Khirbet Qeiyafa in Survey and in Excavations: A Response to Y. Dagan

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Dagan (2009) recently presented an analysis of the settlement history of Khirbet Qeiyafa based on a survey he conducted at the site. His analysis conflicts with the results obtained by the current Khirbet Qeiyafa excavation project. In this article, we compare the two alternative analyses. In light of this comparison, we consider some of the limitations of surveying as a tool of archaeological investigation.

KEYWORDS Khirbet Qeiyafa, Survey

In a recent article in this journal, Dagan (2009) presented the results of the survey he carried out at Khirbet Qeiyafa in the Judahite Shephelah nearly 20 years ago. He compared his data with the results of the current excavations at the site (Garfinkel and Ganor 2008a, 2008b, 2008c), and proposed a dating for the two fortification phases of the site that contradicts our interpretation of the remains. Below we compare Dagan’s proposal to our own conclusions based on the finds obtained in the excavation (Table 1). In light of this comparison, we point to methodological problems in the survey discipline, as highlighted by this case study.

Khirbet Qeiyafa is located in the western part of the high Shephelah (Israel Grid Reference 14603 12267), on the summit of a hill that borders the Valley of Elah on the north. This was a key strategic location in the Kingdom of Judah, on the main road from Philistia and the Coastal Plain to Jerusalem and Hebron in the hill country. A massive city wall, visible prior to the excavation, encompasses the site. The city wall demarcates an area of 2.3 ha and its total length is 700 m (Garfinkel and Ganor 2009: Fig. 1.1; see Fig. 1 here). Due to the local topography, only the external face of the wall is visible, while the inner part cannot be seen as it supports a thick layer of archaeological debris. The base of the city wall is composed of cyclopean stones, some weighing 4–5 tons, while its upper part is built of medium-sized stones (Garfinkel and Ganor 2009: Fig. 3.7).

1 The current Khirbet Qeiyafa excavation project is conducted by the authors on behalf of the Institute of Archaeology of the Hebrew University of Jerusalem.
Most of the archaeological remains at Khirbet Qeiyafa form a 10–15 m wide belt, adjacent to the city wall from the inside. In this belt, bedrock is found 1–2.5 m below topsoil. Bedrock is exposed in ca. 30% of the area of the site, in its centre. The remains of a large rectangular building (possibly a fort), most of which is founded on bedrock, are visible on the highest part of the site, in Area A. In the southwestern corner of the fort, there are two ruined buildings that appear to be a few hundreds years old (that is, dating to the Ottoman period). Large heaps of stones, apparently the remains of isolated farmhouses, are visible in a few other locations. Coins and pottery from the site surface indicate human activity between the Roman period and the Early Islamic period, probably associated with these farmhouses. Altogether, the archaeological accumulation is rather limited. This seems to indicate that Khirbet Qeiyafa was never occupied for a long period of time. Had a city existed at this place for hundreds of years, the entire area would have been built and covered by archaeological debris.

Figure 1  Map of the site and location of excavation areas.
TABLE 1

<table>
<thead>
<tr>
<th>Khirbet Qeiyafa Peripheral city wall</th>
<th>Garfinkel and Ganor</th>
<th>Dagan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper construction</td>
<td>Hellenistic to recent</td>
<td>Ottoman</td>
</tr>
<tr>
<td>Lower construction</td>
<td>Iron Age IIa</td>
<td>Hellenistic</td>
</tr>
</tbody>
</table>

Surface survey versus excavations

Dagan reported: “Khirbet Qeiyafa was re-visited a number of times, during which I documented the remains visible on the surface” and “collected large quantities of sherds from the summit of the hill” (2009: 69–70). Of these, 16 sherds are presented in his article (ibid.: Fig. 4). Based on this data, Dagan reconstructs nine phases of human activity at the site (ibid.: Table 1; see Table 2 below).

TABLE 2

Settlement History of Khirbet Qeiyafa based on Dagan’s survey (Dagan 2009, Table 1)

<table>
<thead>
<tr>
<th>Period</th>
<th>Finds</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ottoman</td>
<td>Many sherds, building remains, agricultural activity</td>
<td>Farmstead</td>
</tr>
<tr>
<td>Mamluk, Early Islamic, Byzantine and Roman</td>
<td>Isolated sherds</td>
<td>Seasonal settlements</td>
</tr>
<tr>
<td>Hellenistic</td>
<td>Many sherds</td>
<td>Large settlement</td>
</tr>
<tr>
<td>Persian</td>
<td>Isolated sherds</td>
<td>Seasonal settlement</td>
</tr>
<tr>
<td>Iron IIC</td>
<td>Isolated sherds</td>
<td>Small village</td>
</tr>
<tr>
<td>Iron IIB</td>
<td>Many sherds (including a handle with a two-winged lmlk seal impression)</td>
<td>Large settlement</td>
</tr>
<tr>
<td>Iron I</td>
<td>Isolated sherds</td>
<td>Small village</td>
</tr>
<tr>
<td>MB</td>
<td>Many sherds</td>
<td>Large settlement</td>
</tr>
<tr>
<td>EB II–III</td>
<td>Few pottery sherds and flint artefacts</td>
<td>Seasonal settlement</td>
</tr>
</tbody>
</table>

Thus far, we have worked at the site for 16 weeks: two weeks in 2007, six weeks in 2008, one week in the spring of 2009, six weeks in the summer of 2009 and an additional week in the winter of 2009. To date, ca. 1,000 sq m have been excavated in four areas of the site (Areas A, B, C and D, Fig. 1). Most squares were excavated from topsoil to bedrock. In addition, the city wall was surveyed meticulously and two city gates were noted—one on the western side of the site (Area B), the other in the south (Area C). These gates were not recognized during the survey carried out by Dagan. Based on the stratigraphy of the excavation areas and coins from topsoil and fills (Farhi 2009), we reconstruct five main phases of human activity at Khirbet Qeiyafa (Table 3; for details see Garfinkel and Ganor 2009).
TABLE 3
Settlement History of Khirbet Qeiyafa based on Excavation Results
(2007–2009, ca. 1,000 sq m uncovered)

<table>
<thead>
<tr>
<th>Layer</th>
<th>Period</th>
<th>Type of occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Ottoman</td>
<td>Farm</td>
</tr>
<tr>
<td></td>
<td>a. Early Islamic</td>
<td>Agricultural terraces</td>
</tr>
<tr>
<td></td>
<td>b. Byzantine</td>
<td>Fort</td>
</tr>
<tr>
<td>II</td>
<td>c. Late Roman</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Early Roman</td>
<td>Agricultural terraces</td>
</tr>
<tr>
<td></td>
<td>e. Late Hellenistic (Hasmonean)</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Early Hellenistic</td>
<td>Walled settlement</td>
</tr>
<tr>
<td>IV</td>
<td>Early Iron Age IIA</td>
<td>Fortified town</td>
</tr>
<tr>
<td>V</td>
<td>Middle Bronze II</td>
<td>Possibly a small village</td>
</tr>
</tbody>
</table>

A comparison of Dagan’s conclusions with our own reveals numerous differences:

Early Bronze: We found no evidence for this period in the excavations. Dagan publishes one pottery sherd—a rim of a holemouth jar (2009: Fig. 4: 1). However, this rim is not typical of the Early Bronze Age. The common rim of holemouth jars, exemplified by finds from nearby Early Bronze Tel Yarmut and Ḥorvat Shovav, is folded inwards (de Miroschedji 1988: Figs. 20: 12–20, 22: 1–14; Gophna and Paz 2008: Fig. 2: 1–4). The date of this sherd is not clear.

Middle Bronze II: Although no settlement layer was found in our excavations, pottery sherds from this period were found mixed in Hellenistic and Iron Age IIA debris (Garfinkel and Ganor 2009: 34–46).

Iron I: Pottery of this period is reported only from the survey.

Iron Age IIA: This is the main layer at the site, featuring a fortified city. A city gate, a monumental threshold, a casemate city wall and three houses were uncovered in Area B (Garfinkel and Ganor 2009: Fig. 1.5; 5.42; 5.120). A rich assemblage of Iron Age IIA pottery, including some 30 complete vessels, was unearthed. Some of the pottery was found in the collapsed debris, up to 2 m high in the casemates but only 0.5 m in the rooms. Concentrations of restorable vessels were found on the floor level of each room and in some of the casemates (Garfinkel and Ganor 2009: Figs. 5.51–5.58). During the 2009 excavation season the same situation was observed in Area C. A city gate, a casemate wall and parts of two houses were founded on bedrock in the Iron IIA period.

Four radiocarbon dates, obtained from samples retrieved from floor levels in the houses and the gate area, indicate that this city should be dated to the late 11th century or the very early 10th century BCE (Garfinkel and Ganor 2009: Fig. 3.26; for the provenance of the samples see Garfinkel and Ganor 2009: Table 3.2). Additional samples, sent after the 2009 excavation season, are not available yet. This pottery assemblage has been viewed
by over 50 archaeologists in a number of presentations organized by the expedition; there has been a general consensus regarding the dating of this assemblage to the Early Iron Age IIA.\(^2\) Iron Age IIA remains were found in the 2009 excavation season in all four excavated areas (Garfinkel et al. 2009).

This rich Iron Age IIA phase—the main occupation settlement at the site—was not recognized at all in Dagan’s survey.

**Iron IIB**: Dagan assigned a relatively large quantity of pottery, including a two-winged *lnow* jar handle, to this period. However, he presents only small rim fragments which do not indicate specific, recognizable form, and the *lnow* handle is not included in his drawings. No archaeological layer from this period was found in the excavation.

**Iron IIC**: Isolated sherds from this period are mentioned in Dagan’s report of his survey of the site. No archaeological layer from this period was found in the excavation.

**Persian**: The survey relates a few sherds to this period. Persian pottery types and silver coins were found in the excavations, but in the early Hellenistic layer.

**Early Hellenistic**: Dagan identified “many pottery sherds” of the Hellenistic period in his survey, but was not able to distinguish between early and late phases within this period. In the excavations, it became clear that there is an early Hellenistic phase at the site, and that this was the second intensive occupation at Khirbet Qeiyafa. It includes a gate, a peripheral wall and a few houses in Areas B and C. The peripheral wall of this settlement was built on top of the outer Iron Age IIA casemate city wall. This phase is dated to the late 4th century BCE, based on six coins, including a Yehud silver coin and three coins of Ptolemy I Soter (Farhi 2009). In Area B, the Iron Age IIA gate was partly blocked during this period and a new threshold was built on top of the monumental Iron Age IIA threshold (Garfinkel and Ganor 2009: Figs. 5.18; 5.117; 16.25). In Area C the Iron IIA gate had been blocked and was never reused as a gate.

**Late Hellenistic (Hasmonean)**: This phase is represented by two Hasmonean coins uncovered above the early Hellenistic debris (Farhi 2009).

**Early Roman**: The survey identified Roman sherds, but was not able to distinguish between early and late phases within this period. The early Roman period is represented by surface coins (Farhi 2009).

**Late Roman**: This phase is represented by surface coins (Farhi 2009).

**Byzantine**: Before the 2009 excavation season this phase was known only by pottery sherds collected in the survey and by surface coins collected in the excavation (Farhi 2009). In the 2009 excavation season it became clear that the large fort in Area A was built in the 5th–6th centuries CE (Garfinkel et al. 2009).

**Early Islamic**: This phase is represented by pottery sherds collected in the survey, and by surface finds, including a coin (Farhi 2009) and a Khirbet el-Mafjar type sherd.

**Mamluk**: Dagan mentioned this period, but no relevant finds were found in the excavation.

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\(^2\) Among the participants were D. Ben-Shlomo, B. Brandl, T. Dothan, I. Finkelstein, A. Gilboa, S. Gitin, Z. Lederman, A. Maeir, A. Mazar, E. Mazar, N. Panitz-Cohen, V. Ross, I. Shai, I. Sharon, L. Singer-Avitz, E. Stern, D. Ussishkin, S. Walff, E. Yannai, A. Zuckerman and S. Zuckerman. Y. Dagan participated in one of these meetings.
Ottoman: The survey identified pottery sherds of the Ottoman period. No pottery or coins of this period were found in the excavation. However, two houses, still standing near the highest point of the site, seem to date to this period. A narrow pathway leads from these houses into an opening in the peripheral wall. This wall, which was first constructed in the Hellenistic period, has remained in use until this day, probably with much repair and maintenance activities. In this respect, it is similar to thousands of terrace walls that were in constant use in the Jerusalem hill country over the course of many centuries.

The excavations at Khirbet Qeiyafa identified building activity from four periods: Iron Age IIA, Early Hellenistic, Byzantine and Ottoman. We have no indication of the character of the Middle Bronze settlement, as the Iron Age IIA settlement was built directly on bedrock, and all earlier remains were completely destroyed. As for the other periods represented, the excavation results suggest that the site was in use as agricultural land, perhaps with an isolated farmhouse, but not as an extensive settlement spread over the entire 2.3 ha.

This list of periods is somewhat misleading, as it gives the impression that Khirbet Qeiyafa was intensively occupied over millennia. As mentioned above, about 30% of the area features exposed bedrock. In most of the excavation squares, a topsoil layer of 20–40 cm and a thin layer of Hellenistic debris cover a massive Iron Age IIA layer sitting on bedrock. Thus, Khirbet Qeiyafa is in a way a one period Iron Age IIA site.

The main difference between the survey and the excavation focuses on the fortified town of the early Iron Age IIA. This town was completely invisible in Dagan’s work. This points to the limitations of surveys for reconstructing ancient settlement patterns. If the Iron Age IIA layer was not recognizable in Khirbet Qeiyafa, where it is represented by a massive accumulation, what can be said about sites that underwent only limited activity during this period? The case study of Khirbet Qeiyafa clearly indicates that reconstructing the settlement patterns of the 10th century BCE is a difficult task, at least in the Shephelah.

Stratigraphical observations during the 2009 excavation season

In the 2009 excavation season in Area B, two clear strata, each containing domestic architecture, were found. The upper stratum includes architecture constructed with thick walls, with two rows of stones (Fig. 2). Sometimes stones were laid in a ‘herring bone’ pattern, placed diagonally on their narrow side (Fig. 3). This stratum was rich in pottery sherds (but not restorable vessels), metal objects and many coins. The coins are dated to the second half of the 4th century BCE, indicating the affiliation of this stratum with the early Hellenistic period (Y. Farhi, personal communication). The ‘herring bone’ building technique was also found in the early Hellenistic site of Naḥal Tut (Alexandre 2006).

The walls of the upper stratum cut into the earlier layer, sometimes destroying architectural remains. Their foundations may reach bedrock, but in many cases they are only sunk into the debris of the earlier stratum. When the Hellenistic walls were constructed the area was levelled and the early architecture was razed to the same elevation. As the bedrock slopes steeply to the west, the walls of the earlier stratum in
Figure 2  Area B: Upper Hellenistic architecture constructed with thick walls on top of the thin lower Iron IIa walls.

Figure 3  Area B: Hellenistic wall with stones laid in a ‘herring bone’ pattern, placed diagonally on the narrow side.
the west are sometimes preserved to 1 m, while the walls of the same stratum in the east are only 20 cm high.

The domestic architecture of the earlier stratum in Area B was always built directly on bedrock. In this layer the walls are thin and were constructed with one row of stones. These walls abut the casemate city wall in a clear pattern: one casemate for each building. The casemate is always the backroom of the building (Fig. 4). This is a typical feature of city planning in Judahite towns of the 9th and 8th centuries BCE, and is known at Beersheba, Tell Beit Mirsim, Tell en-Naṣbeh and Tel Beth-Shemesh (Shiloh 1978; Herzog 1997). Khirbet Qeiyafa is the earliest known example of this city plan and indicates that this pattern had already been developed in the late 11th century BCE.

The lower stratum is filled, from the heads of its walls to the floors, with collapsed stones and a rich assemblage of pottery, including restorable vessels. The floors are levelled, sometimes on bedrock, and, where bedrock slopes downward, on construction fill. The floor levels are rich in restorable pottery vessels and many basalt and limestone artefacts, indicating a sudden destruction of the town (see examples in Garfinkel and Ganor 2009: Figs. 5.51–5.57). Typologically, all the pottery includes Iron IIA types, as published in the 2007–2008 excavation seasons (Kang and Garfinkel 2009a, 2009b).

The same picture of an Iron IIA stratum built on bedrock, covered by later building activities, was found in the three other areas excavated during the 2009 season. In Area A, below a large rectangular Byzantine complex, a rich assemblage of 10 restorable Iron IIA pottery vessels was found. In Area C a second city gate functioned only during the Iron IIA stratum, while in the Hellenistic period it was blocked and the area was used for dwelling. Iron IIA pottery was found in the drain of the gate. East of this gate two dwelling units were partly excavated and in both rich assemblages of restorable Iron IIA pottery vessels were found on the floors. In Area D two city wall casemates were excavated and on their floors restorable Iron IIA pottery vessels were found (Garfinkel et al. 2009).

The Iron IIA architecture and rich assemblages of pottery found in all the areas excavated thus far (A, B, C, D) clearly indicate a large and rich urban centre, not accidental “two rooms” as described by Dagan. In Area B two different strata were found, Hellenistic on top and Iron IIA below. The western city gate functioned as a gate in both periods, but with two different thresholds, one on top of the other (Garfinkel and Ganor 2009: Fig. 16.25). The Iron IIA walls and floors of the domestic architecture run to the city wall casemates and incorporate them into the architecture, indicating that this was one construction activity—an urban planning that characterizes Judahite towns.

### Dating the building activity

On the basis of the stratigraphic observations and the associated pottery, coins and radiometric dating results, we dated the construction of the two gates and the casemate wall to the early Iron Age IIA, and the construction of the upper wall to the Hellenistic period.
Figure 4  Area B: The Iron IIA architecture includes three well-preserved dwelling units. The walls abut the casemate city wall in a clear pattern: one casemate for each building. This typical feature of city planning in Judahite towns is known in Beersheba, Tell Beit Mirsim, Tell en-Naḥbeh and Tel Beth-Shemesh.
Dagan’s alternative settlement history (Table 1) is based on the pottery sherds collected on the site’s surface, a report from 1932 by an inspector who made a brief visit to the site, an aerial photograph from 1945 and memories of people who lived in a nearby village. The question is, can building activities be effectively dated according to the latter data?

In another part of his presentation, Dagan suggests that a wall may be dated by pottery collected a few metres on the slope, outside and below it: “at the outer foot of the later blocking wall of the gate (in Area B), the excavators uncovered the bedrock surface upon which a mixed assemblage of sherds was recovered, including material from later periods. This can be seen as further evidence of an Ottoman date for the upper part of the wall” (2009: 76, n. 8). Our pottery of “later periods” is indeed later than the Iron IIA and Hellenistic periods, and includes types dated to the Roman, Byzantine and early Islamic periods but does not include any Ottoman finds.

Dagan’s suggestion contradicts the rules of stratigraphic methodology, e.g., Wheeler (1954: 72), Kenyon (1961: 75) and Kochavi, Beck and Gophna (1979: 125). In *Beginning in Archaeology*, Kenyon states: “[t]he two main principles of excavation are the observation of the different layers of soil, including any disturbances affecting them, and the interpretation of their relationship to any structure. Each layer of soil can be dated only by the objects in it” (Kenyon 1961: 75, our emphasis). In Wheeler’s classical book, *Archaeology from the Earth*, one reads: “[u]nless a structure is dated by a contemporary inscription… our knowledge of its date or cultural context must be derived from the stratigraphic association of objects of recognizable types” (1954: 72, our emphasis). Kochavi, Beck and Gophna write specifically on the dating of fortifications: “…the primary consideration, in our opinion, should be the pottery-bearing floors abutting onto the wall itself. Such floors date the period of the usage of the wall” (1979: 125, our emphasis).

Our own conclusions conform to these strict methodological guidelines. The casemate wall at Khirbet Qeiyafa, as exposed in Areas B–D, is part of a coherent architectural plan, including two city gates, a monumental threshold and six buildings (not just two rooms as stated by Dagan). The gates, the city wall and the buildings were constructed abutting each other (Garfinkel and Ganor 2009: Figs. 1.5; 5.42). Over 50 complete pottery vessels and about 40 stone tools were found on the floors abutting the casemate city wall (Kang and Garfinkel 2009a, 2009b; and data from the 2009 season). This assemblage is the only legitimate pottery for dating the casemate wall and gate at Khirbet Qeiyafa.

Additional building activities took place on top of the original Iron Age IIA gate in Area B. These activities included narrowing the gate opening from ca. 4 to 2 m. The southern side remained the same while a new northern side was constructed from large stones (Garfinkel and Ganor 2009: Figs. 5.25; 5.117). A threshold composed of several large flat stones was built on top of the Iron Age IIA threshold (Garfinkel and Ganor 2009: Fig. 16.25). The gate chambers underwent significant changes. The two southern chambers were blocked by two walls and were disconnected from the gate passageway. The corner of the southeastern chamber was robbed away; instead, we found a living floor with a tabun and a limestone bowl. The tabun shown on a stone that is part of the original wall can be seen in Fig. 5.34 of our report.
Our dating of the second phase of the gate to the Hellenistic period is based on the objects associated with the floor of the passageway, which runs to the upper threshold. This floor includes Hellenistic pottery sherds and a few coins, three of the Persian period and three of Ptolemy I Soter (Farhi 2009). These coins indicate a very early Hellenistic stage, mainly in the late 4th century BCE. Hellenistic pottery was found on the living floor associated with the tabun and in the robbed southeastern gate chamber. In the Hellenistic period, the modified four-chamber gate was in secondary use, and served as a simple passageway rather than as a four-chamber gate. This indicates that the gate structure was not originally constructed at this phase, as suggested by Dagan. In fact, Dagan’s conclusion here is reminiscent of Macalister’s interpretation of the six-chamber “Solomonic” gate of Gezer, nearly 100 years ago. As is well known, this gate was dated by its excavator to the Hellenistic period and was published as a “Maccabean Castle” (Macalister 1912: Fig. 104). The correct dating of the gate to the Iron Age IIA was reached only half a century later (Yadin 1958; Dever 1998: 160, 164, 199).

Having dated the lower gate and the casemate wall to the Iron Age IIA, and the upper gate to the Hellenistic period, we must examine the date of the upper city wall. We date the original construction of this wall to the Hellenistic period based on two points—architectural and stratigraphic: (1) this wall clearly abuts the Hellenistic gate from the north and from the south; together, they create one fortification system; (2) the first square north of the gate revealed a gray layer of sediment containing Hellenistic pottery that had accumulated against this wall from inside the city (and not cut by the wall). This layer was found below the modern topsoil and on top of the casemate, which was filled with Iron Age IIA destruction debris.

The upper wall is partly buried and partly exposed. Its upper section usually ends in a horizontal layer. This wall functioned as a terrace wall and a fence until the 20th century, and was repeatedly repaired throughout the ages. The area enclosed by the upper wall was indeed used for agriculture until recently, as indicated by olive and almond trees still growing around the site. We agree with Dagan that this wall was in use during the Ottoman period. However, the excavations prove that its original construction dates to the Hellenistic period.

Conclusions

The case study of Khirbet Qeiyafa demonstrates two fundamental weaknesses in Dagan’s approach, one in the survey, the other in his interpretation of the stratigraphy. First, he misinterpreted the main phase of occupation at Khirbet Qeiyafa—the early 10th century BCE. This oversight leads one to wonder whether this horizon was also missed in many other sites surveyed in the Judean Shephelah. Second, Dagan erred in dating the site’s fortifications according to topsoil pottery found in no context, and sometimes even outside the city wall.

This case study teaches us an important methodological lesson—that compared to excavation, the survey is a limited research tool for deciphering the settlement history of a given site. The dating of building activities can only be reliably examined through stratigraphic excavation.
Acknowledgments

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References


