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Introduction

Interaction and the Making of Ancient Mesoamerica

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In archaeology, "interaction" is often treated as if it were a self-explanatory and self-evident concept. But this is not the case. Interaction may take many forms: material exchange or emulation, conquest or colonization, long-distance or local, direct or indirect, multidirectional or unidirectional, among other modalities (see Joyce Marcus, chapter 12 in this volume). Like the phrase "sociocultural process," the term "interaction" seeks to cover an indefinite, complex set of historically contingent processes. Thus, although the term "interaction" may be taken to mean the diffuse social processes that operate between individuals or groups, and generally indicates some kind of social contact, as a rule it suggests nothing specific about the nature of the contact or the particular relationships between interacting units (Caldwell 1964; Parkinson 2002:394). Scalar issues (see, e.g., Neitzel 2000; Peterson and Drennan 2003) further exacerbate the difficulties in scholarly interpretations of interaction. Nonetheless, the concept of interaction at times has been used as a "miracle elixir" to account for similarities in diverse suites of material and visual culture from different regions (e.g., diffusionism), and to extrapolate the specific relations that existed between the interacting cultural groups (e.g., subordinate vs. dominant, core vs. periphery, "mother culture," etc.). Yet interaction, if conceived of solely as a reactionary event, such as the collision of billiard balls (see Wolf 1982:6), is on its own incapable of solving the theoretical, methodological, or evidentiary problems associated with a fragmentary archaeological record and the limitations that this fact presents for the study of ancient societies.

DOI: 10.5876/9781607328360.c000

Despite these conceptual difficulties—or perhaps because of them—critically examining the role of interaction in the complex societies of the past has long been a core area of investigation in archaeology and related disciplines, both in Mesoamerican contexts and beyond. For as Gil Stein (2002:903) notes, interregional interaction is among the most significant recurring forms of social process—defined here as the dynamic patterns of societal activities within a given sociocultural context (cf. Bain 1932:10). Researchers working in many areas of the world have recognized that interaction may serve as a catalyst for cultural innovation, a phenomenon capable of stimulating changes in material and symbolic culture of both kind and degree, particularly in terms of the evolution of sociocultural complexity and economic systems (see, e.g., Cherry 1986; Demarest 1989; Flannery 1968; Goldstein 2000; Hirth and Pillsbury 2013; Lesure 2004; Miller 1983; Renfrew 1972; Rosenswig 2010; Schortman and Urban 1992). As such, a comparative, cross-cultural focus on the multiple forms that interaction may take and its developmental consequences is at the very heart of anthropological archaeology.

In Mesoamerican studies, Paul Kirchhoff's (1943) original conception of Mesoamerica (figure 0.1) as a region of communal cultural traits presumes interaction as the mechanism behind these commonalities. The region encompassed many cultures that shared a core suite of characteristics despite having developed in distinct environments. In spite of certain topographic and logistical limitations, there appears to have been a great deal of long-distance communication and exchange from very early points in Mesoamerican history (see Gary M. Feinman, chapter 1 in this volume). In a sense, one might conceive of Kirchhoff's view of Mesoamerica as falling in line with the concept of interaction sphere (Caldwell 1964; cf. Altschul 1978; Freidel 1979; Possehl 2007; Struever 1972). Thus, interregional interaction and cultural exchange has been a common topic of discussion in the scholarly literature on Mesoamerica, and its study remains salient precisely because it speaks to the core of what defines the region as a heuristic concept. Unsurprisingly, then, scholars from a variety of disciplines have critically examined the role that interregional interaction played in the development of regional cultures; material, political, economic, ritual, artistic, and linguistic interaction have all been examined in multiple Mesoamerican cultural and temporal contexts.

For example, within the Formative period (ca. 2000 BC–AD 250), long-distance obsidian exchange, the dissemination of "Olmec" (or "Olmec-style") iconography, and the adoption of Mixe-Zoque ritual vocabularies have proven fertile ground for research (see, e.g., Campbell and Kaufmann 1976; Clark and Lee 1984; Ebert et al. 2015; Grove 1993; Justeson et al. 1985; Wichmann 1995, 1999). In Classic period (AD 250–950) Mesoamerica, the material exchange of "prestige goods," possible

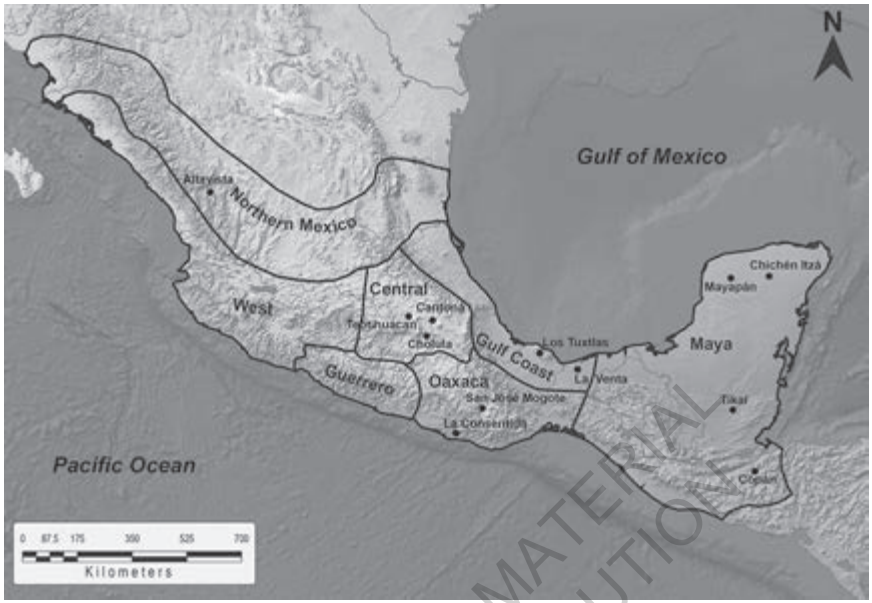

Figure 0.1. Map of Mesoamerica, detailing rough areal divisions and key regions and sites discussed in this volume.

conquests, and marriage alliances between the Maya and Teotihuacan, and among later Mixtec and Zapotec cultures, has been treated extensively (e.g., Braswell 2003a; Gómez Chávez and Spence 2012; Martin and Grube 2000; Nielsen 2006; Pohl 2003a, 2003b; Stuart 2000). In Postclassic period (AD 950–1519) contexts, investigations have focused on a number of episodes of interaction, including the spread of Mixteca-Puebla "international style" ceramics, the specific relationships between particular sites (e.g., Chichén Itzá and Tula), and the impact of Aztec *pochteca*—professional long-distance traveling merchants (e.g., Berdan 1988; Berdan et al. 1996; Kowalski and Kristan-Graham 2011; Pohl 2003c; Pohl and Byland 1994; Smith 1991, 2011a; Smith and Berdan 2003), as well as the use of Nahuatl as a language of interregional exchange.

Thus, multiple lines of evidence attest to the critical role that interregional interaction played in the development and sociocultural dynamics of virtually all Mesoamerican cultures. Yet in many contexts within Mesoamerica, the precise nature of this role remains obscure. Of course, as Gary M. Feinman (chapter 1 in this volume) points out, neither this fact, nor the conceptual complications outlined above, renders the consideration of interaction a futile endeavor. Indeed,

research conducted over the past three decades has added substantial detail to the material, visual, and ethnographic records of the region. Moreover, interdisciplinary methodologies have emerged that offer researchers the opportunity to present and engage data in a new light, and to bring other lines of evidence to bear on fundamental research questions. Investigators are now better equipped to contribute to a more detailed understanding of the ways that interregional interaction may spark cultural innovation and shifting cultural dynamics. In short, the data are ripe for fresh analyses that allow for a more nuanced consideration of the role of interregional interaction on cultural genesis, praxis, persistence, and change in Mesoamerican contexts. As archaeologists, anthropologists, art historians, linguists, cultural geographers, and others apply new methodologies and data to past and present considerations regarding the significance of interregional interaction, there is great potential to shed new light on the processual dynamics that produced not only a multitude of individual cultures but, in many respects, a shared, pan-Mesoamerican culture as well. It is for precisely this reason that this volume adopts a conjunctive approach that juxtaposes distinct contexts, disciplinary perspectives, and methodologies.

To that end, this volume explores the role of interregional interaction in the dynamic sociocultural processes that shaped the pre-Columbian societies of Mesoamerica. Building on previous scholarship, as well as our expanding awareness of the evidentiary record, the interdisciplinary contributions collected here explore how interaction impacted cultural development and social processes in various Mesoamerican contexts. Although "process" (like "interaction") is a vague term, here we are most interested in those sociocultural processes that relate to the generation, consolidation, and communication of ideas and technologies; the exchange of material culture; and the structuration of behavioral practices. Contributions focus on interaction less as an explicative framework, and more in terms of its potential to facilitate the sharing of cultural processes. Specifically, they explore its role in the construction of indigenous epistemologies and systems of shared ideologies; the production of regional or "international" artistic and architectural styles; shifting sociopolitical patterns; and diachronic changes in cultural practices, meanings, and values. In this sense, this volume examines the critical question of how interregional interaction in a sense "created" what we now label "Mesoamerica."

Contributions represent, and are informed by, a variety of methodological, temporal, and regional vantage points. Juxtaposing interregional patterns derived from different lines of evidence (e.g., archaeological, linguistic, art historical) in discrete contexts forces the analyst to attend specifically to the complex relationships among historical actors, social structures, and material culture to produce detailed

and compelling analyses. Accordingly, the contributors to this volume seek to move beyond simplistic conceptions (e.g., an over-reliance on "diffusion," "migration," or "conquest") in constructing explanations of interaction between and among ancient societies. More specifically, the conjunctive, interdisciplinary approach advocated here reveals further degrees of complexity in historical episodes of interregional and cultural exchange.

For example, José Luis Punzo Díaz (chapter 9) considers interaction in the underexplored region of northwestern Mesoamerica. His analysis surpasses previous treatments that viewed areal cultures as passive, "peripheral" recipients whose developmental dynamics stemmed from interaction with more "active" core centers (e.g., Teotihuacan) external to the region itself. Likewise, D. Bryan Schaeffer (chapter 5) and Philip J. Arnold III and Lourdes Budar (chapter 7) reexamine interaction between the Maya lowlands and other sites and regions (Teotihuacan and Los Tuxtlas, respectively). Schaeffer elucidates aspects of cultural agency in these traditions, thereby contributing to a broader scholarly discourse (e.g., Braswell 2003a) that seeks to question traditional conceptions of the historical relationship between these cultures as one of unidirectional influence (cf. Stuart 2000). Further, Schaeffer's art historical examination of the tripod vessel adds nuance to conventional understandings of that form as indexical of external impact and/or central Mexican influence. Arnold and Budar's (chapter 7) analysis of three lines of material evidence likewise reveals the significance of local considerations in regional cultural developments and potential variability in historical exchange relationships. Their consideration of new evidence (e.g., improved chronologies, better-established stylistic sequences) identifies heretofore undisclosed—or unexplored—cultural linkages and allows researchers to move beyond prior models. The chapters by Kerry M. Hull (chapter 4), and Joshua D. Englehardt and Michael D. Carrasco (chapter 3), in offering analyses of linguistic and iconographic (and scribal) interaction, respectively, place in relief the broader factors that underlay interaction and exchange. Treatments such as these, that consider alternative evidentiary lines from distinct methodological perspectives, serve to further contextualize the diverse and heterogeneous processes implicated in the investigation of interregional interaction.

These examples, among others in this volume, illustrate how the present collection moves beyond received scholarship by providing a holistic consideration of interaction throughout Mesoamerican history, and its integral role in cultural development and regional dynamics. Accordingly, the contributors to this collection maintain that novel approaches to a topic that has historically been a staple of archaeological research offer great potential for advancing archaeological understanding of past cultural lifeways. Of course, neither this introduction nor this volume pretends to offer a new "theory of everything" or conclusively resolve the

difficulties inherent in treating the multifaceted and at times imprecise concepts of interaction and sociocultural process. Nonetheless, the conjunctive, interdisciplinary approaches presented here contribute to a greater scholarly comprehension of the terms themselves, as well as the specific examples under consideration. In the remainder of this introduction, we explain and justify this assertion through discussions of what it means to study interaction in the archaeological record from a broad interdisciplinary perspective, and how and why new data and methodologies can meaningfully contribute to advancing research, scholarly debate, and understanding of the complex and varied sociocultural processes at the heart of this volume.

ON BILLIARD BALLS: CONCEPTUALIZING AND IDENTIFYING THE ROLE OF INTERACTION IN CULTURAL PROCESS

As Rosenswig (2010:3) notes, the "interregional exchange of goods and ideas is a distinctly human practice that qualitatively separates us from other creatures on earth." But, he continues, archaeological treatments of how interaction affected the organization and cultural dynamics of interacting societies are often insufficient, and ultimately fail to provide satisfying answers to this critical query. Likewise, responses to the question of motivation, or "why" interaction occurs, are often reduced to one-dimensional tautologies, such as a nebulous "desire for resources that are not locally available" (Rosenswig 2010:3). Frequently, it seems, interaction is viewed as both cause and effect of various cultural processes, as a prime mover and a catchall capable of at once describing and explaining the variable material configurations observable in limited archaeological datasets. As Stein (2002:903) summarizes, "precisely because it is so common and relatively easy to identify in the archaeological record, archaeologists . . . have overemphasized the importance of . . . interaction as a primary cause of social evolutionary change."

Nonetheless, it remains safe to assume that a shared assemblage of cultural traits is indicative of the existence of some form (or forms) of communication, intercourse, or articulation that enabled such sharing. That is, archaeologists commonly infer interaction from the presence of shared forms, styles, and symbols, whose very presence conveniently justifies and explains both the inferred interaction and the presence of shared material culture shared. Such conclusions may seem obvious and eminently reasonable at first glance. Yet the presence of formally similar archaeological evidence at discrete sites or within distinct regions does not in and of itself equate to interaction—nor does identifying such shared material culture alone constitute an archaeological study (or explanation) of interaction.[1] Perhaps more importantly the identification of interaction does not confirm that cultural

meaning is shared, even in those cases where exchange or its directional flow is clear—precisely because the act of exchange is also one of appropriation, translation, and reinterpretation. Rather, the discussion of interaction is reduced to mere descriptive accounts (or worse, speculation) that are incapable of elucidating the actual process and virtually guarantee that researchers cannot produce credible explanations (cf. Smith 2011b:595–596). Such causal-functional treatments render interaction a vague and self-explanatory concept. In the end, explanations derived from such a conception are just as simplistic as the models of unidirectional diffusion and migration proffered by Franz Boas, V. Gordon Childe, and others—and subsequently discarded—so long ago.

The causal-functional perspective is, in large measure, predicated on what may be labeled the "billiard-ball" view of the past (see Wolf 1982:6). This reductionist idea conceived of ethnicity, language, and material culture as traits that were packaged into neatly bounded societies and "careened across the landscape" (and into one another) "like self-contained billiard balls" (Anthony 2010:108). Historical events, therefore, invariably were directly interrelated (cf. Hodder 1987:2). This viewpoint hearkens back to the culture history paradigm, and necessarily presupposes interaction (more specifically, diffusion) as the mechanism by which sharing occurred, thus resulting in a circular argument: if one views cultures as suites of traits, and if those traits are shared, interaction is inferred (Gary M. Feinman, personal communication, 2016).

Apart from affirming the consequent, such a conception is unsatisfactory on many levels. From a philosophical-epistemological perspective, implying causality to direct sources—particularly a single element or process—is problematic. Such an inference exceeds impressional cause, despite whatever historical or empirical evidence exists to suggest a causal relationship (see, e.g., Hume 1999). Extending the billiard ball analogy, it is erroneous to automatically assume that one ball striking another *causes* the other's movement (i.e., to say that A causes B, in strict terms).[2] Although such a philosophical discussion it slightly outside the scope of this volume, one point is cogent: it does not matter what the billiard ball thinks—or how it conceives of the causality of its own motion—it rolls where it is pushed, in accordance with its own vector. Of course, the billiard-ball model is not entirely an apt analogy. We concur with Hodder's (1987:2) critique of the metaphor: the definition of the entities (the balls), and the interrelationships between them, is fluid, since these factors are contingent on a set of historically particular circumstances. In other words, human action is not governed by Newtonian laws of motion. Regardless, even if we accept the analogy, to our minds the moment of intersection, or what happens when the billiard balls touch, is what is most significant, and holds the most explanatory power.

Thus, the sharing of material goods across the landscape should not be seen purely as *either* the cause *or* effect of interaction. Rather, the phenomenon is indexical of the process itself. How the specific process of interaction is related to other sociocultural dynamics—what happens when (and after) the billiard balls touch—is what concerns us and is a far more fruitful avenue of inquiry. For example, in Formative period Mesoamerica, it is often argued that emerging elites co-opted "Olmec" symbolism to bolster their burgeoning authority through association with the prestige of this culture (see, e.g., Demarest 1989; Flannery 1968:111; Rosenswig 2010; cf. Flannery and Marcus 2000; Pool 1997). Although the movement of ostensibly "Olmec" goods across Mesoamerica is archaeologically evident (Blomster et al. 2005; Cheetham 2007, 2010; Cheetham et al. 2009), this fact does not imply that the primacy of Olmec culture—or interaction with the Olmec—caused, or can be directly correlated with, particular sociocultural processes in other cultures. In any case, the functions and meanings of shared material culture may vary. As Rosenswig (2010:49) suggests, shared Olmec imagery "may have been employed in locally specific ways" (see also Grove 1993; Lesure 2004). As John Clark (2004:208) points out, through interaction across geographic regions or cultural groups, ideas may "become enmeshed with material goods and agentive decisions in generative ways; ideas can be represented by things, and things can prompt ideas, symbols, and meanings not previously instantiated in goods" (cf. Renfrew 2001). In other words, ideas about things are both social and dynamic. Exchange may thus act as something of a feedback loop that provides an opportunity to reinterpret the social meanings reflected in material objects. In this sense, a shared complex of material culture, although indexical of interaction, is neither cause nor effect of that (or other) processes, but rather *both* cause *and* effect of higher-order dynamics.

Further, although the interrelationship of historical events should not be an a priori supposition, it is a fact that all past human societies were both material and historical (Zborover 2015:1). As Hodder (1987:2) concludes, integrating historical and archaeological perspectives "involves an attempt at particular and total description, and it does not oppose such description to explanation and general theory." Thus, it is not a given that archaeological methods of studying historical events, episodes, or processes (such as interaction) should be "epistemologically distinctive" from those employed in other disciplines that study similar phenomena (Zborover 2015:3). In this sense, an integrative consideration of archaeological phenomena—such as that proposed in this volume—is capable of providing clues as to both the mechanisms behind and the underlying explanation of a specific instance of cultural exchange or interaction—addressing both the "how" and "why" of the issue.

As this brief discussion makes plain, there are many ways of approaching and understanding interaction among human groups: as a sociocultural process (in

both synchronic and diachronic terms), as an historical event, and/or as catalyst, cause, effect, and/or correlate (or some combination of these) of larger, higher-order dynamics. Although this volume, and the contributions presented herein, does not seek to present a monolithic vision of interaction, we hold that Hume's notion of constant conjunction—at the meeting of the billiard balls themselves—is a far more productive way of conceiving of and understanding episodes of interaction. While this perspective may be more preferable theoretically, in practical terms it renders the identification of the archaeological correlates of interaction—and its processual implications—slightly more problematic. Because sharing can occur in many ways, observable patterns of formally, technologically, and/or stylistically similar material culture may be the result of any number of factors and present a variety of material manifestations in various sociocultural aspects, from the political-economic to the ritual-symbolic. To resolve this dilemma, researchers need an established set of criteria that allow for the evaluation of the empirical strength or plausibility of a given argument (Smith 2011b:595). For this reason, many suggest that it is preferable to start with a model(s) that help(s) explore and organize the data rather than entirely working from the bottom up.

MODELING INTERACTION IN ANCIENT SOCIETIES

As should be clear from the above discussion, like many contemporary approaches, we reject causal-functional treatments of interaction in the archaeological record as unsustainable. Rather, the contributors to this volume conceive of cultural elements in the archaeological record as the result of patterns of action or behavior in the past—even if, as Clarke (1973:17) charges, archaeologists deduce such unobservable behavioral patterns from "indirect traces in bad samples." From this viewpoint, archaeology is positioned to interpret material culture with the aim of understanding historical processes such as interaction in terms of their role in cultural change, rather than as phenomena whose taxonomical study confirms the existence of a series of preconceived categories and self-evident explanations. Such interpretation, however, requires the use of models. As such, we turn below to a brief discussion of several models often employed in archaeological treatments of interaction.

Despite its inherent problems, the causal-functional perspective is still commonly applied—albeit in a distilled form—as an implicit paradigm for interaction in complex societies, particularly by those models that treat migration and trade as prime movers. Although migration models have moved beyond the simplistic conceptions of the billiard-ball analogy (Anthony 2010:108), Burmeister (2000:539) notes that the attribution of patterns in material data "to migration as opposed to diffusion or trade is still a major problem." Migration-based models thus remain

underdeveloped in theoretical and methodological terms, despite a wealth of research in various contexts (see, e.g., Anthony 1990, 1992, 1997; Cameron 1995; Champion 1990; Chapman and Hamerow 1997; Stark et al. 1995). Härke (1998) suggests that the difficulty is perhaps one of attitude on the part of archaeologists, who are reluctant to consider models that most see as diffusion-based. Burmeister (2000:540; echoing Anthony [1992:174]) points out that "the development of a method for establishing archaeological proof of migration" is key to furthering models that contribute to a better theoretical understanding of migration as an element of cultural behavior (cf. Rouse 1986). We would agree in principle that archaeologists should not be too quick to ignore migration-based perspectives on interaction due to some perceived association with outmoded ideas of culture history.[3]

Although the recent investigations cited above present excellent arguments and case studies, such models remain open to criticism as reductionist. Further, it remains unclear how the models successfully resolve any number of issues that have plagued migration-based explanations of archaeological phenomena,[4] such as the identification of solid archaeological indicators. Finally, migration models tend to privilege external dynamics over the transformational capacity of internal social, political, and economic processes. In this sense, at their core migration-based models continue to rely on what for all purposes appear to be direct cause-effect relationships and thus are prone to the same sort of causal-functional tautologies that characterize the diffusionist perspective. One important outlier is Beekman and Christensen's (2003) excellent study of Postclassic period Nahua migrations. Although this article is a paragon of dealing with complex issues related to population movement, it remains the exception rather than the rule. It does bear mention, however, that Beekman and Christensen (2003:113) advocate an analysis of interaction based on "multiple intersecting lines of data"—underlining the value of the approach adopted in this volume.

Trade-based models, grounded in economic anthropology, have long been deployed in archaeological studies of interaction. In many ways, trade models attempt to address the problem of privileging external factors noted above, and consider interaction at a number of different scales, from local to global, and in terms of distinct modalities (e.g., reciprocal, redistributive, market). Renfrew (1977) insisted that it is important to study trade precisely because the institution of a trade network is both a causal factor for cultural change as well as a sociocultural process.[5] The identification of exchange systems in the archaeological record has been operationalized in a number of ways, from the interaction sphere (Altschul 1978; Freidel 1979; Struever 1972), to marriage alliances (Martin and Grube 2000; Pohl 2003b), to markets and distribution systems (Smith 1999; see also the papers collected in Garraty and Stark 2015 or Hirth and Pillsbury 2013). Trade-based

approaches to interaction often have produced more sophisticated conceptions of empirical indicators and the interpretation of shared patterns or assemblages of cultural traits evidenced in artifactual remains. Archaeological considerations of exchange systems thus have resulted in models that are often more theoretically and methodologically refined than traditional migration-based approaches.

Nonetheless, trade-based models are also open to specific critiques. For example, many—particularly those that focus on market exchange—are susceptible to embracing a formalist view of economics (see Polanyi 1944), despite an avowed anthropological focus on the emic, culturally specific practices of premodern societies.[6] Further, markets and market exchange, as distributional systems, may be more appropriately identified as mechanisms for rather than explanations (or causal factors) of interaction. In this sense, such models run the risk of confusing (or conflating) cause and effect. Finally, such models often focus more on overtly material-economic interaction, leaving aside the significant, yet less archaeologically visible, component of symbolic exchange. Theories of ritual economy and models dealing with the exchange of prestige goods recently have arisen to counter this trend (e.g., Clark and Blake 1994; Henrich and Gil-White 2001; McAnany and Wells 2008; Sabloff 2008; Watanabe 2007; Wells 2006; Wells and Davis-Salazar 2007). Prestige goods theory, however, was developed primarily to understand the political relationships between interacting groups. Analyses based on the ritual exchange of prestige goods have therefore most often focused on the development of sociopolitical power, hierarchical rank, and stratification that accompanied the centralized control of social value (e.g., Hayden 1998; Helms 1993, 1994).

More recent conceptions of trade and exchange relationships—and, to an extent, migration patterns—are subsumed under the wider umbrella of World Systems approaches. World Systems Theory (WST), derived from Wallerstein's (1974, 2004) analysis of premodern capitalist systems, have enjoyed a broad popularity in many contexts, both in Mesoamerica and beyond (see, e.g., Alexander 1999; Algaze 1993; Chase-Dunn and Hall 1991; Feinman 1999; Frank 1993; Hall and Chase-Dunn 1993; Kardulias and Hall 2008; Kepecs et al. 1994; Kepecs and Kohl 2003). World Systems Theory treats exchange networks and cultural processes as parts of larger, overarching political, economic, and social systems of core-periphery relations. In doing so, WST is able to account for a variety of internal and external factors at multiple scales in the identification and subsequent explanation of interaction in the archaeological record, from local trade to wider studies of empires and conquest (cf. Berdan et al. 1996; Sinopoli 1994).

Although appealing in terms of their breadth, explanatory potential, and theoretical sophistication, WST-derived models of interaction have received extensive criticism (e.g., Schortman and Urban 1994, 1999; Stein 1999). Like the trade-based

approach, WST often appears to privilege a certain type of interaction (economic) over others (e.g., symbolic). As with any systemic model, WST is also susceptible to discounting the agency of individual social actors. In a similar sense, many archaeologists have criticized WST's perceived undervaluing of the role or potential influence of "peripheral" areas within the system. Finally, WST frequently is critiqued for attempting to "shoehorn" precapitalist (or non-western) economies into a descriptive-explanatory framework that was developed specifically to treat the development of an explicitly capitalist economic system. Of course, archaeologists base many models on analogies derived from contemporary or more recent historical contexts. Critiques of WST that focus on the supposedly inappropriate application of modern analyses in ancient settings often fail to account for more current attempts to refine Wallerstein's original formulation and extend the explicative potential of World Systems analyses (see Kardulias and Hall 2008). Yet in Mesoamerican contexts, it is undeniable that a significant amount of scholarship adopts models that rely on the active participation of a "core" culture or site—be it "Olmec," Teotihuacan, or Aztec—to explain regional dynamics as the imposition of "core" material culture on passive "peripheral" sites via interaction. Of course, recent perspectives on WST or trade models (e.g., Blanton and Feinman 1984; Peregrine and Feinman 1996; see also the papers collected in Smith and Berdan 2003) have attempted to overcome such conceptual problems, but in many cases the problems inherent in the models themselves remain, to varying degrees. The ultimate success or utility of those attempts, therefore, remains open to debate.

Recently, archaeologists have developed models based on Social Network Analysis (SNA; see Scott 2013; Wasserman and Faust 1994; Wellman and Berkowitz 1988) in an attempt to address the difficulties inherent in migration, trade, and WST approaches. Social Network Analysis, derived from sociological theory, focuses primarily on the social relations between sets of actors, whether individuals or groups (cf. Blanton et al. 1996). It is perhaps best to conceive of SNA as a set of analytic methods specifically oriented toward the elucidation of relational aspects of variable social structures among populations. Although sympathetic with general systems theory, in SNA explications of the processual causes and effects of interaction between human groups are mitigated by a series of variables particular to the network itself. These may include centralization, degrees of closeness between nodes, scale, density, boundedness, integration, interdependence, and reach, among others. In this sense, social network analyses seek to include both particular descriptions and total (or general) explanations (cf. Hodder 1987:2; Kardulias and Hall 2008:572–573). Like WST, SNA is thus equipped to consider distinct types of interaction in varying modes at multiple scales.[7] As Gary M. Feinman (personal communication, 2016) notes, these two contemporary frames (WST and SNA—and

others, such as migration or trade) are not necessarily mutually exclusive, as a point of reference, but they both operate differently and offer more interpretive and explanatory potentiality than culture history or diffusionism. In practical terms, researchers have employed SNA with success in a variety of discrete contexts (e.g., Brughmans 2013; Golitko and Feinman 2015; Knappett 2013; Mills et al. 2013).

Bottom-Up or Top-Down?

This brief review of archaeological models cannot possibly do justice to the complexity of their respective contents, and of course there are a variety of other models for interaction that we do not detail. Our intention in this exercise is not to offer a definitive list of all possibilities. Similarly, we offer critiques of these models not because we purport to proffer a superior model, but rather to highlight that any model can offer advantages, but that each necessarily carries disadvantages that may serve to limit its interpretive potential. Further, there is a very real danger of the model overdetermining the data or creating categories relevant only to the specific questions of a particular research agenda. This is of course true for any explanatory model, archaeological or otherwise. We enunciate this platitude to introduce a wider point: although interpretation and cross-cultural comparison require the use of models, starting with a specific model of interaction necessarily presupposes a certain mode, dynamic, or directionality (e.g., core-periphery; cf. Stein 2002:903–904). Of course, almost any "traditional" archaeological model of cultural exchange is susceptible to this type of bias. The principal difficulty lies in another obvious fact: intercultural contacts and interregional patterns of interaction are rarely one-dimensional. Therefore, the relationship between such phenomena and wider processes often cannot be explained fully by using only one model, no matter how scientific, systematic, or multidimensional that model may be. In this sense, departing from a top-down, specifically archaeological model of interaction often limits the possibilities to consider how shared material culture is negotiated in or between distinct cultures, agents, or contexts.

The recent theoretical and methodological trends noted above seek to counter these problematicals. Such revisions in no way suggest the weakness of current models. Rather, the recognition of limitations and appropriate revision of prior frameworks are integral components of theory building (Kardulias and Hall 2008:574). We do not seek to create a "straw man" argument here, nor do we suggest that all approaches to (or models of) interaction in ancient Mesoamerica implicitly accept, for example, a core-periphery dichotomy. In the event, however, one might ask if models, like typologies, are "necessary evils" in archaeological research, in which we trade off certain advantages for less desirable aspects. We agree that archaeologists

need models to interpret and explain patterns in the material record suggestive of interaction. Nevertheless, it is prudent to avoid converting such models into static and preconceived theoretical-methodological straitjackets that are applicable in all contexts (see Pauketat 2007).

To avoid this temptation, archaeologists often have turned to adopting and adapting models from other disciplines—similar to the application of WST or SNA to archaeological questions. For example, Michael Smith (2011b:595), suggests that art history may offer useful methods and concepts that can be applied in archaeological research. A number of scholars in this field have developed ways of thinking about issues of interest to the archaeological study of interaction (e.g., Baxandall 1985; Kubler 1962; Panofsky 1955; Pasztory 1989, among others). This is particularly true in terms of the consideration of shared styles and/or symbolic content as both indexical and specifically indicative of intercultural exchange (despite inherent difficulties in the empirical quantification of such aspects). Further, contemporary art history is decidedly materialist in focus (e.g., Klein 1982; Morphy 2010; Yonan 2011). Finally, researchers in art history regularly treat episodes of interaction, particularly in studies that consider non-Western and pre-Columbian foci.

Likewise, linguistics provides a number of conceptual models that may be profitably applied in archaeology. Indeed, there is a long history of examining archaeological and linguistic correlations in the material record (e.g., Beekman and Christensen 2003; Bellwood 1979, 2001; Bellwood and Renfrew 2002; Kaufman 1976; Josserand 1975; Josserand and Hopkins 1999; Renfrew 1987). Nonetheless, as Kerry M. Hull (chapter 4 in this volume) notes, like archaeological data, linguistic evidence is rarely complete or conclusive, and the two data sets often contradict each other. Further, archaeologists rarely adopt or integrate linguistic models into their own theoretical conceptualizations of interaction—or at the least, the actual use of linguistic methodologies in archaeology is quite limited.[8] Rather, researchers generally prefer to marshal linguistic evidence that supports archaeological claims (or vice versa). In this sense, true intersections of interdisciplinary models are not as common as one might hope or expect.[9] One could be forgiven for thinking that archaeological calls to consider theoretical models from other disciplines is not unlike archaeologists' complaints regarding typologies: we pay lip service to the inherent limitations of our current conceptual toolkit, yet we continue to employ the very models that we recognize as flawed. These considerations are intensely personal for us, insofar as our own research is located at the intersection of archaeology and art history. Moreover, as we suggest in chapter 3, the adoption of linguistic terminology (see Haspelmath 2009; Haspelmath and Tadmor 2009) and conceptions of interaction may clarify several problematical issues that arise in archaeological treatments of the subject.

Finally, we would like to add a note regarding the archaeometric techniques that are often employed to infer interaction—for example, on the basis of a common source for objects or their constituent materials found in geographically distinct locations (e.g., Blomster et al. 2005; Cheetham 2007, 2010; Cheetham et al. 2009). There is no doubt that archaeometric methods have contributed substantially to archaeological research, particularly in terms of empirically grounding interpretive inferences. Although archaeometry is a fundamental tool for gaining a fine-grain understanding of material relationships, it cannot in itself account for or explain the interaction that its techniques assist in identifying. Additionally, archaeometric studies are often particularly prone to overlooking the broader sociocultural processes of which such interaction was a part (the investigations cited above are notable exceptions). This critique is related to the broader difficulty noted previously regarding the study of interaction itself: we risk converting the description of a phenomenon, however detailed, into the explanation of that phenomenon.

In the end, models that assist in explaining interaction in the past wind up doing very similar things in the majority of cases. A given model—be it based on WST, SNA, trade, migration, or something else—may be capable of explaining relationships (or mechanisms of interaction) more robustly than another in a specific context. Nevertheless, we would argue that there is no single, unified theory (or model) capable of explaining interaction in all contexts. Monolithic theoretical models that depart from a normative position (e.g., classical economics) or assume the smoothness of human interaction will ultimately fall short in their total explanatory power, precisely because distinct modes of interaction operate in different ways and for discrete purposes, and leave behind variable material traces. Ultimately, however, all approaches must eventually account for that fact that in a given case feature A may be found earlier in culture X than in culture Y (or region, site, etc.). Treatments must also be able to describe and explain the significance of this fact in terms of the individual behaviors and sociocultural processes at play in societies in the past. In terms of this volume, the majority of chapters are perhaps less concerned with the specific mechanisms by which interaction took place, and more focused on the processual outcomes of such interaction, its material manifestations, and its relationship to wider sociocultural dynamics. In this sense, all strive to contribute to a broader discussion on interaction in the Mesoamerican past, in order to improve extant models and conceptualizations. We hold that it is only via critical, integrative approaches that researchers can aspire to particular and total description and explanation of archaeological phenomena.

STRUCTURE AND ORGANIZATION OF THIS VOLUME

Spanning the geographic and temporal extent of Mesoamerica, the chapters in this volume critically interrogate the above issues as well as many others. The contributions treat various historical episodes of interaction, and they marshal a wealth of information of different kinds in their analyses. Individually, the contributions advance the study of Mesoamerican cultural dynamics beyond strictly archaeological approaches. Each of the chapters raises significant questions about the ways in which interregional interaction and sociocultural structure simultaneously constrain and enable one another. In doing so, contributors provide insight into how sociopolitical, ritual-religious, economic, and other culturally constructed institutions fed into ancient systems of interregional interaction and many times were themselves created by such interaction. As a group, they provide a holistic approach to the study of interaction and cultural dynamics, exploring the strong conceptual ties between these intimately related processes. By juxtaposing various lines of evidence and distinct methodological approaches, the chapters move beyond monolithic or singular emphases. Thus, the volume seeks to achieve a multidimensional perspective, allowing for a rich understanding of the larger cultural systems that at once reflected interregional interaction and produced cultural meaning in ancient Mesoamerica.

To achieve this goal, contributors critically examine specific case studies that highlight the interactive and integrated nature of the region and its cultures. The chapters build on and amplify earlier research to engage such sociocultural phenomena as movement, migration, symbolic exchange, linguistic borrowing, scribal practices, trade systems, and material interaction in their role as catalysts for variability in cultural systems. Individual chapters adopt interdisciplinary treatments of interregional interaction, presenting a variety of case studies drawn from multiple spatial, temporal, and cultural contexts, including previously understudied regions and temporal periods, such as northwestern Mesoamerica and the "initial" Early Formative period (ca. 2000–1500 BC). Contributors combine perspectives and methodologies from diverse fields of study to further scholarly understanding of the role of interregional interaction in the creation of cultural paradigms, artistic production, systems of material and economic exchange, shared ritual-religious practices and belief systems, technological development and change, linguistic evolution, and specific human activities and agentive decisions in the Mesoamerican past.

The volume is comprised of fourteen chapters, including the introduction and conclusion. Individual chapters treat the primary topic of interregional interaction and cultural dynamics on various scales, ranging from panregional (chapters 1–3), macroregional (chapters 4–6; 9; 11–12), to microregional or site-specific (chapters 7–8; 10). These fourteen chapters examine in multiple ways and at several

interconnected degrees the dynamic cultural processes that contributed to the development of Mesoamerica as a complex whole throughout its history, as well as the developmental trajectories and dynamic sociocultural processes at play in its various constituent cultures. In addition to scalar variability, chapters examine diverse indicators of interregional interaction, and vary in their approaches and evidentiary focus. Primary data sets examined include ceramics (chapters 2, 5), scribal practices (chapter 3), linguistics (chapter 4), iconography and symbolism (chapters 6–7, 10), obsidian and lithics (chapter 8), settlement patterns (chapter 9), and metals (chapter 11). Methodological treatments range from "traditional" archaeological analyses (chapters 7, 9) to art historical (chapters 5–6), linguistic (chapter 4), and archaeometric (chapter 8) techniques, as well as multidimensional, cross-disciplinary analytic methods that examine a combination of data sets within variable interpretive frameworks (chapters 2–3, 10–11).

Due to the diverse nature of the individual contributions, chapters are arranged in rough chronological order based on their primary temporal focus, progressing through the Formative (2000 BC–AD 250; chapters 2–4), Classic (AD 250–950; chapters 5–8), and Postclassic (AD 950–1521; chapters 9–11) periods—though overlaps and diverse temporal foci are evident in some chapters (e.g., 4, 7, 9). Finally, chapters 1 and 12, by Gary M. Feinman and Joyce Marcus, respectively, are slightly more theoretical in nature, and thus serve—along with this introduction and David Freidel's conclusions—to bind together a complex discussion and diverse perspectives into a coherent whole.

As editors, we have designed the volume so that each contributor offers a unique methodological approach to interaction or investigates particular temporal or spatial foci. We have further tried to balance specific case studies against the theoretical discussion of diverse and heterogeneous processes that underlie interaction and exchange. We simultaneously seek to emphasize the diversity of approaches to the range of data presented in individual contributions while underscoring points of commonality among the chapters. In this sense, one may conceive of the studies collected here as distinct voices in an ongoing dialogue among the contributors, with individual chapters at once standing alone and complementing each other.

CONCLUDING THOUGHTS

No single volume can possibly account for or offer definitive conclusions to the critical queries that continue to surround the archaeological study on interaction and its relationships with dynamic cultural processes. It is precisely because of the complex and polymorphic nature of interaction that in this volume we bring together a diverse set of perspectives to contemplate core questions regarding interaction and

to highlight the need for a multidisciplinary approach to the subject. We believe that through this synergy we can begin to capture some of the complexity that archaeologists and researchers in kindred disciplines confront when researching interregional interaction. Moreover, we view such a conjunctive approach as more informative and insightful than looking at any one context in detail or focusing on a specific data set from a single methodological perspective. This is because a holistic, interdisciplinary approach and the application of transdisciplinary methods to multidimensional data sets bring to light new data, methodologies, and perspectives that contribute to contemporary academic debate. By providing a greater range of empirical data and offering novel conceptualizations of fundamental issues, integrating approaches provoke pertinent questions and have the potential to refine current theoretical models that relate interregional interaction with cultural processes in variable contexts. Researchers are thus better equipped to create explanations that more faithfully reflect culturally, spatially, or temporally specific configurations, modes, and dynamics in patterns of interaction. We therefore contend that the adoption of such an approach not only makes this volume unique, but also complements previous treatments.

Further, the critical reassessment of previous models and commonly held assumptions raises theoretically important questions that go beyond typical archaeological treatments of the effects of interaction. Such questions focus attention on the construction, negotiation, and transformation of cultural identity, ethnicity, individual agency, the continuity of regional traditions, and shared geographic and cultural spaces. For example, do distinct forms and modes of intercultural exchange (e.g., reciprocal or unidirectional) have similar effects across contexts, or are outcomes contingent on historical-cultural particulars? How can we reconcile the cultural mapping of Mesoamerica, which usually depicts clear demarcations of linguistic and/or ethnic divisions, with the evident overlap in spheres of interaction and shared traits? How did geographic and ecological diversity facilitate interregional interaction and/or pan-Mesoamerican culture, and how does this factor in to considerations of cultural dynamics at distinct scales?

In this volume, neither we nor the contributors pretend to respond definitively to these queries. However, the dialogue contained herein greatly assists in thinking through these issues, offering new directions, and creating a nuanced understanding of the role of interaction and its interface with dynamic cultural processes in pre-Columbian societies. For example, Timothy J. Knab and John M. D. Pohl's analysis (chapter 10) of the motivations behind interregional exchange, in terms of the rotating power structures that they identify in contemporary and prehispanic Cholula, contributes to a greater understanding of how agents employed interaction to forge communal identities in shared cultural spaces. Their chapter also questions

traditional models of Mexica hegemony in the Postclassic Mesoamerican world, suggesting that forms and modes of interaction are indeed contextually contingent. Marcus reaches a similar conclusion regarding contingency in her examination of distinct modes of interaction in two regions. In addition, Marcus further contextualizes the role of interaction in localized power competitions, highlighting the transformative potential of competitive interaction at the local scale—a capacity often overlooked in traditional explanations that privilege unidirectional, extraregional exchange. Charles L. F. Knight's (chapter 8) treatment of obsidian exchange involving the site of Cantona similarly interrogates questions of hegemony and unidirectionality in considerations of interaction. His analysis—like those of D. Bryan Schaeffer (chapter 5), Philip J. Arnold III and Lourdes Budar (chapter 7), and Jesper Nielsen et al. (chapter 6)—contributes to a fuller understanding of Classic period webs of interaction and regional traditions. These authors make clear that cultural exchange between southeastern and central Mesoamerica at this time was far more complex and dynamic than many have previously considered, involving numerous independent polities beyond the umbra and gravitational pull of Teotihuacan and/or the Maya lowlands.

On the other hand, the chapter by Kerry M. Hull, as well as our own contribution, places in relief the difficulties inherent in the mapping of archaeological cultures. Although the circumscription of such cultures is often clearly demarcated on maps, the linguistic and art historical analyses presented in these chapters reveal new data that highlight overlapping interaction spheres and add to scholarly interpretations of, for example, "Olmec" influence throughout the region. Moreover, our chapter offers suggestions for a new analytic vocabulary, based on linguistic terminology, which has the potential to add precision to archaeological conceptualizations of interaction. Finally, Guy David Hepp's chapter 2 introduces new evidence on the Early Formative period in coastal Oaxaca, providing much-needed data that speaks to the Archaic-Formative period transition. His analysis of exchange relationships involving the site of La Consentida not only carries significant implications for the development of the Red-on-Buff ceramic horizon, but also sheds light on the origins of cultural and linguistic divides between Otomanguean and Mije-Soke groups. Hepp's chapter thus illuminates multiple issues that complement both other chapters and previous studies, including those related to cultural mapping, interaction spheres, and the scale and directionality of interregional interaction during a crucial yet understudied transitional period in Mesoamerican history.

These are but a few examples of the insights and new understandings that emerge from the conjunctive, interdisciplinary perspectives espoused in this volume. Each author marshals different types of evidence and theoretical approaches, and all provide a unique perspective in the dialogue surrounding the relationships between

interaction and cultural dynamics, as well as the place of interaction studies in archaeological investigation. The common thread that serves to bind together the disparate chapters and foci presented in this volume is that all authors seek to question traditional conceptions and models of interaction in a wealth of discrete Mesoamerican contexts. The fact that individual contributions are not explicitly limited to a single spatial or temporal context or specific case study—and that many chapters explore regions and/or temporal contexts infrequently treated in previous investigations—enhances this critical interrogation by expanding its scope and providing new comparative data that feed into improved theoretical models. Indeed, the integrative approach advanced here underlines the need to create new conceptual models capable of further elucidating the complex, multifaceted relationship between interaction and cultural processes in the contexts of any number of ancient societies. Thus, building on received scholarship regarding interaction and sociocultural process, this volume seeks to contribute to contemporary debate by placing in relief multiple contexts, bringing to light new evidence, and offering novel approaches that may be applied in cross-cultural perspectives to improve understanding of a phenomenon that remains of great archaeological interest, in pre-Columbian Mesoamerica and beyond.

NOTES

1. Of course, demonstrating these patterns is an important step in the research process—as long as identification is not conflated with explanation of the phenomena.

2. It is, however, difficult to completely discredit the notion of causality, although this may be due to terminological confusion or the conflation of "causality" with "correlation."

3. This is especially cogent given the insight now provided by genetic research that in many instances clearly indicates migration events.

4. For example, the explanation of similar suites of material culture on Crete and mainland Greece in the Late Bronze Age (see, e.g., Matthäus 1980; Wright 2006; cf. Bouzek 1996; Dickinson 1996). At its heart, as Voutsaki (1999) notes, such an explanation boils down to a nebulous "diffused Minoan influence." In Mesoamerica, a similar problematical is evident in discussions of Teotihuacan "influence" throughout the Early Classic period. That is, the appearance of talud-tablero architecture or the tripod vessel form is often viewed as unilaterally indicative of a specifically "Teotihuacan" or a more nebulous "Central Mexican" presence and influence in the Early Classic period Maya lowlands and elsewhere (e.g., Ball 1983; Bove 1990; Cheek 1977; Demarest and Foias 1993; Sanders 1977; cf. Bove and Medrano 2003; Braswell 2003b; McKillop 2004:182–186; Pendergast 2003).

5. Although it may appear that this conception falls in line with our view of interaction as both cause and effect of higher-order dynamics, in truth Renfrew's position, in our

reading, is more aligned with the causal-functional perspective, insofar as it conceives of the materialized (or institutionalized) trade network itself as a cause, be it proximate or ultimate.

6. Some readers may interpret this critique as somehow antithetical to cross-cultural comparison. We would take issue with such a reading, since we argue throughout that such comparison is at the heart of anthropological archaeology. However, such comparisons must be based on a culturally relative, anthropological understanding of the data on their own terms—not on contemporary or formalist perceptions of what constitutes, for example, a "market" or "mercantile system." That is, generalizing, top-down approaches to archaeological explanation do offer more comparative potential, but scholars must not lose sight of individual developments that are unique to particular sociocultural contexts, since such variable historical particularities are also a core focus of anthropological archaeology. Thus, if archaeologists seek to offer interpretations specific to the societies under investigation, it seems reasonable to at least try to develop an emic model before imposing more generalizable comparative categories based on debatable criteria.

7. Indeed, one might consider prestige goods theory itself as a type of Social Network Analysis.

8. That archaeologists use linguistic models for migration to support explanations for changes in material culture (see, e.g., Renfrew 1987) is not the same as truly integrating or using linguistic models or methods.

9. Although Smith (2011b:595) gives a nod to the possibility, he ultimately admits that a full consideration of the potentialities of art historical models in archaeological studies of style and interaction are "beyond the scope" of his chapter.

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