The Iron Age Chronology Debate: Is the Gap Narrowing?

Introduction

An article by one of us fifteen years ago (Finkelstein 1996) instigated a fierce debate over the chronology of the Iron Age strata in the Levant (summaries of opinions in Finkelstein 2005; Mazar 2005); the debate still lingers on today. Establishing a firm, absolute chronology for the Iron Age strata has far-reaching implications on regions far beyond the Levant (e.g., Coldstream 2003) and on biblical history (see, e.g., different attitudes in Finkelstein 2010; Mazar 2010).

In the early years of the debate, discussion focused on stratigraphy, ceramic typology, finds at key sites, and historical considerations (e.g., Finkelstein 1996; Mazar 1997) and soon reached a stalemate. But starting a decade ago, attention turned to radiocarbon dating. This avenue was dramatically enhanced by the large-scale Iron Age Dating Project, in which a large number of samples from many strata representing the different ceramic phases of the Iron Age in both the north and south of Israel were dated (Boaretto et al. 2005; Sharon et al. 2007; for specific sites, see, e.g., Gilboa and Sharon 2003 for Tel Dor; Mazar et al. 2005 for Tel Rehov; Boaretto 2006 for Megiddo). This short review summarizes the state of the art as it stands today. Though an agreement regarding Iron Age chronology has not yet been reached, it is fair to say that understanding between the “rival” camps is growing and that the gaps are closing.

Relative Chronology

The relative chronology of the Levant in the Iron Age, that is, the sequence of ceramic typology phases based on stratigraphy, is now well-established and widely agreed upon. The period is divided into seven phases (see, e.g., Zimhoni 1997; Herzog and Singer-Avitz 2004, 2006; Mazar et al. 2005; Finkelstein and Piasezky 2006).

1. **Early Iron I**—Giloh in the highlands and the Philistine monochrome strata in the southern coastal plain
2. **Middle Iron I**—Shiloh V in the highlands and the Philistine bichrome strata in the southern coastal plain
3. **Late Iron I**—Megiddo VIA and its contemporaries in the northern valleys; Qasile X in the southern coastal plain
4. **Early Iron IIA**—Megiddo VB and its contemporaries in the north; Lachish V, Arad XII, and their contemporaries in the south
5. **Late Iron IIA**—Megiddo VA–IVB, Rehov IV, and their contemporaries in the north; Lachish IV, Beer-sheba V, Tell es-Safi Stratum A3 (previously titled Temporary Stratum 4), and their contemporaries in the south
6. **Iron IIB**—Megiddo IVA in the north and Lachish III in the south
7. **Iron IIC**—Lachish II and its contemporaries

Past Dates

The chronology of the Iron IIB–C is not disputed, as it rests on solid archaeological and historical grounds. (In any event, radiocarbon cannot help in this case because of the flat section in the calibration curve: “the Hallstatt Plateau.”) Hence from the beginning, the debate focused on the late Iron I and the two phases of Iron IIA.

We should first clarify the lines of dispute at the beginning of the debate. According to the Conventional Chronology, the Iron IIA covered the period of time between circa 1000 B.C.E. and 925/900 B.C.E.—approximately the time of the supposed united monarchy (e.g., Mazar 1990; New Encyclopedia 1993, 4:1529; note that 925 B.C.E. relates to the dating of the Sheshonq I campaign according to 1 Kgs 14:25). According to the Low Chronology, the Iron IIA covered the period of time between circa 930/920 and the second half of the ninth century B.C.E. A few years later Mazar introduced a third dating system that he titled the “Modified Conventional Chronology,” according to which the Iron IIA should be placed between circa 980 and 840/830 B.C.E. (Mazar 2005). At the same time, Herzog and Singer-Avitz (2004, 2006) proposed to date the Iron II A to circa 950–800 B.C.E. Sharon et al. (2007) pointed to the possibility of a circa 900 B.C.E. Iron I/IIA transition.

As the reader can see, from the outset the debate focused on two questions: the beginning of the Iron IIA (1000, 980, or 930/20 B.C.E.) and the end of the Iron IIA (925 or the second half of the ninth century, as late as 800 B.C.E.). To this one can add a third question: the date of transition from the early to late Iron IIA.

The End of the Iron IIA

The question of the end of the Iron IIA was resolved immediately with the introduction of 14C measurements to Iron Age archaeology (fig. 1). The first step was the radiometric results for samples taken from the destruction layers of late Iron IIA Strata V and IV at Tel Rehov, which led Mazar to down-date the Iron IIA/B boundary to approximately 830 B.C.E. (Mazar and Carmi
Later work indicated that other late Iron IIA destruction layers should probably be dated to the second half of the ninth century, possibly until roughly 800 B.C.E. (Finkelstein and Piasetzky 2009; fig. 2). We refer to the two destruction layers at Tell el-Hammah in the north and to the devastation of Tell es-Safi (location of biblical Gath) in the south (for the latter, this date is reached assuming that the destruction is related to the days of Hazael, king of Damascus). Finally, the pottery assemblage retrieved from the destruction of Level 3 at Beth-shemesh is described by the excavators as transitional IIA/B (Bunimovitz and Lederman 2006, 2:419–20); 14C determinations for samples from this layer seem to date this destruction in the first half of the eighth century B.C.E. (Finkelstein and Piasetzky 2009).

The Beginning of the Iron IIA

The date for the beginning of the Iron IIA, that is, the transition from the Iron I to the Iron II, is still disputed. Mazar (2005) puts the transition in 980 B.C.E. (see recently a possibility of a lower date in ca. 960 B.C.E. in Mazar and Bronk Ramsey 2010, 1682), while Sharon et al. (2007), as well as the two of us (recently Finkelstein and Piasetzky 2010a), put it in the second half of or late tenth century B.C.E.

It now seems that certain late Iron I strata, such as Megiddo VIA in the north and Qasile X in the south (the data for the latter is less consistent), came to their end in violent destructions at the beginning of the tenth century. However, these destructions could have occurred during the course of the period; in other words, they do not necessarily mark its end. Indeed, other late Iron I strata, such as Tel Dor, Tel Rehov, and possibly Tell Hammah (the former two with no destruction horizon), lasted later, until the second half of the tenth century. Taking a broader view, all Bayesian models that have so far been published based on 14C results from a large number of sites and strata put the transition in the second half of the tenth century (summary table in Finkelstein and Piasetzky 2010a; fig. 3).

In this case we can also turn to a historical clue. The list of towns that refers to the campaign of Sheshonq I (biblical Shishak in 1 Kgs 14:25) mentions Megiddo and Arad. If one relies only on Egyptian chronology (that is, without the biblical reference), the exact date of this campaign is difficult to establish (e.g., Ash 1999, 34; Ben-Dor Evian forthcoming). Still, the alternatives cannot go beyond the second half of the tenth century B.C.E. Regarding Megiddo, a fragment of a stela of Sheshonq I was found at the site, unfortunately, not in a clean or clear context. Since Stratum VIA at the site was destroyed in the early tenth century, the pharaoh must have established the stela in the settlement of Stratum VB of the early Iron IIA (assuming that he did not erect it on a desolate hill, when the site was unoccupied a short while after the devastation of Stratum VIA). Regarding Arad, assuming that Arad Rabah of the Sheshonq I list is identified at Tel Arad, the site does not have a late Iron I layer, and hence it is reasonable to assume that the list relates to the early Iron IIA settlement of Stratum XII. Therefore, as things stand today, when Sheshonq I campaigned in the second half of the tenth century, Megiddo VB and Arad XII must already have existed.

All this means that the Iron IIA pottery tradition had already been established not too late in the second half of the tenth century B.C.E. In any event, it seems logical to argue that the transition between the two pottery traditions—of the late Iron I and the early Iron IIA—was gradual and took place over several decades.

The Transition from the Early to Late Iron IIA

A Bayesian model based on a large number of 14C determinations that we have recently published (Finkelstein and
Piasetzky 2010b; fig. 3) puts the early Iron IIA in circa 920–880 B.C.E. and the transition from the early to late Iron IIA between circa 900 and 865 B.C.E. (63 percent agreement between the data and the model). This makes sense historically, as the late Iron IIA palaces at Megiddo and the Jezreel compound should probably be related to the height of the Omride dynasty of Israel in the days of King Ahab (873–852 B.C.E.). On the other hand, approximately twenty 14C determinations from the early Iron IIA Negev Highlands sites of Atar Haroa and Nahal Boqer provided dates “deep” in the ninth century B.C.E. (Boaretto, Finkelstein, and Shahack-Gross 2010). Although one can argue that at these sites, isolated and located away from the main centers of ceramic production, early Iron IIA forms could have lingered for a while, these dates show that one can hardly push the transition from the early to late Iron IIA too early, say, to roughly 900 B.C.E.

Summary

Radiocarbon investigations in recent years show beyond doubt that the Iron IIA lasted until approximately 800 B.C.E. The early-to-late Iron IIA transition should be placed in the first half of the ninth century. For the beginning of the Iron IIA (the Iron I/II transition), the differences between the debating camps have now narrowed to a few decades—a gap that is beyond the resolution of radiocarbon results, even when a large number of determinations are deployed. Introducing historical considerations as well as observations related to the pace of change of pottery traditions, the Iron I/II transition could have taken a decade or two and should be put shortly after the mid-tenth century B.C.E.

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Note

1. The dates given in this article are based on an exceptionally large body of measurements. For example, our Bayesian model for six phases in the Iron Age (Finkelstein and Piasezky 2010b) is based on 339 determinations, from 143 samples, from thirty-eight strata, at eighteen sites, measured in six laboratories, using three dating methods. Note that the dates are founded on short-lived samples only (that is, not charcoal, which may introduce the Old Wood Effect) and are given in 68 percent probability (1 σ).

References


———. 2010a. The Iron I/II A Transition in the Levant: A Reply to Mazar


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