## Dawn of the Metal Age: Technology and Society during the Levantine Chalcolithic by Jonathan M. Golden

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There can be little argument that the technological development of a metal industry had a profound impact on the society in which it evolved. A metal industry altered more than people's daily lives and the way others viewed them; it introduced the people to an awesome and alluring power that would shape the manner in which their society continued. Golden's Dawn of the Metal Age highlights this phenomenon in regards to the Levantine Chalcolithic (4700-3500 BCE), the Copper Age of the coastal lands and islands on the eastern part of the Mediterranean. Golden, a lecturer in Drew University and Fairleigh Dickinson anthropology at University, bases his research on his doctoral dissertation for the University of Pennsylvania and his own extensive field experience in the Levant. The discussion of the introduction of a metal industry is much more complex than the absence of metal one day and its existence the next. This technological development, like most debated in the archaeological world, must be contextualized to gain any kind of accurate conclusion about the society.

Golden's text places the metals industry that developed in the Chalcolithic within the broader Levantine society. It specifically focuses on the social organization of the Levantine Chalcolithic and how the presence of metal affected it. Central to this discussion is the

relationship between a social hierarchy and the metals industry. Did an already present social elite commandeer an enterprise they could profit from, or did an elite emerge from those who controlled access to the necessary materials? Golden argues for the convergence at a middle ground over the question of 'what came first, the metal or the elite?'.

The book can be divided into several broad themes. It begins with an introduction to the subject matter, looking at the region of the Levant and the study of prehistoric metallurgy. Continuing with this introduction, chapter two outlines the main topics that will be discussed throughout the text, including standardized production, technological progress, craft specialization, social hierarchy and ritual function. A chronology of the Levantine Chalcolithic is then provided in the following chapter. This divides the Chalcolithic period into four distinct phases based on trends in the ceramic assemblage and the distribution of copper: 1) a Neolithic transitional phase, 2) a pre-metallic Chalcolithic phase, 3) a mid to late Chalcolithic phase with a 'Copper Boom' and 4) a late Chalcolithic to Early Bronze Age transitional phase. This chronology is important to understanding the evolution of the copper industry.

Chapter four delves into the theme of social organization; it debates the evidence for a social hierarchy based on the presence of luxury items in cave tombs. Golden asserts that these expensive grave goods are part of a specific tomb type for the elite with its own standard burial kit. Continuing this theme of social organization, chapter five relates it to changes in economic production and practice and the decline of the Ghassulian culture in the Jordan Valley. It uses the changing settlement patterns to convey how areas were altered with the introduction of copper.

The next two chapters try to understand craft production by focusing on the material culture. Chapter six provides a model for the organization of production in Chalcolithic society and chapter seven applies this model to specific Chalcolithic sites. The model is based on the archeo-metallurgical evidence involved in the production of copper from the raw materials through the taphonomic, or decaying, processes. All the information hints at craft specialization in the copper industry. The production of metal was a complex and technical process not openly participated in by everyone.

Chapters eight and nine relate to the power of the metal industry and those who controlled it. In the former, Golden argues that the luxury goods industry may have evolved from a functionally unsuccessful 'pure' copper industry. Experimentation and a demanding elite could have led to a more complex metal industry involving more advanced technology and the attainment of exotic materials. Meanwhile, the following chapter portrays how control of this prestige goods economy translated to socio-political power.

The only negative aspect of Golden's text is the manner in which he introduces the opinions of other scholars. While his own views are meticulously developed, Golden presents contrary arguments as a kind of afterthought to his own beliefs. This is probably most detrimental in chapter ten when it undermines Golden's assertions regarding the social organization of the Levantine Chalcolithic. The reiteration of the 'uniqueness' of some societies and the questioning of an existing social hierarchy at this point in the text forces the reader to re-evaluate all of the conclusions made until now. Thankfully, the following chapter adequately concludes the text by providing a summation all of Golden's main arguments. It

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concludes by addressing the dynamic social forces behind the rise of a copper industry in the Levant. Though the culture of the Chalcolithic was short-lived, it provided the technical and social developments that would bring in the Bronze Age.

All in all, Golden's *Dawn of the Metal Age* provides a broad-ranging piece and an important contribution to the field of archaeology. The text is written in such a way that even senior undergraduates should be able to follow and engage with the material. Though centred on the advent of the metals industry, this is not a metal-specific book. There is something for everyone in this text that covers ceramic assemblages, burial traditions and settlement patterns. In fact, it is probably best appreciated not by the metals specialist, but by the anthropological archaeologist as it offers a social commentary of the Levantine Chalcolithic based on archaeological evidence. Some of Golden's arguments would no doubt be applicable to other societies, and could provide a framework for studying the introduction of a metal industry in other places. Using new discoveries and Golden's informed scientific analyses, *Dawn of the Metal Age* is a significant aid to the study of the past.

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