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Faulseit, Ronald K., ed. 2016. *Beyond Collapse: Archaeological Perspectives on Resilience, Revitalization, and Transformation in Complex Societies*. Carbondale: Southern Illinois University Press.

Johnson, Scott A. 2017. *Why Did Ancient Civilizations Fail?* New York: Routledge.

Storey, Rebecca, and Glenn R. Storey 2017. *Rome and the Classic Maya: Comparing the Slow Collapse of Civilizations*. New York: Routledge.

ABSTRACT

Collapse is a theme addressed by specialists from many disciplines, from environmental and sustainability studies to popular culture and the hard sciences, as well as by archaeologists and historians. This review focuses on three recent books about past collapses and sets them in the context of collapse studies. The new contributions build on the growing body of collapse theory and increasing data on individual case studies, but each takes a new direction, adding to the ongoing debates about collapse, resilience, and transformation. While taking us forward, it is apparent that issues of definition and terminology are still an issue in collapse studies. The review also demonstrates that collapse is an area of lively research that can be regarded as a recognizable subfield of archaeological and historical research that also crosses over into other disciplines.

KEYWORDS

Archaeology; collapse; environmental issues; resilience; social change; sustainability; transformation

Collapse is a popular topic in both academic and popular discourse. It receives serious scholarly attention from archaeologists and others and is a major theme in television documentaries, feature films, and novels (Middleton 2018). Almost three decades after the publication of the two seminal works on past collapses, Joseph Tainter's (1988) *The Collapse of Complex Societies* and Norman Yoffee and George Cowgill's (1988) *The Collapse of Ancient States and Civilizations*, 2016 and 2017 have been good years for collapse studies. Three monographs and two edited volumes have appeared; these are Scott Johnson's *Why Did Ancient Civilizations Fail?* (2017), Rebecca and Glenn Storey's *Rome and the Classic Maya: Comparing the Slow Collapse of Civilizations* (2017), and my *Understanding Collapse: Ancient History and Modern Myths* (Middleton 2017a); the edited volumes are Ronald Faulseit's *Beyond Collapse: Archaeological Perspectives on Resilience, Revitalization, and*

Transformation in Complex Societies (2016), and Tim Cunningham and Jan Driessen's *Crisis to Collapse: The Archaeology of Social Breakdown* (2017); Alison Vogelaar, Brack Hale, and Alexandra Peat's *The Discourses of Environmental Collapse* is now due out in 2018.

In this review, I take a critical look at the works of Faulseit, Johnson, and Storey and Storey. To understand their contribution to and significance in collapse studies, and by wider implication anthropology and archaeology and the study of social change, they must be set in the context of the developing field of “collapsology,” so this review begins by outlining the progress in research on collapse. By extension, this review suggests that collapse studies has become, and should be recognized as, a respectable and valid area and focus of research within archaeology and history in its own right, in the same way that topics such as colonialism, gender, and state formation are.

Foundations

Two books, Tainter (1988) and Yoffee and Cowgill (1988), represent the foundations of modern studies of past collapse and remain valuable contributions (with more than a nod to Renfrew 1984). They are quite different in format, purpose, and scope. Tainter's volume provides an overview of many examples of collapse; centrally, it drives an argument that collapse is a political process in which a society “displays a rapid, significant loss of an established level of sociopolitical complexity” and that it is best explained from an economic perspective—declining marginal returns on increasing or maintaining an achieved degree of complexity (Tainter 1988:4–5). He applied his theory to three case studies of collapse: the Western Roman Empire, the Classic Maya, and the Ancestral Puebloans, though it could also be pointed out that, on his own dates, none of these fit his own definition of “rapid” (a few decades) collapse (see also reviews by Bowersock 1991 and Myers 1989). This point will be returned to further below, since the speed of collapse is a theme taken up by both Johnson and Storey and Storey.

Yoffee and Cowgill's volume is quite different. An edited volume with a range of theoretical essays and area case studies of ancient China, Teotihuacan, and the Classic Maya collapse, it presents no unified view on collapse or explanation of it. The essays are all still fresh, relevant, and thought-provoking. Some of the most helpful chapters offer discussions of terminology and definitions of collapse and what the term applies to, recognizing the importance of definition and precision. For example, both Cowgill and Yoffee, in their essays, stated that we need to “clearly differentiate between state, society and civilization, and use the last term in a specifically cultural sense”—thus, civilizations transform but do not collapse, but states within civilizations can and do collapse (Yoffee and Cowgill 1988:15, 256). In his chapter, Bronson also

focused on the political collapse of states rather than civilizations, which he considers “too incorporeal” a unit; he pointed out, too, that “Great Traditions” often continue (Yoffee and Cowgill 1988:196). Along with Tainter’s definition, these are valuable guides, although, as we shall see, they have not always been followed by subsequent writers on collapse.

The environmental turn

No review touching on collapse can omit some discussion of Jared Diamond’s book *Collapse* (2005) and the responses it has provoked. It may be taken to represent the public face of collapse that developed through the 1990s and 2000s, in which collapse was seen as primarily an environmentally driven phenomenon (Middleton 2012). Diamond, not an archaeologist or an anthropologist, developed his ideas on ecocidal collapse over some years (Diamond 1992, 1994, 1995), following in the footsteps of others such as Thomas (1956), Ehrlich (1968), Meadows et al. (1972), Ponting (1991), and quite explicitly Redman (1999). Despite the caveat that he knows of no “case in which a society’s collapse can be attributed solely to environmental damage” he claimed that “deforestation was a or *the* major factor” in the Rapa Nui, Ancient Puebloan, Classic Maya, and Greenland Norse collapses (his italics; Diamond 2005:11, 487). His arguments emphasize “overshoot,” in which population is high and a trigger renders the existing human-environmental system unable to sustain it—collapse, imagined primarily as a kind of neo-Malthusian population collapse, follows.

In addition to the “ecocide” discourse, there was also a focus on climate change, which in Diamond’s (2005:173–177) account of the Maya collapse was a “trigger” for collapse. Weiss and Bradley (2001), in a well-known paper in *Science*, claimed it as a major driver of past collapse, while Brian Fagan’s numerous books popularized the idea of a close causal link between climate and history (Fagan 2000, 2004, 2008, 2009). Richardson Gill (2000; Gill et al. 2007) promoted the idea of a Classic Maya collapse caused by massive droughts that killed huge numbers of people, against which the Maya were powerless. These views were taken up by the wider media and have since become well known. More recently, in *New Scientist*, Marshall (2012) again pushed Weiss and Bradley’s theory, suggesting that the Tiwanaku, Moche, and the Maya in the Americas, the Mycenaean and the Western Roman Empire in Europe, the Egyptian New Kingdom, the Hittite and Akkadian Empire in the Near East, the Indus Valley civilization in South Asia, the Tang dynasty in China, and the Khmer Empire in Southeast Asia all collapsed due to climate change. His article was based in part on a paper by Drake (2012) on the Mycenaean collapse, in which he identified a gradual and long (one-thousand-year) climate change in Greece, which caused collapse by overshoot.

Challenge and response

The climate change and ecocide narratives tended to portray collapse as apocalyptic, to play down past people's agency and societies' environmental and agricultural competence as well as biological and cultural resilience. Both have been challenged as grand theories and as explanations in specific cases (e.g., Butzer 2012; Butzer and Endfield 2012; Middleton 2012; Tainter 2006). Critics have charged Diamond with writing history that is shot through with environmental and geographical determinism, and his work, despite its popularity, has received some less than favorable reviews in academia (e.g., Correia 2013; deMenocal et al. 2005; Marohasy 2005; Tainter 2008). Climate change theories too are often seen as deterministic and simplistic (Middleton 2012:268–270).

A number of archaeologists and historians published their own responses in a volume called *Questioning Collapse*, edited by Patricia McAnany and Norman Yoffee (2010a). They questioned Diamond's interpretations and explanations of the Anasazi, Classic Maya, Easter Island, Greenland Viking, and Mesopotamian collapses, while others responded to his interpretations of contemporary societies. In the final essay, John McNeill (2010) highlighted issues with Diamond's definition of collapse, his judgment of long-lived ancient societies as failures, and his judgement of fairly short-lived societies that have outsourced environmental problems as successes. While his message is laudable, McNeill concludes, and while the contemporary world does face serious issues in sustainability, Diamond is often "wrong in his judgements about successes and failures among societies of the past" (McNeill 2010:365).

Other studies by archaeologists have also set forth very different narratives of collapse for Diamond's case studies. For the Greenland Vikings, Buckland et al. (2008) have suggested an orderly abandonment of the two settlements, rather than the chaotic spiral into famine and violence that Diamond envisioned. For the Puebloans, Wills et al. (2014) find that "there is no basis for concluding that the abandonment of Chaco Canyon was brought on by deforestation, improvident use of natural resources, or unstable exchange relationships" and so "there is no reason to use Chaco's history as a warning from the past about societal failure." An alternative to ecocide on Easter Island, a response to the interpretations of Bahn and Flenley (1992), was proposed already by Rainbird (2002) and Peiser (2005), but neither is referred to by Diamond. Stevenson et al.'s (2015) analysis "demonstrates that the concept of 'collapse' is a misleading characterization of prehistoric human population dynamics" on the island (see also Hunt 2007).

In turn, Diamond (2010) responded to *Questioning Collapse* in *Nature* by stating that "it makes no sense to me to redefine as heart-warmingly resilient a society in which everyone ends up dead, or in which most of the population

vanishes, or that loses writing, state government and great art for centuries.” This highlighted some of the misunderstandings in what different people mean by the word *collapse*, a problem pointed out by various commentators (Demarest 2001:105; Middleton 2012; Tainter 2006; Tainter 2016). But as McAnany and Yoffee (2010c) explained in their reply, “The point of *Questioning Collapse* is that everyone didn’t ‘end up dead’ in cases of ‘collapse,’ but that many survived and some flourished under changed political and cultural circumstances. The conflation of profound societal change with the notion of biological extinction is a persistent error that runs through much ‘collapse’ scholarship.” They further added that collapse as “the *end* of a social order and its people” is rare. These points will become relevant again in the context of our reviewed works.

Maya archaeologists have also responded to the climate change collapse scenario in an increasingly organized fashion, marked by the publication of *The Great Maya Droughts in Cultural Context: Case Studies in Resilience and Vulnerability* (Iannone 2014a). They accept that severe droughts would have affected the Classic Maya polities (nobody really disputed the occurrence of droughts themselves, which are well known from the historical period—Mendoza et al. [2007:155] counted 25 “events” between 1535 and 1896), and that in some cases it may have been one cause or contributing factor in some collapses (Aimers and Iannone 2014:43). Unlike Gill, however, they see the human response to drought as the key part of the story—the Maya were not simply passive victims of massive droughts. Demarest (2014:206) argues that, for the rain-watered Peten region, the evidence that drought was not a significant factor is found in our ability to “very specifically reconstruct events and processes of the southwestern Peten collapse in terms of chronology and *layers* of causality *before* and *without* drought.”

Opinion on the Maya collapse is that we must expect a complex and varied picture, with different causes, stresses, and responses in different areas across three centuries (Aimers 2007; Webster 2002). There may have been shifts in trade routes from inland to the coast in the background (Golitzko et al. 2012), social and political process that resulted from the growth of states (Golden and Scherer 2013), and environmental degradation at some sites (Turner and Sabloff 2012). Intersite competition and warfare is recognized as a major factor; and an important new volume, *Ritual, Violence, and the Fall of the Classic Maya Kings* (Iannone, Houk, and Schwake 2016), sheds much light on this in the Maya collapses (also Webster 2000:111–112).

Another part of the challenge to the environmental turn came from an increased interest in and application of ideas of resilience theory in collapse studies (e.g., Redman 2005; Redman and Kinzig 2003), and an increased concern with what happens after collapse, especially with the regeneration of complexity (Schwartz and Nichols 2006; Tainter 1999). I leave aside discussion of these here and return to them below.

Archaeologists accept that environmental issues could be part of the explanation for collapse in some instances, and to different degrees, but neither climate change or human-caused environmental “degradation” alone provide overarching explanations of collapse, the explanations for which must be rooted in human relationships and responses to circumstances (Butzer 2012; Butzer and Endfield 2012; Middleton 2012).

Now, having provided some context of how collapse studies has developed since 1988, we can turn to the works under review.

The new generation

The three recent volumes reviewed here complement each other well, since each adopts a different approach and has distinct and different aims. Johnson’s (2017) book, *Why Did Ancient Civilizations Fail?*, begins with a discussion of explanations of collapse and an outline of his own “grand theory”—social hubris. In chapter 2 he outlines the importance of the agriculture as the basis of complex societies. He pairs up subsequent chapters, the first of each pair discussing a factor or system (chapter 3, the environment; chapter 5, agricultural systems; chapter 7, trade systems; chapter 9, social organization; and chapter 11, unexpected catastrophes), and the second of each pair using a chosen exemplar to demonstrate that factor’s possible role in collapse (chapter 4, the Maya; chapter 6, Mesopotamia; chapter 8, Rome; chapter 10, Egypt; and chapter 12, Incas and Aztecs). The final chapter addresses the situation today and Johnson offers us his advice.

Storey and Storey’s (2017) *Rome and the Classic Maya: Comparing the Slow Collapse of Civilizations* is the first major work on collapse to attempt a truly comparative approach; it examines the collapses of the Western Roman Empire and the Classic Maya side by side (though see also Middleton 2010, chapter 4, on the Hittite, Western Roman, and Classic Maya collapses; Middleton 2017a). To make the comparison explicit, chapters 3 to 7, the book’s main body, are each split into two corresponding parts. Chapter 3, for example, “Introduction to the Case Studies: The Archaeological Evidence,” addresses the material evidence for various aspects of Roman decline and collapse (40–62) and follows with an introduction to Classic Maya and their collapse (62–74). Chapters 4 to 7 trace the collapses through economic, political, social, and environmental dimensions. Chapter 8 contains a short conclusion for each case study (Rome: 204–205; Maya: 205–208) and turns to discussion of the present and “lessons for the future” (219–229). Chapter 1 introduces the authors’ new model of “slow collapse” and chapter 2 outlines other works on collapse.

Faulseit’s (2016a) substantial 20-chapter volume is divided into five parts: (1) setting the stage, which contains orienting essays by Faulseit (2016b) and Tainter (2016); (2) reframing narratives of societal transformation;

(3) resilience theory and societal transformation; (4) long-term resilience and adaptive strategies; and (5) postcollapse resilience and reorganization. The authors use case studies drawn from China, Europe, Mesoamerica, North America, South America, and Southeast Asia. The contributions and the volume, as a whole, draw together many strands of recent collapse research, including proposing continuity and transformation narratives and exploring ideas of resilience and regeneration. As well as collapses, they also investigate “noncollapses” in the face of catastrophes and ecological stress. As with earlier edited volumes on collapse and regeneration, in which chapters can stand alone, there is a wealth of theory, evidence, and opinion to explore.

A logical place to gain a better appreciation of these three volumes is to begin with how they each define and characterize collapse.

Conceptions of collapse

A number of researchers have noted disagreements over what collapse is and what it applies to, and to a lack of definition of key terms. Our three authors acknowledge this and all try to make themselves clear. However, while building on earlier work, they do not all agree on what collapse is or on whether it is a useful term.

Johnson dislikes the term *collapse*; he explains:

What archaeologists see as a collapse is usually just a transition to a different way of life ... the idea of a rapid failure of the systems on which a population depends is intriguing but not an accurate way to describe what happens to most complex societies ... “Transition” is a neutral term that better conveys what happens ... I use the term “collapse” in a general way, and in most cases I will avoid ambiguity by qualifying what type of breakdown occurred. (Johnson 2017:7)

For the Classic Maya collapse, then, Johnson (2017:7) suggests that “the term ‘collapse’ is a misnomer.” He emphasizes, in contrast to Tainter, the nonrapid nature of the overall changes that took place: “‘Collapse’ implies a rapid and complete fall from a better state to a worse one. It suggests great upheaval and the catastrophic ending of a once-great and complex civilization. In fact the change was none of these things” (Johnson 2017:58). He observes changes in elite culture, such as the end of the particular Classic period ruling ideology and the recording of long count dates, but stresses wider biological and cultural continuities (Johnson 2017:59). Though many urban areas were abandoned, nonelite populations continued to farm, many religious practices continued, and writing continued to be used, though literacy practices changed; there were still urban areas and complex society when the Spanish arrived, although the total population was smaller.

As for judging the collapse as a failure, Johnson thinks such a view is “ethnocentric in light of the great complexity of the post-transitional Maya

world of merchant rulers” (Johnson 2017:59). Certainly this follows the tenor of McAnany and Negrón’s (2010) contribution to *Questioning Collapse*, which asks why we are so willing to label the Terminal Classic Maya transformation a failure. Middleton’s account is also similar here, with an emphasis on diversity in and the duration of the collapse, and a continuation of the Maya story into the Postclassic period, including the Spanish attack on Maya culture (Middleton 2017a, chapter 10).

Storey and Storey (2017:11–12) do use the term collapse, but they offer their own definition of it and its associated terms, which allows them to characterize a greater range of phenomena more specifically. Their rough definitions are as follows: Decline = “things going to hell”; political fall = “when things go to hell to the extent that major political institutions cease to function”; collapse = “if things go so completely to hell that the culture loses coherence and the major defining elements and dimensions of that culture disappear”; and resilience = “after collapse, there is a giving way to a new cultural entity.” They also give a more formal and detailed definition of collapse as:

a major disjuncture in the trajectory of a complex culture (those commonly called “civilizations”); the political integration completely fails, and the Great Tradition (the assemblage of material culture and reflected ideologies unique to that culture) similarly comes to an end.

That process also entails human suffering on a large scale, largely through diminution of population, which almost never means total disappearance of a population; but there is significant loss of life and a smaller population left behind.

The people (in most cases) survive, persist, and regenerate into another complex society; usually there is a gap (large or small) before re-establishment or re-integration of complexity into a new political system with a new Great Tradition, which is partly derivative of the old but also distinct.

Unlike the foundational works (and Demarest 2013), Storey and Storey see collapse as something that happens not only to political structures, states, but also to cultural ones, referring to Great Traditions; for Tainter this is merely a possible by-product of political collapse. Storey and Storey’s definition also includes suffering and loss of life. This likely owes something to the sustainability literature; Young and Leemans’ (2007:450), for example, define collapse as a rate of change to a system that “has negative effects on human welfare, which, in the short term, are socially intolerable.” Like Johnson, they also have clearly been influenced by the more recent focus on resilience and regeneration, with the acknowledgment that there is usually biological continuity through collapse and the development of new traditions that are in some way connected with an earlier society.

In terms of the rapidity of collapse, Storey and Storey (2017:10) have a similar view to Johnson, and they more explicitly develop a concept of “slow collapse,” arguing that in “large and complex cultural systems” there is “inherent inertia” so that collapse takes “a couple to several centuries” to play

out. This concept, they explain, is “intended to reconcile the arguments of those who favor transition [or transformation] and those who favor collapse” as terms. Thus, the Roman collapse began with economic problems in the 2nd century A.D. and the political fall happened in A.D. 476. However, collapse was not complete until the 8th century A.D. (Storey and Storey 2017:205). The Classic Maya collapse took place during the Terminal Classic, from the 8th to 11th centuries A.D. (Storey and Storey 2017:213).

Authors in Fauseit explain their own understandings of collapse. For example, Torvinen and colleagues (2016:263) define collapse as “severe social transformation” but see this as only one end “of a spectrum of possible social transformations.” They also consider “noncollapse transformations,” which also involve sometimes significant change such as “institutional and/or spatial reorganizations that allow a transformed society to persist.” Others, such as Kidder et al. (2016) understand collapse to signify a sociopolitical process with an end followed by renewal.

Fauseit himself, in the introductory essay to his volume, explores the three terms and concepts of *collapse*, *societal transformation*, and *resilience*. He explains his use of collapse to mean “the fragmentation or disarticulation of a particular political apparatus,” which happens “rapidly” over a few generations (Fauseit 2016b:5). In this, he follows the foundational works. Referring to suggestions to use the terms *social change* or *societal transformation* rather than *collapse* (e.g., in McAnany and Yoffee 2010a), Fauseit (2016b:6) proposes that societal transformation can stand as “a broadly defined concept encompassing the full extent of possible outcomes (e.g., collapse, reorganization, revitalization, etc.) associated with societies in transition”; thus “*societal transformation* serves as an umbrella term that covers the range of sociopolitical trajectories.” As for resilience, Fauseit (2016b:6–7) rightly points out the confusion associated with the term and notes two different views: resilience can mean either “the ability to maintain, or quickly restore ... conditions considered highly desirable” (quoting Cowgill) or “the maintenance of cultural aspects ... in civilizations that experience a decline in sociopolitical complexity” (citing McAnany and Yoffee 2010a).

Johnson’s preference for collapse as “just a transition to a different way of life” is somewhat vague. Some might approve of its lack of negativity—others, for example Ward-Perkins (2005) on the Roman collapse, might not. His vision of the Maya collapse lacks “social upheaval” and a catastrophic end to a civilization. While the latter point is correct, the former point may be disputed. There was no single Maya collapse, but there were many individual collapses of kingdoms large and small over three centuries—Aimers and Iannone (2014:43) see collapse as a stage “that occurs at different times in different places.” The archaeological record shows that individual collapses did involve social upheaval; termination rituals, for example, often involved the violent defacement and destruction of stone monuments related to rulers

(Harrison-Buck 2016). At Cancuen, the city was “destroyed in a sudden and devastating attack” and around 50 members of the ruling elite were killed: “the king, queen, court, and nobles were ritually executed” and deposited with “fine regalia and ornaments” in a sacred pool; people of all ages were killed and the city was abandoned (Demarest 2014:203).

Storey and Storey’s concept of slow collapse seems to be an important theoretical development, though it too would appear to derive in part from the foundational works and Diamond’s *Collapse*, but in connection with the slippery term “decline.” Thus Tainter (1988:4) suggested that “losses that are less severe, or take longer to occur, are to be considered cases of weakness and decline,” while Diamond (2005:3) held that collapse is an “extreme form of several milder forms of decline,” in which “it becomes arbitrary to decide how drastic the decline must be before it qualifies to be labelled as a collapse.” Johnson’s long “transitions” is similar in spirit. However, the idea of that collapse can happen over two to four centuries is counter-intuitive, although Butzer too has envisaged collapse on a “centennial” timescale (Butzer 2012; Storey and Storey 2017:15).

The common understanding of the word *collapse* implies suddenness and a clear end of something. Rapidity and suddenness (apparent archaeologically) have been features of concepts of collapse since Renfrew (1984:366, 369), who thought in terms of up to a century. Tainter (1988:4–5) thought in terms of decades and I would be agreeable to think, sometimes, in terms of an even shorter period (within a lifetime), but this also depends on how a researcher understands causality (far too large a topic to address here) and where one draws the boundaries of study (thus the collapse of an individual Mycenaean or Maya kingdom could have been rapid). Faulseit retains this sense, which to me keeps matters clear. In recognition of the convolutedness of these issues, though, the Storeys return to terminology at the end of their book (2017: 208–215, also 10–18), but it might have been helpful from the start to work within previously established terminology and to explain how and why their cases did or did not fit in with it. In my own work (Middleton 2010, 2012, 2017a, b) I have not attempted to devise any new general definitions, as I think the foundational works provide sufficient clarity; I examine examples of change that have been labeled, for better or worse, collapse, and I sometimes question the appropriateness of this. The attempt to reconcile *collapse* with *transition*, rather than to understand them as applying to different units (political and cultural respectively) at the same time and on different timescales, may cause more confusion than clarity.

For reasons of this confusion, I believe, Storey and Storey (2017:205) claim that there is a recent trend, represented by McAnany and Yoffee (2010a), to deny that there were Roman and Maya collapses. But what is being disputed by them is Diamond’s notion of collapse as foremost a demographic and biological catastrophe. McAnany and Yoffee (2010a) and their colleagues stress

the norm of resilience of population and also that aspects of culture (or “civilization”) usually continue even when others are rejected; they do not deny that states ended. These are not new points; they can be found in Andrews’ work on the Maya from more than 40 years ago, Renfrew’s work of more than 30 years ago, as well as the foundational works, while other pre-Diamond specialists have also questioned collapse (Andrews 1973; Bowersock 1988 and 1996; Renfrew 1984). While it is evident that collapse is a kind of societal transformation, at the same time it is equally clear that not all societal transformations appear as collapse (the universal extension of Roman citizenship, or Christianization, for example), so it would seem better to retain collapse, where necessary, with the specific meaning of an “end” of something.

A further issue with the Storeys’ definition is the inclusion of human suffering caused (“largely”) by reduction in population, which seems similar to Diamond’s focus on population collapse. But does diminution of population cause human suffering? Clearly it can be traumatic, if we are thinking in terms of a catastrophic event, something like the European Black Death, in which possibly 60% of the population (perhaps 50 million people) perished between 1346 and 1353 (Benedictow 2005). But it is unclear that anything like this happened in any collapse (bar when Old World diseases entered the New World). It is a surprising inclusion given their emphasis on slow collapse, for surely population reduction over centuries would not cause suffering on the scale of an individual lifetime. In any example of collapse, although we might have battles, conflicts, or diminution of elites, we are almost certainly not seeing the killing of whole populations (even urban populations) or the sudden deaths of hundreds or thousands (except in battles or conflicts), which could be seen as apocalyptic. It is normal for population levels and distributions to change over time and to be affected by economic, environmental, political, and social factors and we must be careful how we characterize this in collapse.

With regard to human suffering, Storey and Storey (2017:113, 137) note the increasing oppressiveness of empire from Diocletian and the increase in “judicial savagery,” a rise in capital crimes and vicious punishments after A. D. 200. Slaves played a key role in the Roman economy and the state operated a massive military system, at the expense of taxpayers, that was open to abuse. Although the creation of the Germanic kingdoms may not have been peaceful, collapse need not have entailed more suffering for more people than the imperial system itself; possibly it led to less. The Storeys, however, view peasant survival as “unremarkable,” but the effects of collapse on the majority should not go unexplored (see Joyce et al. 2014, for an example).

Causes of collapse

Johnson rightly eschews a single cause for all collapses, or even for specific collapses; rather, he sees collapse as brought about by the complex and

dynamic interaction of multiple factors, people, and systems (Johnson 2017:4–5). In discussing the Classic Maya, he stresses that “environmental change is not what caused the so-called Maya collapse... it was the failure to react to changes in local conditions, both environmental and social” (Johnson 2017:59). He cites a large population, deforestation, and erosion and soil exhaustion through farming, collapse of long-distance and tribute trade networks, and multiyear droughts as all being part of the story. For the Western Roman Empire, Johnson sees this as decline rather than collapse and again “many conditions conspired to undermine Rome’s continued success” (Johnson 2017:142–143). These included the inability to continue expanding and bringing in new wealth to support the center, heavy taxation and elite withdrawal, climate change, deforestation and erosion, the rise of Christianity, problems with succession, invasions, and rival powers. Although the discussion of the Rome chapter should hinge on “trade collapse as one destabilizing factor,” as the subtitle and chapter pairing suggest, this is not really developed.

Johnson has his own grand theory to explain the failure to act or react appropriately: social hubris. Hubris, he explains, is “excessive pride or arrogance,” which “causes people to ignore evidence and prevents proactive adaptation”; thus, “the hubris of any society will prove to be its downfall” (Johnson 2017:1–2). The social hubris theory is similar in part to the sunk-cost effects theory, where a failure to adapt is explained through a deliberate and rational conservatism and past investment in the status quo (Roth, Robbert, and Strauss 2015). As Janssen, Kohler, and Scheffer (2004:727) state:

People with large investments have, as a result of those investments, a tendency to attempt rather rigidly to maintain a previously successful way of life in areas and times when they are experiencing severely reduced returns on those investments—even to the point where they make additional investments in trying to maintain what perhaps ought to have been perceived as a lost cause.

However, as with Tainter’s case studies, in which he argued that increasing complexity to deal with a particular challenge ceased to yield a return, Johnson (2017:5) too notes that a precipitating factor probably kick-started collapses. Some might argue that the factor in itself is not important because, whatever it was, it merely functions as a trigger to the fragmentation of an already fragile or unstable system—a structural approach. But for anyone interested in the history, and surely the exercise of history is a search for “what happened,” the contingent precipitating factor is an essential part of the explanation and the narrative. In the end, we are again left looking for these factors and in trying to deduce their effects.

The Storeys suggest multiple causes of collapse for both Rome and the Maya, outlined through their four-theme approach. For example, they argue that “the Roman government’s evolving corruption and privatization

exacerbated its economic weaknesses, thereby leading to the eventual collapse of the Roman Empire as a coherent economic system” (80). In addition, wealth flowed upward into the hands of a few, creating great economic inequality (92). There was similar inequality in Maya society (105). For the political dimension, the Roman Empire suffered from problems in the exercise of power and the imperial succession as well as the effects of external enemies; Storey and Storey also suggest that the army became less effective (109–114). The Maya states also had issues with succession, but more significantly the relationships between the states, including efforts by big players to expand their power over rivals, “made the polities unstable” (127–129).

Social issues in collapse are less clear, but the Storeys recount the impacts of Christianization and of northern and alternative ethnicities (Storey and Storey 2017:141–142, 149). They observe an increasing “disconnect between the commoners, whose support was crucial to the whole system, and their polities” (166). For the Maya, they discuss the increasing visibility and social emphasis on rulers and elites—followed by the rejection of the rulers and “Holy Lord” ideology (165–166).

Finally, the Storeys (2017:169, 172–184, 184–196) suggest that human-caused and natural environmental issues such as deforestation and climate change caused real problems for both the Romans and the Classic Maya and, in all likelihood, contributed to their collapse. But they also add that “global climate trends affect different areas in different ways,” and thus the Maya were not affected by the global cooling of A.D. 220–800. This should sound a warning bell for all climatic explanations of collapse, which is that climate and weather can be quite localized, even during global “events.”

None of these ideas are new (see Middleton 2010, chapter 4, for example), but the discussion is valuable because it considers recent work and adds new data to these suggested causes of collapse. However, preempting the criticism that these factors did not cause the Eastern Empire to collapse, the Storeys (2017:215) very oddly suggest that it did collapse by the eighth century A.D., seven centuries before the empire ended in A.D. 1453. The long existence of the Eastern Empire and its final extinguishing through conquest, though, could surely be considered as an excellent case of resilience and transformation, followed by the collapse of an established regime and the absorption of the empire into a rival power.

Johnson and Storey and Storey are right to dismiss monocausal explanations, because a multicausal approach makes sense, and it is easy to see how the many factors came into play—as Wheeler wrote in 1966 (126): “the fall, like the rise of a civilization is a highly complex operation which can only be distorted by oversimplification. It may be taken as axiomatic that there was no one cause of cultural collapse.” The difficulty is, and will remain, in balancing the relative importance and role of each factor as part of a

complex system, and indeed in ascertaining whether we know all of the relevant factors (Cline 2014:170).

An interesting development in collapse studies is the increasing focus on what might be termed social justice or the lack of it, and the inclusiveness of societies, where a greater part of the population have (or do not have) a shared interest and belief in the society (Middleton 2017a:341; Storey and Storey 2017:228–229). Also important are the relationships between and within ruling and secondary elites and between them and the majority population; rivals for power and secondary elites and the development of factions were probably important in a number of collapses (Feinman and Nicholas 2016; Middleton 2010:54–67). It should be remembered that people in power or seeking it may be more concerned with their own self-interest than with the wider good and that their actions could have wide and unintended consequences (Feinman and Nicholas 2016:47; consider Harold's decision to claim the English kingship and William's subsequent and devastating conquest). Butzer (2012:3638) found that "poor leadership, administrative dysfunction, and ideological ambivalence appear to be endemic to the processes of collapse." Building on his research on past societies, Turchin (2010, 2017) sees political and social instability as creating increasing issues for contemporary societies, and indeed, in terms of our success and sustainability, it would be shortsighted in the extreme to focus on external factors at the expense of the social.

Resilience and regeneration

Resilience theory gained traction in collapse studies throughout the early years of the century and it is now widely discussed in works on collapse (e.g., Iannone 2014b; Redman 2005); it owes its origins to ecology and the work of Holling (1973). Walker and Salt (2006:xiii) define resilience as "the capacity of a system to absorb disturbance and still retain its basic function and structure." Resilience is seen through the adaptive cycle, which is expressed metaphorically as a figure ∞ . This is a cyclical pattern of four phases: exploitation (r), conservation (K), release (Ω), and reorganization (a). Collapse is seen as the release or Ω phase, which is followed by reorganization (a). Multiple adaptive cycles may be linked in a panarchy, represented as connected "figure eights" (Gunderson and Holling 2002). As applied to historical examples, it proposes repeated and cyclical change.

Many of the papers in Faulseit engage with and make use of resilience and regeneration thinking. Iannone (2016) in particular argues that "the application of resilience theory and, particularly, heuristic devices such as adaptive cycles, panarchy theory, and thing-entanglement, can be incredibly useful to any effort aimed at elucidating the complexities of a collapse or reorganization episode in the past" (204). One of the key ways in which it is useful, in his

view, is that it can provide a common language and set of concepts for communicating ideas across disciplines (Iannone 2016:130). Some might suggest that the figure eight and the terminology recall the suspect biological metaphor of birth, maturity, decay, and death followed by rebirth. They might wonder too whether the notions of release and reorganization help us more, or take us further than the ideas of Renfrew (1984:369) who noted the “rapid subsequent regeneration of chiefdom or even state society, partly influenced by the remains of its predecessor” after a collapse, or Eisenstadt’s (1988) observation that collapse is a normal process of boundary reconstruction—collapse as involving beginnings as much as endings.

Resilience can be seen as a kind of flexibility in which a system retains “function and structure.” Two papers in particular explore resilience and non-collapse. Torvinen and colleagues (2016) use two societies from the southwest United States, Cibola Pueblo III-IV and Classic-Postclassic Mimbres, to test the hypothesis that societies with greater social diversity are more resilient and more likely to undergo transformation without collapse—continuity with change, such as “institutional and/or spatial reorganizations” (263). Although their research suggests that there is no simple relationship between diversity and resilience, it is an avenue that could be usefully explored in other cases of collapse and noncollapse. Pool and Loughlin (2016) look at the continuity of Tres Zapotes among the collapses of neighboring polities. They suggest that the distribution of political power from a central ruler to different elite factions was key in the long survival of the city; it did not collapse suddenly but declined over centuries (302). These are interesting contributions, but it is not clear that resilience theory, as opposed to a common sense understanding of resilience, adds much.

As fashionable as the focus on resilience theory now is, it can be questioned whether its definition and model of change, not developed for doing history, is always appropriate or useful to the study of past societies and historical change and even whether it is consistently applied. Iannone himself points out that “not all systems pass through the various phases of the adaptive cycle in the anticipated order” and “not all of the ideal characteristics of a particular phase will be exhibited by a specific archaeological example” (Iannone 2016:181, 205). While only a model, a metaphor, and a tool for thinking, it seems odd to regard a cyclical model in which features of a stage are not always present and stages may be passed through out of order as useful. Furthermore, assigning archaeological evidence to any particular phase of the adaptive cycle remains, at least in some instances, “a matter of taste” (Iannone 2016:204).

We might also ask which elements of function and structure take priority. Should it be the institutions of state, such as kingship and elite culture and status and their material expressions, which might include monumental building, fine goods, use of writing for specific purposes, or particular

religious beliefs and practices, or economic structures, or should it be more widely available technologies, or should it be the culture, lifestyles, and practices of the often excluded or invisible majority? If we follow the view that collapse means primarily political collapse and the end of a state, it means that a particular style of ruling and elite systems were not at all resilient—they did not absorb disturbance or retain their basic structures and functions, hence collapse can be seen as ideological change or change in identity and a structural change. The collapse phase in resilience theory should surely follow this sense. If we mean that biological populations are resilient, then we must understand “function and structure” in a different way.

What could be usefully applied in many cases is the frames analysis approach used by Chase and Chase (2006) to investigate continuities and discontinuities through the Classic Maya collapse. They used four frames, which are *structural*, *human resources*, *political*, and *symbolic*, and through these were able to construct a broad and dynamic view of the Maya transition. Following this system, there would be no need to divide a culture into Great and Little Traditions, which, while useful, is too binary. The Storeys’ approach to collapse using four dimensions echoes this and is a helpful method.

Cyclical models of historical change have been around for a long time, but it is questionable whether they are always accurate or helpful in historical or meaningful terms. It is not clear, for example, that Redman and Kinzig’s (2003) placing of Mesopotamian history into a 1,500-year cycle, for example, achieves anything new other than fairly unsurprising *long duree* observations. The continuum of Greek history, from the Mycenaean palace states through collapse until the eventual regeneration of complex societies, makes little sense when seen as a cycle, if the particularities of culture, economic, and sociopolitical arrangements are the objects of interest. Yes, there were continuities in language, in religion, and some social customs and technology, but historical Greek societies of the Archaic and Classic periods were fundamentally different and were separated from Late Bronze Age societies by four centuries; they owed little if anything to the palace cultures (Dickinson 2006; Morris 2006). It may be better in this instance to envision multiple linear and interconnected processes, with, rather than just the regeneration of complexity, the specific generation of new complex societies within a culture zone.

Some of the contributors to Faulseit also seem ill at ease with a cyclical model. Feinman and Nicholas (2016:51) interpret change in Oaxaca from A.D. 800 or 900 to the coming of the Spanish in 1519 as “a long continuous sequence of somewhat more incremental, albeit significant, changes.” Hutson and colleagues (2016) adopt a historical processual approach, which “emphasizes the ways in which each historical trajectory is unique” (126). Zabler and Sutter (2016:487–488, 496) note how the Moche collapse involved “historically situated processes” and “unique historical contingencies.” By adopting

a cyclical model, there is a risk that evidence is forced into that model at the expense of history. And even with the model, Feinman and Nicholas (2016:46) remind us that collapse remains unpredictable because change always involves human agency and dynamic relationships—“a predictable tick-tick-tick-boom formula or timetable for the life cycle and ultimate collapse of societies has never been advanced and is simply not demonstrable.” It is important not to get overly attached to the adaptive cycle model at the expense of historical particulars.

Where a more general conception of resilience is important is in emphasizing that populations usually continue and do not die out—there is thus biological resilience and continuity, though identities and ideologies and other aspects of life may change. McAnany and Yoffee (2010a, b, and c) thus stress the rarity of population and social collapse combined. In this sense, and as has been recognized by Renfrew (1984) and Tainter (1999; 2016), collapse affects elites and elite culture most: the lifeways of the majority may be most likely to survive a collapse. Again, it is important to specify which functions and structures (at which level) of a society are being considered and why we might privilege one (e.g., elite culture) over another.

Alongside a frames analysis approach, a less formal notion of resilience can help in enabling us to think of different and multiple systems within an overarching system (or society), such as population, environmental, cultural, economic, political, and social resilience; this allows us to explore changes that may happen alongside each other at different rates. As McAnany and Yoffee (2010b:10) rightly observe: “Political change can be quick and episodic, whereas other kinds of change ... can be slower moving ... both kinds and different paces of change can co-exist”: rapid collapse alongside longer transition.

Further thoughts

All contributions to the study of collapse are affected by the idiosyncrasies, biases, and preferences, conscious or unconscious, of their authors, and my own work is no exception. There is room for divergence and discussion—a plurality of voices and narratives—and though we may sometimes be wrong, there is more than one “correct” version of what happened in any particular collapse. With this caveat, I offer some final general thoughts on potential problems or issues with the works under review, which fall into three categories—organization and content, choice of examples, and terminology and concepts.

Firstly, as I know from experience, it can be difficult to organize longer discussions of collapse satisfactorily. Of the three volumes, Faulseit’s is the most successful because, as an edited book, each chapter can stand alone as a single case study. Storey and Storey split every content chapter into Roman

and Maya sections, which makes sense in a comparison of two collapses. Johnson's book is arranged to suit his purpose, but the organization of paired system and society chapters means that really only half of the book can address examples of collapse. But within this half of the book, the treatments of collapses (or transformations) are extremely brief in comparison to the length of the contextualizing descriptions. In chapter 4, the Maya, less than 5 pages cover the collapse; in chapter 8, Rome, 3 paragraphs, less than 2 pages, followed by a single paragraph relating the collapse to hubris. In total, this makes around 21 pages dealing with specific cases of collapse out of a total of 293 pages. The final chapter, with its contemporary focus and exhortation to change our way of life, weighs in at 27 pages, compared with just 7 pages of introduction to collapse and social hubris. The impression is of unevenness and that the book is more a collection of lecture notes for a course on environment and archaeology rather than a book about the collapse or failure of past societies. There are also some interesting points of style, perhaps to make it attractive to a wider (younger American English) audience, for example the notion that the author might be considered by readers to be "a naïve ... advocate of living like hobbits or ewoks in some misguided romantic vision of a science fiction idyll" (Johnson 2017:235).

Another issue is, I think, the decision of Storey and Storey to choose the Western Roman Empire and the Classic Maya for a comparison (which Tainter 2014 also did). They themselves highlight some of the profound differences in these objects of study, such as the difference in territorial size, population, urban style, and (for me) the key factor, which is that the former was an integrated empire, a single political unit, whereas "the Maya lived in independent polities" (Storey and Storey 2017:2–3). This last is a fundamental structural difference in the unit of study. It is more accurate to consider "the Classic Maya collapse" or transition as many individual state collapses (plural) that happened over three centuries, the sum total of which has been labeled, misleadingly, "a collapse" (singular). Storey and Storey (2017:3) even state that there are much better parallels between the Classic Maya and the Greek or Mesopotamian city-states and "numerous" other examples, and the reader wonders why, if a comparative study was the aim, one of these was not selected.

A more logical choice of comparison in looking at imperial collapse might have been the Hittite Empire. Though smaller than the Roman Empire, both shared the salient features of imperial states. Both had a monarchy that experienced problems with succession and within the royal family, both expanded and took on provinces, vassals, and neighboring states and engaged in conflict with them, the provinces and vassals were periodically rebellious in both, the empires both suffered civil wars, population, and manpower problems, and barbarian neighbors raided and settled both their territories. For both, climate change and environmental problems have been identified

too. Both governments moved the capital city as a response to threat and to gain advantage; and, following collapse, both in some sense continued to exist. For the Hittites, royal relations at Carchemish claimed the title of great king and a number of smaller Neo-Hittite states developed—in the Roman Empire, the Eastern Empire continued, while the new elites of the Germanic kingdoms selectively adopted and maintained Roman trappings.

Arguably a better parallel for the Classic Maya collapse would be the collapse of the Mycenaean kingdoms of Late Bronze Age Greece (a thought also entertained by Tartaron 2008). Like the Maya, the Mycenaean world was (at least in part) divided into independent states, which coexisted in a culture zone over several centuries. Over time these kingdoms no doubt had both friendly and competitive relationships, and one or more may have sought hegemony over a greater territory and other states. The competitive spiral was probably as instrumental in the Mycenaean collapse, which saw the palaces burned and places destroyed over a few decades, as it was in at least some of the Maya state collapses (Middleton 2017b). In both cases, a particular ideology of kingship and state organization was rejected and there was site abandonment. In both cases there was also selective cultural continuity, making the societies after collapse still recognizably Maya and Mycenaean.

It might be thought unfair of me to make this point, for after all authors can compare what they wish to, and especially since in two books I also examined the Hittite, Maya, and Western Roman collapses. In the earlier work (Middleton 2010), my aim was not strictly comparative but was rather intended to identify common processes and themes that might further illuminate, through historical analogy, the Mycenaean collapse; I assumed that there would be, across polities, a “similarity in processes, rooted as they are in quite basic human relationships and motivations” (Middleton 2010:2, 118). In the second work (Middleton 2017a), a case study approach was taken, so each supposed collapse, including Western Roman and Maya, was examined in its own right.

I agree, therefore, with Storey and Storey’s (2017) conclusion that both the Roman state and the Maya *states* (plural) were “affected by similar problems”; but the point that has become increasingly clear to me is that it seems most accurate to regard “the” Classic Maya collapse, as commonly understood, as a broad cultural, demographic, and ideological transition that was driven by many individual state collapses over the Maya culture zone over three centuries. The Western Roman collapse, on the other hand, was the political collapse and fragmentation of a single imperial state, while Roman civilization transformed over a much longer time period, now termed “Late Antiquity.” Going back to the clear definitions and terminological discussions of the foundational works, the Maya civilization did not collapse because civilizations do not collapse—Maya states within it did. Confusingly, Storey and Storey follow the line that civilizations “are state level societies” and thus “that the Maya were a state” (Storey and Storey 2017:12–13).

It seems more accurate to me to see “civilization” and cultures as transformative over longer terms and political systems as collapsing rapidly, while acknowledging that specific material and behavioral “epiphenomena of complexity,” in Tainter’s (1988:4) words, may disappear alongside political collapse—since they may be related to a particular elite culture or ideology. Thus, in the Mycenaean collapse the very limited and palace-focused writing and literacy ended, but in the Maya collapse elite literacy continued, though literacy practices changed; in both there was a change in political and social ideology. The Western Roman collapse does not see the sudden end of Latin, Roman Christianity, Late Antique art and high culture, and so on, though aspects of life may have become less sophisticated (Ward-Perkins 2005). Part of the confusion here seems to be related to the concept of a Great Tradition, mentioned above, and the relation of a political unit with a cultural unit. Storey and Storey hold that collapse is the end of a Great Tradition, or at least some of its elements, while Maya and collapse expert Arthur Demarest (2013:23) argues that “the collapse of an ancient society does *not* mean an end to its ‘great tradition’ such as its culture, worldview, ethics, literature, and other major characteristics.” As always in collapse studies, apparent disagreement may really stem from different understandings of the same terms—collapse, civilization, Great Tradition, and so on.

Conclusions

The three works reviewed here, and the others mentioned at the start, all make a positive contribution to the existing body of collapse literature, examining and questioning collapse theory and bringing together up-to-date evidence and interpretations of particular cases of supposed collapse, though not everyone will agree with all of the ideas and conclusions presented by them. Each responds, in some way, to the foundational works on collapse, to Diamond’s *Collapse* and the environmental turn, to *Questioning Collapse* and to the rise of resilience thinking. Each offers a new awareness of collapse as a field in its own right within archaeology, one that has its own body of literature and theory and is self-conscious and self-critical. Each contributes something different to the ongoing discussion about collapse and transformation.

The most successful, in my opinion, is Fauseit’s volume of essays, which, unlike Johnson’s and the Storeys’ works, generally retains the “traditional” notion of collapse as a fairly rapid political process. It is rich in theoretical discussion and interesting case studies grounded in up-to-date archaeological work; the variety of approaches and perspectives adopted by the different authors gives the reader much to think about; this will ensure that the volume will remain invaluable reading for all interested in collapse and social change

and resilience. The Storeys' work sets out clear and up-to-date discussion of the evidence for Roman and Maya collapses, helpfully organized into themes and arranged side by side for clear comparisons to be made, which makes it, too, a useful volume. Their ideas will surely provoke some interesting reactions.

In 2012 I argued:

The view that collapse is a phenomenon simply determined by unexpected environmental or climatic shifts, resource degradation, and maladaptation fails to recognize that reactions to problems and challenges of all kinds are not simple cause and effect; rather they are bound up with and refracted by social realities, priorities, and motivations that may be far from unified or singular. Many collapses may be best seen as representing the consequences of conflicts between and within groups, which led to the materially visible changes that we identify in the archaeological record. Those conflicts may have been triggered or exacerbated by a wide range of both internal and external causes with unpredictable consequences. (Middleton 2012:285)

In the same year, Butzer and Endfield (2012:3628), with similar sentiments, stated that “without downplaying the importance of hard science and modeling in studies of collapse, it can be argued that socio-cultural and political processes need greater attention” and Butzer (2012, 3638) identified social factors as the most important in collapse. What is refreshing, therefore, in the new literature of 2016 and 2017, is the acceptance of collapse as primarily driven by human relationships and social dynamics and not simply forced by the environment (e.g., Feinman and Nicholas 2016:46; Hutson 2016:136; see also Middleton 2017a:340). Collapse studies has recovered from its years “in the wild” (Tainter 2006:60). The various contributions to collapsology of 2016 and 2017 should ensure continued engagement with the subject and provide researchers with much to think about.

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