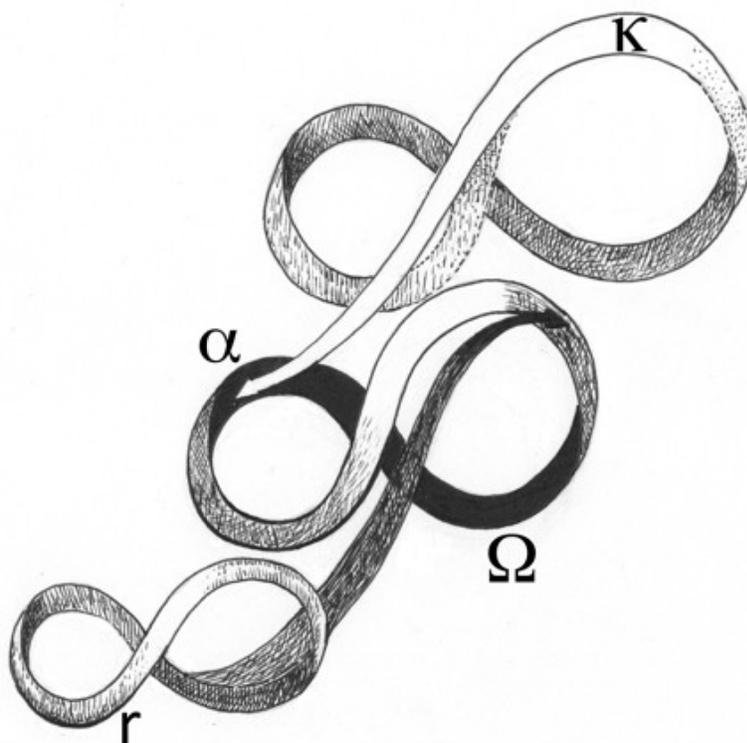


Center for Archaeological Investigations, Southern Illinois University Carbondale

Twenty-Ninth Annual Visiting Scholar Conference

**Beyond Collapse:  
Archaeological Perspectives on Resilience,  
Revitalization & Reorganization in Complex Societies**



March 1-2, 2013

Sponsored by  
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## ACKNOWLEDGMENTS

There are many people who helped make this conference a reality, and I am grateful for all of their efforts. First, I would like to thank the members of the archaeological oversight committee, Mark Wagner, Heather Lapham, Paul Welch, Izumi Shimada, and Andrew Balkansky, for their guidance and assistance with the abstract selection and schedule development. A special thanks is owed to Paul Welch for offering up his expertise on the Mississippian cultural tradition for the Cahokia excursion. I would like to thank Ms. Betty Cleeland for her kind financial support, which reduced registration fees for all, and allowed students to attend free. The support, guidance, and assistance provided by Mark Wagner and Heather Lapham from the Center for Archaeological Investigations was integral to the process of organizing the conference, and I cannot thank them enough. I am also grateful to Pat Eckert and her staff at Continuing Education and Outreach for handling the conference registration and providing much needed logistical support. I appreciate the efforts of Mary Lou Wilshaw-Watts and Robin Adams, who devoted much time to helping work out the details and ensuring things ran smoothly. I would also like to express much gratitude to the student volunteers (listed below), whose energetic and enthusiastic support has been essential to the conference operations.

Of course, a conference is only as good as its contributions, and I am humbled and honored to have such a distinguished group of participants. I would like to give special thanks to the members of the discussion panel, Thomas Emerson, Gary Feinman, Dan Healan, Rebecca Storey, and Joseph Tainter, for their insights, but I owe a debt of gratitude to all of the presenters for their challenging and intriguing contributions toward furthering our understanding of complex societies. Thank You.

Ronald K. Fauseit Jr.  
2012-2013 CAI Visiting Scholar

### STUDENT VOLUNTEERS

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Brandy Dacus  
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\*Conference Logo by Betty Cleeland, redrawn from Figure 3-10, Holling, Gunderson, and Peterson (Chapter 3, Page 75), in *Panarchy* (2002), edited by Lance H. Gunderson and C.S. Holling, Island Press, Washington

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PROGRAM OF THE 29<sup>TH</sup> CAI VISITING SCHOLAR CONFERENCE

**Beyond Collapse: Archaeological Perspectives on Resilience, Revitalization & Reorganization in Complex Societies**

March 1-2, 2013

Center for Archaeological Investigations  
Southern Illinois University Carbondale  
Carbondale, IL

Organized by Ronald K. Fauseit, Ph.D.

**Friday, March 1**

8:00 – 8:30      **Registration**

**Session 1: Reconsidering the Collapse of Complex Societies**

8:30 – 8:55      **Rebecca Storey** (University of Houston) and **Glenn R. Storey** (University of Iowa)  
Questioning the Maya Collapse

8:55 – 9:20      **Tristram R. Kidder, Michael Storozum, Qin Zhen** (Washington University St. Louis), and **Liu Haiwang** (Henan Provincial Institute of Cultural Relics and Archaeology)  
New Perspectives on the Collapse and Regeneration of the Han Dynasty

9:20 – 9:45      **Thomas Emerson** and **Kristin Hedman** (Illinois State Archaeological Survey)  
The Consolidation and Dissolution of Cahokia: Native North America's First Urban Polity

9:45 – 10:10    **Gary Feinman** and **Linda Nicholas** (The Field Museum)  
After Monte Albán in the Central Valleys of Oaxaca: A Reassessment

10:10 – 10:25    **Session 1 Q&A**

10:25 – 10:35    **Break**

**Session 2: Persistence/Perseverance during Sociopolitical Transformation**

10:35 – 11:00    **Christopher Pool** and **Michael L. Loughlin** (University of Kentucky)  
Tres Zapotes: The Evolution of a Resilient Polity in the Olmec Heartland of Mexico

11:00 – 11:25    **Scott Hutson** (University of Kentucky), **William Vanessendelft** (Tulane University), and **Miguel Covarrubias** (Instituto Nacional de Antropología, Centro Regional Yucatan)  
Reorganization and Resiliency in Three Acts: A Case Study from the Northern Maya Lowlands

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11:25 – 11:50 **Geoffrey McCafferty** (University of Calgary) and **Meaghan Peuramaki-Brown** (Brandon University)  
Surfing the Classic Collapse in Central Mexico: Cholula through the Classic to Postclassic Transition  
(400-1200 C.E.)

11:50 – 12:00 **Session 2 Q&A**

12:00 – 1:30 **Lunch**

**Session 3: Socioecological Crisis and Resilience Theory**

1:30 – 1:55 **Jerald D. Ek** (University of Albany)  
Socioecological Regime Change and the Collapse of Ancient Complex Societies

1:55 – 2:20 **Jakob Sedig** (University of Colorado, Boulder)  
The Decline and Reorganization of Southwestern Complexity: Using Resilience Theory to Examine the  
Collapse of Chaco Canyon

2:20 – 2:45 **Gyles Iannone** (Trent University)  
Release and Reorganization in the Tropics: A Comparative Perspective

2:45 – 3:10 **Andrea Torvinen, Michelle Hegmon, Ann P. Kinzig, Margaret C. Nelson, Karen Schollmeyer, and  
Colleen Strawhacker** (Arizona State University)  
Transformation without Collapse: Three Cases from the US Southwest

3:10 – 3:25 **Session 3 Q&A**

3:25 – 3:35 **Break**

**Session 4: Environmental Adaption and Sustainability**

3:35 – 4:00 **Victor Thompson** (University of Georgia)  
Finding Resilience in Ritual and History in South Florida

4:00 – 4:25 **Chris B. Rodning, Jayur Mehta, and Bryan S Haley** (Tulane University)  
Resilience, Persistence of Place, and the Native American Settlement at the Sims Site, St Charles Parish,  
Louisiana

4:25 – 4:50 **Trish Jackson** (South Dakota State University)  
Endings of the Greenlandic Norse - Emerging Evidence Against Social Collapse

4:50 – 5:00 **Session 4 Q&A**

5:00 – 5:15 **Break**

5:15 – 6:00 **Keynote Address: Joseph A. Tainter** (Utah State University, Logan)  
The Roots of Complexity: Why Collapse is So Difficult to Understand

6:30 – 8:30 **Reception at Starview Winery**

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## **Saturday, March 2**

8:00 – 8:15      Coffee

### **Session 5: Post-collapse Reorganization and Regeneration of Complex Societies**

8:15 – 8:40      **Stacy Dunn** and **Ashley Heaton** (Tulane University)

Local Elite Resilience During the Late Intermediate Period, Central Coast of Peru

8:40 – 9:05      **Julie A. Hoggarth** (Penn State University) and **Jaime J. Awe** (Institute of Archaeology, National Institute of Culture and History, Belize)

Social Reorganization and Household Adaptation in the Aftermath of Classic Maya Collapse at Baking Pot, Belize

9:05 – 9:30      **J. Heath Anderson** (Wooster College), **Robert H. Cobean** (Instituto Nacional de Antropología e Historia), and **Dan M. Healan** (Tulane University)

Collapse, Regeneration, and the Origins of Tula and the Toltec State

9:30 – 9:55      **David B. Small** (Lehigh University)

Using Complex Adaptive Systems as a Heuristic Model for Understanding the Rise of Community Complexity in Iron Age Crete

9:55 – 10:10      **Session 5 Q&A**

10:10 – 10:20      **Break**

### **Session 6: Revitalization in the Aftermath of Collapse**

10:20 – 10:45      **Christina A. Conlee** (Texas State University, San Marcos)

Restoration of Complex Societies Following Collapse and Abandonment in Nasca, Peru

10:45 – 11:10      **Matthew Spigelman** (New York University)

Revitalization and Reconfiguration in Twelfth Century B.C.E. Cyprus

11:10 -11:35      **Katie Lantzas** (Chestnut Hill College)

Reconsidering Collapse: Identity, Ideology, and Post-Collapse Settlement in the Argolid

11:35 – 11:45      **Session 6 Q&A**

11:45 – 1:20      **Lunch**

### **Session 7: Socioeconomic Resilience and Adaptation After Collapse**

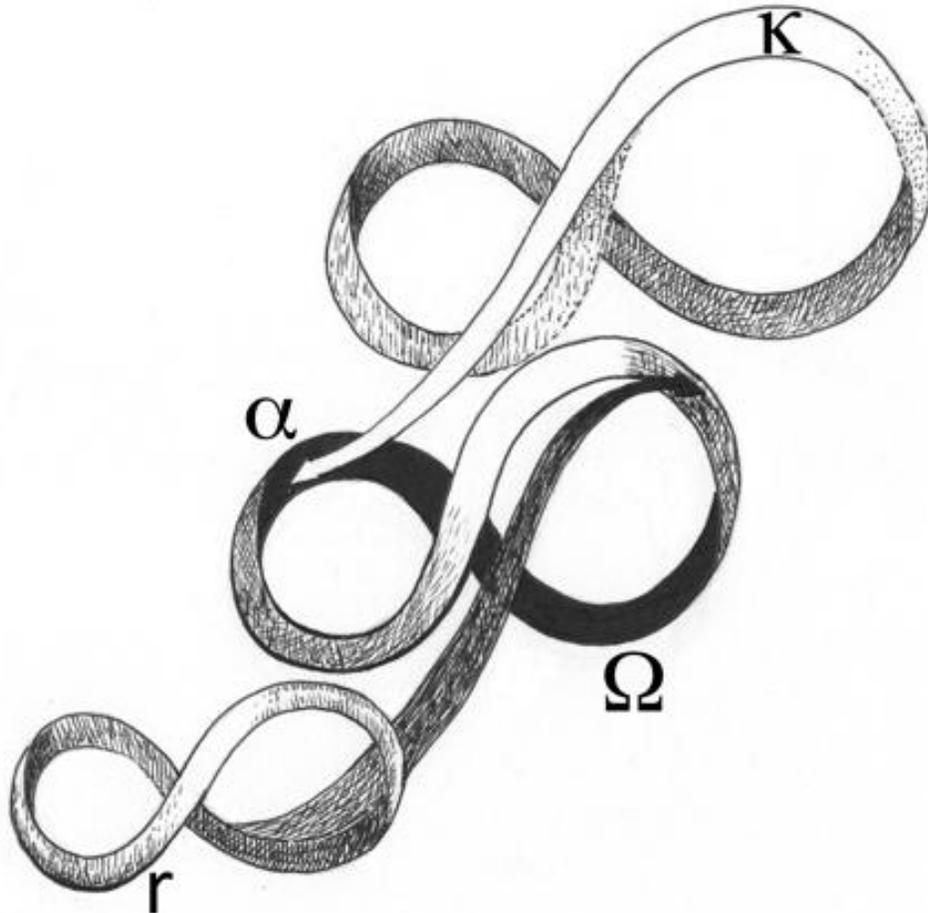
1:20 – 1:45      **Kari Zobler** (University of Illinois-Urbana) and **Richard C. Sutter** (Indiana University - Purdue University Fort Wayne)

A Tale of Two Cities: Continuity and Change Following the Moche Collapse in the Jequetepeque Valley, Peru

1:45 – 2:10      **Maureen Meyers** (Independent Researcher)

The House that Trade Built: Exchange Before and After the Collapse of Mississippian Chiefdoms

- 
- 2:10 – 2:35 **Nicola Sharratt** (American Museum of Natural History/Bard Graduate Center)  
Crafting a Response to Collapse: Ceramic and Textile Production in the Wake of Tiwanaku State Breakdown
- 2:35 – 3:00 **David Kohrman** (Western Michigan University)  
Special Topic: Forgotten Detroit
- 3:00 – 4:00 **Session 7 Q&A, Break, Poster Discussions**
- 4:00 – 6:00 **Round Table Discussion**  
Panel Members: Thomas Emerson, Gary M. Feinman, Dan M. Healan, Rebecca Storey, and Joseph Tainter



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## Abstracts

### **Session 1: Reconsidering the Collapse of Complex Societies**

#### ***Questioning the Maya Collapse***

*Rebecca Storey (University of Houston) and Glenn R. Storey (University of Iowa)*

There is a concerted effort, long overdue, to stress the continuity of the Maya and their resilience into the Postclassic period by Maya scholars. Recent works, such as Diamond's *Collapse*, have again brought the Classic Maya collapse to the fore as a possible instructive example for the contemporary United States and the world. While too many of the public are under the impression that the Maya disappeared (Diamond makes it clear that they did not), the scholars have started to question the whole idea of a Classic Maya collapse. As with recent scholarship about Late Antiquity of the Roman Empire, they wish to speak and describe instead a "transition." The regeneration of the Maya Great Tradition in the Postclassic involved important economic and political institutions, but salient aspects of the Classic Maya Great Tradition were lost. More importantly, what happened to the several million inhabitants of the Classic Maya heartland? Why was that area largely archaeologically empty for centuries after? The Maya are an example of regeneration and resilience with continuities from the Classic period into the Postclassic but are also an example of collapse, as defined by loss of population size and density and part of their Great Tradition. This collapse took several centuries and moved from south to north in the Maya Lowlands, but to claim there was no collapse, only transition, is an inadequate description for the abandonment of what had been the heartland.

#### ***New Perspectives on the Collapse and Regeneration of the Han Dynasty***

*Tristram R. Kidder, Michael J. Storzum, Qin Zhen (Washington University St. Louis), and Liu Haiwang (Henan Provincial Institute of Cultural Relics and Archaeology)*

China claims an unbroken 4,000-year-long history. This history, however, includes multiple episodes of socio-political failure and renewal. We use richly detailed and complementary archaeological, historical, and environmental data from the lower reaches of the Yellow River to investigate the collapse of the Western Han dynasty and its reconstitution as the Eastern Han. In the first three decades of the Common Era, Yellow River avulsion and massive flooding prompted the collapse of the Western Han. Although environmental disaster triggered this event, the Western Han dynasty's failure has no single cause. The weakening East Asian monsoon resulted in greater aridity with increasing variability in the amplitude and frequency of floods and droughts, while population growth coupled to agricultural and technological intensification led to significantly enlarged demands on natural resources. Assertions of authority by the central government and resistance to these claims by rival elites created domestic political strife at the same time that imperial expansion caused political, military, and economic crises at home and along the frontiers. These factors produced major structural contradictions that the state and society could not absorb. Thus, a complex interplay of climatic, environmental, demographic, and technological factors that accumulated over a long period of time led to a rapid cascade of ruptures in social, political, and economic structures that undermined the Western Han hold on government while encouraging novel political opportunities exploited by the

Eastern Han to legitimize their claim to the Mandate of Heaven. The Han dynasty's collapse and regeneration exemplifies why understanding socio-natural systems requires a holistic approach.

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### ***The Consolidation and Dissolution of Cahokia: Native North America's First Urban Polity***

*Thomas E. Emerson and Kristin M. Hedman (Illinois State Archaeological Survey)*

The public is fascinated by the collapse of civilizations. Yet scholars know that societal failure is the norm. Cahokia was the earliest and greatest of the pre-European contact native polities. In the mid-1000s C.E., a religious, social, and political consolidation known as the Lohmann phase (1050-1100 C.E.) “Big Bang” signified the birth of Cahokia. Within a century (Stirling phase 1100-1200 C.E.), a Greater Cahokia administrative-political center had grown in size to cover 14.5 km<sup>2</sup>. But by the mid-1200s C.E., it was in steep decline and by the early to mid-1300s C.E. depopulated. We show that Cahokia was the first truly North American pan-Indian urban center comprised of culturally and probably linguistically diverse groups – we suspect that this very diversity was the root of its ultimate demise. We support that argument by a detailed examination of the usual suspects of collapse – famine, disease, nutritional stress, climate change, environmental degradation, warfare, and so forth. We suggest that while some of these factors would have placed stress on the social, political, and economic foundations of the polity, none were inevitably in and of themselves fatal blows. We attribute Cahokia’s dissolution to the collapse of its religious and political structure and the resulting fatal fraying of the tenuous social, political, and religious bonds that had been so carefully created by its eleventh century C.E. leaders. Ultimately it was the degeneration of the unifying religious and social bonds that held these diverse people together that was the “straw that broke the camel’s back.”

### ***After Monte Albán in the Central Valleys of Oaxaca: A Reassessment***

*Gary M. Feinman and Linda M. Nicholas (The Field Museum)*

After more than a millennium as the principal center in the Valley of Oaxaca (Mexico), the political power of Monte Albán significantly waned and its population declined. This episode of political decentralization, often linked to the Classic-Postclassic transition in the region (and beyond), has for generations been interpreted in many ways, including ethnic replacement, societal collapse and drastic population loss due to climatic change, shifts in key aspects of socioeconomic organization and leadership, and/or part of macroregional processes that rippled across Mesoamerica. Although some of these interpretive positions maintain more empirical support than others, all have been handicapped by chronological limitations that have channeled explicatory analysis into the consideration of a single transformation from one phase (Classic period, Monte Albán IIIB-IV) into another (Postclassic period, Monte Albán V). Recent advances in archaeological and ethnohistorical research have begun to define an extended temporal framework for this lengthy episode, allowing for the recognition of change along a range of dimensions in a less transformational and more continuous manner. Broadening the temporal and spatial frame in which we examine this transition provides little support for a central role for catastrophic or cataclysmic events. Instead, we find support for models that focus on shifts in the organization of political and economic power and the nature and directionality of human networks. We also emphasize elements of continuity within a broader context of change.

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## **Session 2: Persistence/Perseverance During Sociopolitical Transformation**

### ***Tres Zapotes: The Evolution of a Resilient Polity in the Olmec Heartland of Mexico***

*Christopher A. Pool and Michael L. Loughlin (University of Kentucky)*

This paper examines the question of why some polities persist and flourish long after their neighbors collapse. In particular, what accounts for the long-term resilience of some polities and the collapse of others under similar environmental conditions and processes? We argue that a key factor is the ability of leaders to enact variant political and economic strategies at different social and temporal scales as contingencies demand, while effectively articulating strategies between those different scales. Our study focuses on the polity of Tres Zapotes in the southern Gulf lowlands of Mexico, which alone among Olmec regional centers survived the collapse of the La Venta polity. Over the course of the Early and Middle Formative periods, complex polities centered at the capitals of San Lorenzo, Laguna de los Cerros, and La Venta experienced overlapping cycles of growth and collapse on half-millennial scales that resulted in political dissolution and regional depopulation. Only the then-over 400-year-old Olmec regional capital at Tres Zapotes, survived the collapse of La Venta, flourishing for another 700 years before suffering a long, slow decline. In a context of increasing intraregional competition and declining access to interregional exchange networks, political reorganization that distributed power among local factions while maintaining the regional dominance of the capital was critical to the resilience of the Tres Zapotes polity.

### ***Reorganization and Resiliency in Three Acts: A Case Study from the Northern Maya Lowlands***

*Scott R. Hutson (University of Kentucky), Willem Vanessendelft (Tulane University), and Miguel Covarrubias (Instituto Nacional de Antropología, Centro Regional Yucatan)*

In the Early Classic Period (app. A.D. 250 to 600), the local center of Ucí, in the northern Maya Lowlands, reached the height of its power, materialized by an 18 km long stone causeway connecting Ucí to smaller centers such as Kancab and Ukana as well as several small villages. The decline of Ucí resulted in demographic transformations and continuities as well as changes in local political organization that are not easily predicted by a cyclical understanding of complex societies. For example, after the decline of Ucí, the inhabitants of Santa Teresa, a small village 6 km to the northeast, built a ball court that also hosted ceremonies involving food consumption. Earlier villages did not have such spaces for such community-wide events. Thus, after Ucí, hinterland villages did not cycle back to an earlier evolutionary stage of decentralized existence. Rather, the community reorganization at Santa Teresa and elsewhere represents a new step in a historically particular political trajectory. On the other hand, Kancab had a monumental plaza coeval with the period of its integration with Ucí but which appears to have been abandoned after Ucí's decline. Nevertheless, the site eventually grew to its largest size in the Terminal Classic and Early Postclassic periods, during which the monumental plaza was reutilized. Kancab's rebound stands in contrast to larger sites in northern Yucatan that appear to diminish at the beginning of the Postclassic period. Kancab's resiliency is also underscored by the presence of abundant colonial period ceramics in its site core.

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## ***Surfing the Classic Collapse in Central Mexico: Cholula through the Classic to Postclassic Transition (400-1200 C.E.)***

*Geoffrey McCafferty (University of Calgary) and Meaghan Peuramaki-Brown (Brandon University)*

Growing up in southern California in the '60s with the Beach Boys for a soundtrack, surfing was an ideology that strongly framed experience: harnessing enormous forces of nature to rise above tumult only to be propelled forward as all around came crashing down. We use this metaphor to consider the developments at the ancient religious center of Cholula (Puebla, Mexico) during the Classic to Postclassic transition (400-1200 C.E.). This period is notable for the "collapse" of powerful polities centered at Teotihuacan and Monte Alban, and farther south the Classic cities of the Maya region. And yet, Cholula not only survived the collapse but grew to prominence as the predominant site in the central highlands with its ideological influence felt throughout Mesoamerica and as far south as the Greater Nicoya region of Nicaragua and Costa Rica.

This presentation will draw upon archaeological discoveries and reinterpretations of the past 25 years at Cholula, combined with recent theoretical considerations of the meanings of "collapse" and the processes found in its recognition. Because one of the important factors in Cholula's resilience seems to be its long-distance interactions, especially with the Gulf Coast Maya, it is appropriate to incorporate recent evidence for Maya presence in the central highlands. The discussion will include evidence from the major ceremonial center on and around the Great Pyramid, Tlachihualtepetl, as well as agency performed at residential sites around the city. Conclusions will include an alternative strategy on the part of the residents of Cholula as they negotiated the currents of change.

## **Session 3: Socioecological Crisis and Resilience Theory**

### ***Socioecological Regime Change and the Collapse of Ancient Complex Societies***

*Jerald D. Ek (University of Albany)*

The theory of adaptive change (or resilience theory) holds great explanatory value in understanding diachronic change in coupled human-environmental systems through time, including periods of rapid sociopolitical disjunction and collapse. One aspect of resilience theory--the socioecological regime concept--provides a particularly useful heuristic for understanding the collapse of ancient states and episodes of abrupt change in socioecological systems. As socioecological systems lose resilience, environmental or anthropogenic disturbances can sometimes trigger fundamental change within multiple coupled human-environmental dynamics. This cascading set of changes is here referred to as a "socioecological regime shift," representing a transition to a fundamentally new set of human/environmental dynamics. In archaeological research, we typically refer to these types of processes as transitional periods between evolutionary stages, archaeological cultures, development phases, or historical epochs. In this paper I examine the utility of the socioecological regime concept in understanding diachronic change in ancient state societies. A theory of adaptive change that can accommodate sudden conversions and upheaval in societies has important implications in archaeological research focusing on sociopolitical change. Further, a focus on socioecological regimes in the ancient world can help us understand not only instances of sociopolitical collapse and regeneration but also cases in which regeneration does not occur.

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## ***The Decline and Reorganization of Southwestern Complexity: Using Resilience Theory to Examine the Collapse of Chaco Canyon***

*Jakob Sedig (University of Colorado, Boulder)*

Recently, archaeologists working in the U.S. Southwest have used resilience theory to examine prehistoric cultural transitions. Much of this work has focused on the Mimbres and Hohokam archaeological cultures, but little attention has been paid to one of the most complex prehistoric cultures in North America: Chaco Canyon. In this paper I use the concepts of resilience theory to examine the decline and reorganization of Chaco Canyon. Southwest scholars have long debated the political, social, and economic structures of Chaco Canyon, the amount of influence it had on surrounding areas, and reasons for its decline/collapse in the mid-twelfth century A.D. I hope to elucidate some of these issues using the tenets of resilience theory. Chaco appears to be an excellent candidate for a resilience study. The concepts of memory, release, and reorganization—central to the adaptive cycle—were involved with the decline of Chaco and establishment of Aztec Ruins, a new political and social center to the north. Additionally, once Chacoan decline/collapse has been examined through the lens of resilience, it can be compared and contrasted to the Hohokam, another complex Southwestern society that has previously been studied by resilience theorists.

## ***Release and Reorganization in the Tropics: A Comparative Perspective***

*Gyles Iannone (Trent University)*

Recent calls for archaeologists to focus more of their efforts on crafting “integrated histories” for coupled socio-ecological systems have been intended to ground future-looking modeling exercises in the “long-term” (e.g., Costanza et al. 2007a, 2007b). This has stimulated the formation of transdisciplinary research teams aimed at examining issues of resilience and vulnerability, using case studies from a variety of different ecosystems and representing a range of core adaptive strategies. It has also necessitated the adoption of a common vernacular to facilitate communication between team members from diverse academic disciplines. Adaptive Cycles and Panarchy Theory have emerged as two potentially unifying heuristic devices in these transdisciplinary research endeavors. This paper explores the efficacy of these two related concepts, with particular emphasis on their use in the cross-cultural comparison of the rise, fall, and rise of tropical civilizations in the Americas and Asia. Of particular interest are (1) how best to differentiate between periods of release (collapse) and reorganization in the archaeological record, given the defining characteristics outlined in Adaptive Cycle Theory, and (2) how significant the “revolt” and “remember” components of the Panarchy model are in specific examples of release and reorganization.

### References Cited:

Costanza, Robert, Lisa J. Graumlich, and Will Steffen

2007a *Sustainability or Collapse? An Integrated History and Future of People on Earth*. MIT Press, Cambridge.

Costanza, Robert, Lisa Graumlich, Will Steffen, Carol Crumley, John Dearing, Kathy Hibbard, Rik Leemans, Charles Redman, and David Shimel

2007b Sustainability or Collapse: What Can We Learn from Integrating the History of Humans and Nature? *Ambio* 522-527.

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## ***Transformation Without Collapse: Three Cases from the U.S. Southwest***

*Andrea Torvinen, Michelle Hegmon, Ann P. Kinzig, Margaret C. Nelson, Karen Schollmeyer, and Colleen Strawhacker (Arizona State University)*

Archaeologists now recognize that many societies undergo major transformations that do not fit the classic model of collapse. Our comparative study of cases in the U.S. Southwest and northern Mexico has identified various kinds of transformations, including reorganizations that allow a transformed society to continue (e.g., continuity with change and transformative relocation) as well as complete social upheavals (i.e., “collapse”). We are also investigating underlying factors, especially those contributing to reorganization and continuity. Recent work found a general association between social conformity – indicated by a lack of material culture diversity – and severe transformations. This finding suggests that the converse – that is, diversity in various social realms – may contribute to less severe, non-collapse transformations. This paper evaluates that hypothesis through the comparison of three cases and the kinds of diversity involved in each. Specifically, we examine cooking technology, household organization, subsistence practices, local ceramic production and interregional interaction as distinct social realms. Our cases include the end of the Classic Period in the Hohokam region (ca. A.D. 1375) as a collapse, the Pueblo III to Pueblo IV transition in the Zuni region (ca. A.D. 1275) as continuity with change, and the Classic to Postclassic transition in the Mimbres region (ca. A.D. 1130) as transformative relocation. Our results allow us to clarify the influence social diversity may have on the type of transformation(s) to which a society is vulnerable. The analysis has implications for modern society by determining the vulnerabilities associated with social diversity, while acknowledging the trade-offs that accompany such decisions.

## **Session 4: Environmental Adaptation and Sustainability**

### ***Finding Resilience in Ritual and History in South Florida***

*Victor D. Thompson (University of Georgia)*

Much of the archaeological writing on resilience theory has tended to focus on subsistence economies and their interaction with environmental change as a way of examining socio-ecological systems. While these studies do not deny the role that ideological and historical aspects play in the dynamic interaction between humans and their environment, few treat such aspects of these systems as central to their analysis. This paper examines the history of built environment and the development of complex polities in the Okeechobee basin, and more generally south Florida, from a perspective that places history and ritual at the forefront of its analysis. The archaeological record of south Florida indicates that the hunter-gatherer-fishers of this region created and modified their landscapes through the construction of geometric earthworks, artificial ponds, and transportation canals, along with other expressions of the built environment, on a regional scale that was sustained for over 2,000 years. I suggest that the one of the primary reasons that these traditions were continued over such an extended time frame was the result of a unique intersection between the reliance on aquatic resources, season fluctuation and control of water flows, and the socio-political rituals associated with large-scale building projects. Such activities served to mediate environmental conditions and fluctuations, as well as facilitate community building and the sustainability of such traditions over protracted periods of time. I use this example to emphasize and explore the theoretical importance of both history and ritual when considering resilience in socio-ecological systems.

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***Resilience, Persistence of Place, and the Native American Settlement at the Sims Site, St. Charles Parish, Louisiana***

*Christopher B. Rodning, Jayur M. Mehta, and Bryan S. Haley (Tulane University)*

Resilience is the capacity of an ecosystem to absorb or to recover from disturbances and damage. Adapting this concept to archaeological perspectives on human settlements and societies, resilience is the capacity of a cultural system or a cultural landscape to absorb the effects of climate change and other long-term environmental changes, periodic storms, and short-term climatic episodes such as droughts and seasonal cycles, anthropogenic impacts on past landscapes, and cultural practices related to interactions within and between groups of people. Resiliency theory offers an interpretive framework with which to consider the archaeology of Native American settlement in coastal Louisiana, an area that experiences hurricanes and tropical storms, periodic inundation of land and wetlands, formation of new landforms due to alluvial deposition, and changes in coastal geography and ecology related to sea level rise. Meanwhile, archaeological evidence demonstrates the presence of broadly shared cultural traditions in coastal areas of Texas, Louisiana, Mississippi, Alabama, and northern Florida. This paper situates long-term developments in the archaeology of Native American settlements and societies in coastal Louisiana within the framework of resiliency theory, with particular emphasis on the Sims site, a multimound center in St. Charles Parish, located between Barataria Bay and the Gulf Coast to the south and the eastward-flowing Mississippi River to the north. Archaeological evidence demonstrates shifting settlement by hunter-gatherer-fisher groups in the environs of Lake Salvador and Bayou des Allemands, but Sims represents a permanent and persistent place within this landscape in southeastern Louisiana.

***Endings of the Greenlandic Norse – Emerging Evidence Against Societal Collapse***

*Trish Jackson (South Dakota State University)*

Few mysteries receiving attentive study remain unsolved for centuries. This is exactly what has occurred with the Norse colonies in Greenland, existing from A.D. 986~1450. Even with rich historic written records and abundant data from archaeological, environmental, and climate studies, scholars cannot agree on why the colonies vanished. Norse colonization of Greenland occurred during the height of the Viking Age (A.D. 793–1050), when the unusually warm climate melted much of the North Atlantic sea ice, removing any impedance to westward exploration. Geopolitical factors, tithing to the Church, and a cooling climate made life increasingly challenging in the colonies' later years with decreased access to important lifeways of hunting, trading, and travel. Archaeological evidence has firmly demonstrated the complexity of Norse society. Now, emerging evidence suggests that the Norse Greenlanders had equally complex and advanced adaptive strategies for mastering the environment, including pasture expansion and soil building and amendment. Additionally, recent climatic studies show that the Norse Greenlanders encountered dramatic seasonal weather shifts and storminess. This study draws from the written historical record and couples it with recent archaeological and climatological studies to formulate an evolved view on the capability of Norse Greenlandic colonies to survive. A further step takes on the question of why the Greenlandic Norse colonies died out by providing a fresh perspective on the question in light of this new evidence.

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## **Session 4: Keynote Address**

### ***The Roots of Complexity: Why Collapse Is So Difficult to Understand***

*Joseph A. Tainter (Utah State University, Logan)*

Often the most difficult part of science is asking the right question, and this is true of the study of collapse. Collapse explanations have a long history. Ancestral collapse literature can be traced to about 1000 B.C. in Mesopotamia and China. Yet even after 3,000 years of effort, we still find it difficult to understand phenomena that today we call by such terms as "collapse" or "rise and fall." Failure to resolve a processual question over a span of 3,000 years of effort must certainly place collapse among the great conundrums of historical science. In this presentation I will examine the roots of this dilemma, tracing our failure to understand collapse to the socialization that all scholars undergo. Socialization influences how phenomena are perceived and the values one assigns to research questions. Biases related to research on collapse make us vulnerable to deus ex machina explanations and have led to 3,000 years of asking the wrong question.

## **Session 5: Post-collapse Reorganization and Regeneration of Complex Societies**

### ***Local Elite Resilience During the Late Intermediate Period, Central Coast of Peru***

*Stacy Dunn and Ashley Heaton (Tulane University)*

In Andean archaeology, the dominant culture chronology used today describes times of expansionist empires (or "horizons") alternating with intermediate periods of regionalization, reflecting an emphasis on cyclical patterns of growth, collapse and reorganization of socio-political groups. Not well understood, however, are the differing local responses to political development and incorporation throughout these phases. The central coast during the Late Intermediate period [LIP] (A.D. 1100-1400) offers the opportunity to examine the coalescence of regional powers in the space created by the collapse of Middle Horizon (A.D. 600-1000) empires of Wari and Tiwanaku. With the lapse of widespread integration, the coast was constellated with small chiefdoms (señorios), who established new networks through conflict, trade, and political alliances.

This study focuses on the resilience of local groups in the Huaura Valley on the central coast during this process of decentralization and reintegration. Our recent investigations indicate this valley was not significantly involved in the Wari sphere of influence; thus the collapse did not initially greatly impact local Huaura elites. In the latter half of the LIP, however, the Chancay señorío expanded into the Huaura Valley. Motivated by the need for additional agricultural lands and pressure from competing señorios, the Chancay promoted local elites and founded new sites in the Huaura Valley at strategic locations for transport and defense. Our research reveals the degree to which local Huaura elites were able to maintain internal control and style through methods of incorporative resistance in this period of immense change and political uncertainty.

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### ***Social Reorganization and Household Adaptation in the Aftermath of Classic Maya Collapse at Baking Pot, Belize***

*Julie A. Hoggarth (Penn State University) and Jaime J. Awe (Institute of Archaeology, National Institute of Culture and History, Belize)*

Research focusing on the sociopolitical collapse of Classic Maya society is numerous, detailing the processes of depopulation, abandonment, and the cessation of carved monuments and elite paraphernalia in the central and southern Maya lowlands. Despite the large number of studies focusing on the processes of collapse at individual sites, geographic regions, and at variable chronological time frames, less attention has focused on the internal social responses by households to the dissolution of Classic political institutions. This study focuses on changing strategies of adaptation and social reorganization by noble and commoner households at a community within the Baking Pot polity of western Belize. Results from this study indicate that while the royals abandoned the palace complex of Baking Pot during the Terminal Classic period, households in Settlement Cluster C continued to persist at the site, developing new forms of economic, political, and ideological organization in the Terminal Classic and Early Postclassic periods. Using a quantitative approach to examine changes in the distribution of mercantile goods, feasting materials, and ritual items and deposits, noble and commoner households were found to employ variable strategies of social differentiation, community integration, and religious adaptation in the context of the disintegration of the state as well as in the subsequent period of social reorganization of the community in the Early Postclassic period.

### ***Collapse, Regeneration, and the Origins of Tula and the Toltec State***

*J. Heath Anderson (Wooster College), Robert H. Cobean (Instituto Nacional de Antropología e Historia), and Dan M. Healan (Tulane University)*

The collapse of the Middle Classic Teotihuacan state between A.D. 550 and 650 was felt throughout Mesoamerica but particularly in Central Mexico, much of which had been under its direct control. This included southwestern Hidalgo, the center of a highly structured regional settlement system apparently emanating from Teotihuacan that suffered large-scale abandonment with the latter's demise. Subsequently, however, the region experienced a resurgence that culminated in the rise of Tula and the Toltec state that came to dominate much of Central Mexico during the later Early Postclassic period. The focus of this paper is the time period during which the regeneration of complex society in the Tula region following the collapse of Teotihuacan occurred, which corresponds to the Epiclassic period (c. A.D. 650-900) in Central Mexico. Information obtained from regional survey and excavation over the past several decades indicates that the monolithic Teotihuacan-controlled settlement system in the Tula region was succeeded by a system composed of numerous localized, largely independent, and probably competitive polities of nonlocal origin associated with the Coyotlatelco ceramic complex. More recent excavation and analysis coupled with chronometric dating suggest that regeneration began with the consolidation of this fractious political landscape into a small regional state that subsequently grew into the Early Postclassic Toltec state based at Tula. We discuss the nature of these events and their implications for understanding the nature of Tula and the Toltec state in particular and their relevance to the topic of regeneration of complex societies in general.

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## ***Using Complex Adaptive Systems as a Heuristic Model for Understanding the Rise of Community Complexity in Iron Age Crete***

*David B. Small (Lehigh University)*

The end of the Bronze Age (ca. 1100–1000 B.C.E.) was quite devastating to Cretan culture. Gone were the major Minoan palaces as well as numerous smaller communities. Most of the traditions of the Bronze Age past were lost in the transition to the Iron Age (ca. 1000–700 B.C.E.). Settlements were small and not as complex as their Bronze Age ancestors. Yet by the seventh century, community evolution had come to produce a codified plan of social institutions, as seen by the recent work at seventh century Azoria. This presentation seeks to understand the recurrent rise of a this new form of social complexity by using concepts taken from Complex Adaptive systems and their inherent concept of phase transitions. My analysis will focus on isolating dominant emergent configurations of community institutions. Major and important institutional configurations will be identified and their connection to and separation from the late Bronze Age examined. Periods of community “chaos” or emergence of social change will be identified by isolating phase transitions through a sensitive look at the mortuary record to isolate social aggrandizers who would have hastened the emergence of new complex systems.

## **Session 6: Revitalization in the Aftermath of Collapse**

### ***Restoration of Complex Societies Following Collapse and Abandonment in Nasca, Peru***

*Christina A. Conlee (Texas State University, San Marcos)*

The Nasca region of Peru saw the rise and fall of complex societies over a period of 1,500 years. The Nasca culture was the first civilization that developed in the region around A.D. 1 and it came to its demise with the intrusion of the Wari state and deteriorating climatic conditions by A.D. 650. However, a true collapse did not occur because there was not a breakdown in the political system leading it to become less complex. Instead, Nasca was incorporated into a larger state and new types of alliances, entanglements, and resistances were created with important aspects of local society remaining intact. It was at the time of the Wari collapse around A.D. 900 that the disintegration of society occurred and resulted in the abandonment of the region. This true collapse was facilitated by Nasca’s interconnectedness with the intrusive state and by continued environmental changes. After a period of two hundred years, the region was once again inhabited and despite this severe disruption there was a reemergence of society that was in some ways profoundly different and in other ways reflected earlier traditions. Local small-scale sociopolitical institutions appear to have been reestablished and were key in revitalizing society. These included the irrigation and agricultural regimes that played an important role in the organization of social and economic relationships and in the creation of hierarchy. Pan Andean ideology and organization of family and community were also maintained and aided in the establishment of new settlements and restoration of society.

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### ***Revitalization and Reconfiguration in Twelfth Century B.C.E. Cyprus***

*Matthew Spigelman (New York University)*

Societies throughout the Eastern Mediterranean were integrated and interdependent during the Late Bronze Age, linked in a complex system of royal and merchant exchange relationships. Central to this system was the exchange of copper, produced in industrial quantities on the island of Cyprus. The dis-articulation of this system around 1200 B.C.E., and the concomitant shift to iron, brought about a wide range of local responses. In this paper I utilize Wallace's "Revitalization Movement" model to interpret changes on the island of Cyprus, in which segments of society created new symbolic relationships with the copper ingot form that had been central to exchange during the preceding period. The use of the Revitalization Movement model in an essentially a-historical setting presents interpretive challenges; however, it provides a more compelling explanation for the archaeological evidence than previously proposed "historical" invasion narratives or "processual" processes of gradual development.

### ***Reconsidering Collapse: Identity, Ideology, and Post-Collapse Settlement in the Argolid***

*Katie Lantzas (Chestnut Hill College)*

In this paper, I discuss the ideology and socio-economic practices of the communities in the Argolid during approximately 1200 B.C. through 900 B.C., which is the period following the "collapse" of the Mycenaean palatial centers. A thorough examination of mortuary practices, the built environment, ceramic material, and metal objects demonstrates that during this transitional period an ideological shift took place alongside complex socio-economic developments. An analysis of the material evidence does not indicate poverty and disorganization as has been previously argued. Rather, it illustrates the active formation of a new ideology and socioeconomic practices that privileged the individual and the domestic unit over the larger corporate group.

My analyses of the mortuary evidence and built environment demonstrate that, following the collapse of the Mycenaean palatial administration, the remaining communities maintained and developed practices that promoted the individual or the domestic unit. Analysis of specific examples from the ceramic material and metal objects dating to this period are used to discuss specific activities, such as production and exchange. Evidence from this data illustrates that these activities had, in all probability, taken place outside the direct control of the Mycenaean palatial administration and continued without substantial interruption throughout this period. This appraisal of the material culture dating from the Late Helladic IIIB 2 through Early Geometric period re-examines the period known as the "Dark Ages" and attempts to reconstruct the ideology and socio-economic practices of Iron Age communities in the Argolid, rather than simply presenting a catalog of archaeological remains.

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## **Session 7: Socioeconomic Resilience and Adaptation After Collapse**

### ***A Tale of Two Cities: Continuity and Change following the Moche Collapse in the Jequetepeque Valley, Peru***

*Kari Zobler (University of Illinois Champaign-Urbana) and Richard C. Sutter (Indiana University-Purdue University Fort Wayne)*

During the environmentally influenced demise of the Moche (A.D. 200-800), new archaeological and bioarchaeological data provide evidence that sites chose differential responses of resilience, including forging new political alliances, expanding economic production, and adopting new religious practices. Biological distance analyses show that adjacent highland Cajamarca peoples arrived in the Jequetepeque Valley and interbred with local inhabitants interred at San José de Moro during both the Late Moche (~A.D. 650-800) and subsequent Transitional (~A.D. 800-900) periods. Culturally, local ceramicists at San José de Moro reflected this influence by experimenting with hybrid vessels that blended local Moche forms and designs with highland ones. By contrast, recent excavations at the site of Talambo--located at the lower neck of the Jequetepeque Valley--indicate that the changes detected at San José de Moro and other sites in the valley were not uniform. Specifically, almost no evidence for adjacent highland influence was found at Talambo. Instead, investigation of independent craft production at Talambo indicates that local artisans thrived during the transition from the Late Moche through Lambayeque (~A.D. 900-1100) periods with minimal stylistic hybridization. We suggest that, unlike changes noted elsewhere in the Jequetepeque Valley, the population at Talambo was able to moderate external influence and remain economically independent during a period of environmental deterioration.

### ***The House That Trade Built: Exchange Before and After the Collapse of Mississippian Chiefdoms***

*Maureen Meyers (Independent Researcher)*

This paper traces the change in structures used for trade during the late prehistoric Mississippian and early historic period in the Southern Appalachian Southeastern region. Certain houses were used for exchange during the late prehistoric period in this region, and in some ways, particularly in size and location, they resemble later historic Cherokee council houses. Thus, there appears to be a material correlate of exchange that in some way stays constant throughout time in the region, despite the collapse of Southeastern chiefdoms and the rise of the so-called Civilized Tribes. There is constancy in the presence of a place of exchange; however, how and why that place is used differs because the nature of exchange was different between the prehistoric and historic periods. During the Mississippian period, it served to reinforce chiefly power while also providing a public space for communal feasting. After contact, exchange was done on a more individual basis, yet community was maintained through the use of council houses. Understanding how native economies transformed in this region will help us understand how they operated both before and after collapse in the Southeast. This research will provide specific examples of structures used for exchange prehistorically and historically and identify the role of the individual and the community in the maintenance of exchange systems over time.

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***Crafting a Response to Collapse: Ceramic and Textile Production in the Wake of Tiwanaku State Breakdown***

*Nicola Sharratt (American Museum of Natural History/Bard Graduate Center)*

The breakdown of regional economic networks and the cessation of craft specialization are both frequently cited as indicators or consequences of collapse, yet the impacts of this breakdown on local communities has received less attention. Trade and production were particularly significant for the diaspora communities of the Tiwanaku state in the South Central Andes. The establishment of distant Tiwanaku enclaves was motivated in part by economic demands, and these communities, located far from the Tiwanaku capital in the altiplano, mediated and reaffirmed their ties to the state center through the movement and production of goods. This paper examines evidence that the violent and drawn-out collapse of the state, beginning circa A.D. 1000, was accompanied by the disintegration of the trade ties that had linked colonial populations with their ancestral heartland. Focusing on recent excavations (2006-2012) at Tumilaca la Chimba, a village established by refugees fleeing the destruction of Tiwanaku state-sponsored towns in the Moquegua Valley, I explore how changes in the political superstructure and resource procurement impacted craft production in post-collapse communities. Drawing on both stylistic and chemical analyses, as well as data on the organization of production, this paper suggests that despite radical shifts in the wider political and economic environment, ceramicists and weavers at Tumilaca la Chimba found dynamic ways to reproduce earlier material forms and that craft goods were simultaneously a medium through which to reassert the rejection of elite authority and distance from the waning state and a powerful means of reaffirming cultural identity.

***Forgotten Detroit***

*David Kohrman (Western Michigan University)*

Of all the North American cities to suffer from urban decay after the Second World War, none is more notorious than Detroit. The city's racial problems, population loss, and massive modern ruins, such as the Michigan Central Station and Packard Plant, have become legendary. Recently the economic downturn of 2008 has heaped fresh attention on the city and its ruins with cover stories in national magazines and waves of disaster tourists from around the globe. Increasingly Detroit has served as the butt of jokes, as a symbol for what has gone wrong, and as a warning. I propose to briefly outline the history and patterns causing Detroit's decay, from the postwar decline of neighborhoods following factory closures and white flight and the subsequent transformation of the downtown into the "skyscraper graveyard" during the 1970s and 1980s to today's epidemic of shuttered public schools. In addition, I will discuss how the city's decline has been viewed and remembered by different groups who face the ruins. An abandoned skyscraper or factory, and the history behind them, mean vastly different things to people who live in their shadow, suburbanites, politicians, metal scavengers, ruin photographers, etc. Studying the experiences, and memories, of these groups in terms of the city's ruins is a vital component to a broader understanding of the city. Ultimately the insight gained sheds light on the history of decline, how the city struggles to rebuild itself, what ruins get preserved, and what ruins are swept away.

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## Posters

### ***Warfare and Reorganization: The Construction and Reuse of Fortifications on the Central Coast of Perú*** *Margaret Brown Vega (Indiana University-Purdue University Fort Wayne) and Nathan Craig*

A continued topic of debate along the coast of Perú is the emergence and reconfiguration of complex societies. Early research identified a pattern of fortification temporally dated to the end of the Early Horizon (EH, ca. 900-200 B.C.). Subsequent research in several coastal valleys characterized the late EH and the early Early Intermediate Period (EIP, ca. 200 B.C. – A.D. 200) as a transitional period marked by conflict, and characterized by important sociopolitical developments. Yet, due to our lack of understanding of these developments the period remains a “Dark Age.” Recent research in the Fortaleza and Huaura valleys of the Central Coast identified a pattern of early fort construction contemporary with the trend noted in other coastal valleys. A set of radiocarbon dates confirms that some fortifications in the Huaura Valley were constructed during the transitional EH/EIP period. This raises the possibility that stylistically similar fortifications also date to this period. Survey also found that few new fortifications were built after this period. Rather, the EH/EIP fortifications were reused and modified by later societies. Once constructed, extant fortifications helped shape subsequent social and political strategies. This paper examines the early pattern of fortification from a regional perspective and tracks the continued use of ancient fortifications during later pulses of conflict in the Huaura Valley. Despite variations in the sociopolitical climate of different time periods, some places of past refuge and defense are revitalized for contending with new times of war.

### ***The Memory of Collapse: Considering the Role of Cultural Trauma in Societal Reorganization following the 9th Century Maya Collapse at Actuncan, Belize*** *David W. Mixter (Washington University in St. Louis)*

During societal collapse and regeneration, local collective memory plays an undervalued role in shaping the process of reorganization. In particular, societal collapse often includes events and transformations that result in collective trauma. In the case of the ninth century collapse of Classic Maya society, the widespread failure of divine kingship as a viable political ideology produced trauma because it compelled local regenerating communities to rethink the underpinnings of their society. Historical studies of collective trauma note that survivors often seek to consolidate their collective identity in part through an increased emphasis on unifying origin stories that hearken back to memories from before the period of collapse. I propose that collapse-related trauma and a subsequent focus on local origin stories strongly influenced the process of regeneration at the site of Actuncan, Belize. Actuncan initially came to prominence over a millennium prior to the collapse, only to suffer a premature decline early in the Maya Classic period. At the time of the collapse, Actuncan was a secondary center within the Late Classic Xunantunich polity of the upper Belize River Valley. Rather than settle at Xunantunich, the final pre-collapse capital of the region, populations aggregated at the much older site of Actuncan. Based on recent research into sequences of building use and construction at the site, I argue that Actuncan’s disassociation with the trauma of the collapse and that community narratives of Actuncan as an “origin place” led to its selection as a center of post-collapse regeneration.

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### ***Household Economic Strategies in the Oaxaca Valley After the Collapse of the Monte Albán State***

*Ronald K. Faulseit (Visiting Scholar, Southern Illinois University Carbondale)*

The Late Classic (A.D. 600-900) collapse of the Monte Albán state, generally typified by the decline and abandonment of its urban core, has been the subject of some debate. While a few scholars have suggested that the centralized political system experienced a crisis causing rapid demographic shifts, others have argued for a more gradual transition to the system of fragmented and competitive minor states that dominated the Late Postclassic (A.D. 1300–1521). Less attention has been paid, however, to what occurred immediately in the aftermath of the state collapse. This is mostly due to the lack of physical evidence from firmly dated Early Postclassic (A.D. 900–1300) settlements. My research focuses on the Late Classic and Early Postclassic settlement at Dainzú-Macuilhóchitl, an important secondary center during the Monte Albán era, to examine how the site was reorganized after the decline of the Classic period political system. In this paper, I discuss the economic strategies employed in an Early Postclassic house complex derived through the spatial analysis of materials associated with craft production and consumption. These data present a pattern consistent with an economic strategy employing multicraft production and the procurement of finished obsidian tools, which suggest dependence on regional market interactions.

### ***Standing Up for the Fall of Rome: Reviving and Reviewing the Argument for the Collapse of the Roman Empire***

*Glenn R. Storey (University of Iowa)*

Ever since Edward Gibbon enshrined the end of the Roman Empire as a “Decline and Fall,” discourse on the topic has been dominated by these terms. In the last 40 years, however, many Roman scholars have rejected the constraint of dealing with Late Antiquity as a time of “decline,” even going so far as to call for the eradication of the terms “decline,” “fall,” or “collapse,” preferring the more “neutral” terms “transformation” or “transition.” I propose to review the current scholarship on the end of the Roman Empire and argue that the terms “decline,” “fall,” and “collapse” are still very much in play, but at the same time acknowledging that the terms “transformation” and “transition” are not inappropriate for discussing some aspects of the end of the Roman world. I argue in favor of the trend of some recent scholarship, which accepts that the Roman Empire both “declined and fell”; then I review some of the archaeological evidence that has been brought to bear, suggesting that the Roman Empire did not fall and did not suffer a demographic diminution but that the inhabitants in some regions simply chose to pursue non-Roman material culture that left behind more ephemeral residues. I conclude with the suggestion that the collapse of the Roman Empire was slow and that it took several centuries for the Roman “Great Tradition” assemblage of cultural features to finally disappear and give way to something else, particularly the Byzantine Empire, which was essentially a regional empire only.

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## ***Wari Collapse and Political Revitalization: Growth, Transformation, and Alliance Building in the Huanangue Valley, 1200-1470 A.D.***

*Kasia Szremski (Vanderbilt University)*

In the popular imagination, *collapse* is understood to be the extreme breakdown of political and cultural systems that inexorably leads to fragmentation, de-evolution of cultural forms, and generalized violence and chaos. However, this is often not the case when there are several strategies that groups can use to adapt to moments of extreme socio-political crisis and/or instability. This paper investigates the political transformations that occurred in the Huanangue Valley, Peru, as a result of the fall of the Wari Empire, during a period of time known as the Late Intermediate period (LIP). Past studies of the LIP characterize this time as one of social and political fragmentation and endemic violence; however, newer research demonstrates that several different strategies were employed by different groups in different regions in reaction to the breakdown of Wari hegemony. Data from the excavation of two LIP sites in the Huanangue Valley suggests that, locally, the LIP was a period of population growth, increasing sociopolitical complexity, and alliance building. This paper argues that local groups in the Huanangue Valley took advantage of the power vacuum left by the Wari to increase their agricultural holdings as well as to build alliances with each other as well as with more distant groups. As such, we argue that local responses to collapse can lead to local cultural and political florescence and therefore the breakdown of extensive hegemonic systems does not always lead to a “dark age” but can lead to new opportunities for local scale political innovation and transformation.

## ***The Adaptive Cycle of Intensive Agricultural Systems of the Ancient Maya***

*Scott Macrae (University of Florida) and Dr. Gyles Iannone (Trent University)*

Archaeologists have often struggled with understanding the life cycles of relic agricultural field systems. By incorporating the multi-variable approach of the adaptive cycle, complex relationship dynamics can be identified and applied to understand unique historical sequences of specific case studies. Demonstrating its application are the intensive terrace systems and settlement located within the Contreras Valley of west-central Belize. The focus of research draws upon four years of fieldwork from within the Contreras Valley and extensive research from the associated major ancient Maya center of Minanha. The variables identified include the relationships between intensive agricultural terracing, climatic change, social pressures, and populations found within the Contreras Valley and in association Minanha. Results produced a multifaceted understanding of the development, maintenance, collapse, and persistence of the field systems and community. This study follows the unique trajectory of the Contreras Valley starting with kin-based social groups practicing small-scale decentralized agricultural production. The succeeding rise of the Minanha royal court produced new social and population pressures which in addition to climatic stresses drove the inhabitants to develop a hierarchically organized social structure with large-scale intensive terrace systems. The ensuing collapse of the Minanha royal court relieved population and social pressure resulting in the abandonment of many field systems while returning social organization to an emphasis on kinship. Results describe how the select variables interacted to create unique circumstances that initiated changes in the Contreras Valley. The application of adaptive cycles was advantageous for understanding the dynamic variables involved in the interpretation of the Contreras Valley.

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## **Dynamics of Decline: Ritualized Strategies for Continuity and Transition as Seen from the Classic Maya City of El Perú -Waka'**

*Dr. Olivia C. Navarro-Farr (The College of Wooster)*

The literature on the processes of societal collapse has tended to emphasize a macro-scale perspective situated at the level of the state. However, focusing on broad processes of state formation and decline paints a simplistic, cyclical, and seemingly inevitable portrait of expansion and contraction that masks a great diversity of micro-scale patterns. Investigators dealing with archaeologies of decline have begun to employ social theory to understand these nuanced micro-scale occurrences which look more like episodes of resistance, collective agency, or even attempts at continuity and transition in response to political, economic, or environmental downturn. I present new data from the main civic-ceremonial shrine at El Perú-Waka' that suggest the intensive use of symbolic capital and organized labor to carry out a series of intentional symbolic "statements." This new evidence is buttressed by previous research documenting numerous and diverse public ceremonies carried out in direct association with this public shrine. The material remains of these acts included ceremonial objects inconsistent with royally sponsored ritual. I argue these performances were conducted by a socio-economically diverse population under the auspices of some organized but non-royal political authority to ensure continuity and the maintenance of balance in the midst of the dissolution of dynastic rule. These micro-scale dynamics reveal diverse practices and deliberate responses that undermine the illusion that decline is met passively by a powerless populace.