators restricted themselves in digging only one half of the symmetrical (a phenomenon deduced from other excavated contemporary city gates) layed out gate, leaving the other half for future research.

It seems that an ideal solution for the excavation and preservation of multi-layered sites is practically beyond our reach. However, due to the uniqueness of the archaeological record and the destructive nature of the archaeological scientific method, all parties involved (archaeologists, architects and the authorities) are called for acting with more attention concerning the above expressed dilemma. The writer is calling the ICOMOS international committee on Archaeology to take these observations into consideration when preparing, in the future, doctrinal papers on Archaeological sites and their protection.

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The Archaeologist's Dilemma

The ancient sites in Israel, and mainly those dating approximately to the years 3000-500 BCE, are stratified mounds, i.e. sites to where people in antiquity returned over and again, building their towns and houses on top of the ruins of their predecessors.

The archaeological method of excavation of such sites is to excavate from the top of the mound downward, one stratum at the time, record its architectural components and subsequently to dismantle these remains for the excavation of the following (i.e. earlier) stratum. In the past, the archaeologist's intention was sometimes the complete excavation of a stratum on the ancient mound (e.g. like the complete removal of the three uppermost strata at Megiddo). This is considered today scientifically malpractice. Archaeologists intentionally excavate only limited segments of mounds leaving their greater parts for future scientists (and possible new methods).

In recent years a new problem arises concerning the excavated area of a site. The archaeologist is making use mainly with public funds - the taxpayer's money, and is expected, in many cases, to leave behind, in situ, authentic architectural remains for the public, as a touristic site. The archaeologist is therefore confronted with a dilemma: excavating stratum after stratum will give full knowledge of the site but will leave behind an uninteresting pit. On the other hand the decision to preserve a certain stratum will stop the excavation in that particular site preventing any further knowledge on the earlier, yet unexcavated strata. The paper will briefly examine several concrete examples and possible solution of this problem.

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Le Dilemme de l'Archéologue

En Israël, les anciens sites, et surtout ceux datant environ des années 3000-500 Av.J.C. sont des 'tell's stratifiés, c'est-à-dire des sites où les peuples de l'antiquité revenaient périodiquement à fin d'y bâtir leurs cités et leurs habitations au-dessus des ruines de leurs prédécesseurs.

Ces sites sont excavés selon la méthode suivante: chaque stratum est excavé séparément en creusant de haut en bas à partir du sommet du 'tell'. Ses éléments architecturaux sont enregistrés et sont ensuite démolis en vue de l'excavation du stratum suivant (c'est-à-dire du stratum plus ancien).

Auparavant, il était parfois dans l'intention de l'archéologue d'excaver complètement le stratum d'un 'tell' ancien (comme, par exemple, l'élimination des trois strata supérieurs, à Megiddo).

De nos jours, cependant, cette méthode est considérée innacceptable du point de vue scientifique. Les archéologues ne creusent plus, à dessein, que des segments limités des 'tell's en sauvegardant leur plus grande partie pour les archéologues de l'avenir (et peut-être aussi pour de nouvelles méthodes de recherches).

Un nouveau problème a récemment surgi, concernant la surface excavée d'un site: l'archéologue travaille à l'aide de fonds public, c'est-à-dire à l'aide de l'argent des contribuables. Ceci fait que l'on s'attend souvent à ce qu'il laisse les ruines architecturales in situ à l'usage du public, en tant qu'attractions touristiques.

L'archéologue doit donc faire face au dilemme suivant: l'excavation successive des strata fournira une connaissance complète des sites, mais, à la fin, il n'en demeurera qu'une fosse dénuée d'intérêt. D'autre part, la décision de préserver un stratum spécifique, arrêtera l'excavation de ce site et empêchera ainsi d'obtenir toute information sur les strata plus anciens qui demeureront non excavés.

Le présent article se propose d'examiner brièvement quelques exemples concrets et de suggérer une solution possible du problème.