

# COPING WITH CHANGING CLIMATES IN EARLY ANTIQUITY (3CEA)

## *Comparative Approaches between Empiricism and Theory*

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Coping with Changing Climates in Early Antiquity: Comparative Approaches between Empiricism and Theory (3CEA) is a collaborative project sponsored by the Humanities Without Walls consortium ([www.humanitieswithoutwalls.illinois.edu](http://www.humanitieswithoutwalls.illinois.edu)) through its competitive research initiative “The Work of the Humanities in a Changing Climate,” which is funded by a grant from the Andrew W. Mellon Foundation and is based at the Illinois Program for Research in the Humanities ([www.iprh.illinois.edu](http://www.iprh.illinois.edu)). In January 2018, 3CEA was awarded approximately \$136,000 over the course of three years (2018–20) through the Franke Institute for the Humanities ([franke.uchicago.edu](http://franke.uchicago.edu)), the consortium’s partner institution at the University of Chicago.

Projects members include ten faculty and graduate students from three institutions: **Hervé Reculeau** (assistant professor of Assyriology, University of Chicago, principal investigator); Michele Buzon (professor of anthropology, Purdue University, project coordinator); Jay Crisostomo (assistant professor of Assyriology, University of Michigan, project coordinator); Gary Beckman (George C. Cameron Professor of Ancient Near Eastern Languages and Cultures, University of Michigan); Catherine Kearns (assistant professor in classics, University of Chicago); Timothy Leonard (PhD candidate, University of Michigan); Thalia Lysen (PhD candidate, University of Chicago); **Nadine Moeller** (associate professor of Egyptian archaeology, University of Chicago); Émilie Sarrazin (PhD candidate, University of Chicago); and Katie Whitmore (PhD candidate, Purdue University).

CEA investigates, in a comparative perspective, the social and cultural perceptions of, and experiences with, climate change in the Bronze and Early Iron Ages (third to first millennia BCE), through a multidisciplinary approach that convenes archaeologists, bioarchaeologists, and text specialists to foster interdisciplinary collaboration among the three partner institutions in the Midwest and between faculty and graduate students. The project uses ancient texts, archaeological and paleoenvironmental data (including ancient skeletal remains), and geospatial analysis to address the ways in which societies in the Eastern Mediterranean, Northern Africa, Anatolia, and Mesopotamia were affected by ancient episodes of climate change (see *Annual Report 2017–18* for a detailed presentation of the working groups and research questions). Focusing on social perception of and reaction to changes in the local, regional, and global climate(s), the project members have chosen to primarily address one well-documented (and abundantly discussed) episode of rapid climate change (RCC): the “Late Bronze Age crisis” around 1200 BCE, which saw the demise of the Egyptian New Kingdom, Mycenaean Greece, the Hittite Empire, and several city-states in the Eastern Mediterranean. Contrary to most research conducted so far, which took this episode of devolution in social complexity as the endpoint of their analysis, 3CEA integrates this sequence of events within a longer chronological time frame that not only encompasses the three preceding centuries of the Late Bronze Age (fifteenth to twelfth centuries BCE), but also the two to three following ones that constitute the formative years of the Early Iron Age (twelfth to tenth or ninth centuries BCE, depending on areas). Additionally, the project offers a

reassessment of the so-called 4.2ka event that allegedly brought an end to the Akkadian Empire in Mesopotamia and the Old Kingdom in Egypt around 2200 BCE.

In accordance with the strong focus on collaboration and collaborative practices promoted by the Humanities Without Walls consortium, academic year 2018–19 saw the realization of one of the project’s key components: a joint two-quarters (or one-semester) seminar, which was offered in the winter and spring quarters of 2019 to graduate students at the three partner institutions, using video conferencing and shared online pedagogical resources. Each week of the academic year between January and June 2019, the participants gathered in a seminar room at their home institution, and a virtual discussion room uniting all three institutions was created using the Cisco Webex Meetings software. For three hours, students and instructors presented and discussed a common selection of readings, starting with a series of methodological sequences on modern and ancient climates in the areas under study, and how the latter are reconstructed by palaeoclimatologists from a series of proxy data (ice cores, tree rings, fossil pollens, lake and ocean sediments, stalactites and stalagmites, etc.). The seminar then focused on theoretical approaches that have defined the analysis of (past) societies in relation to climate in the academic literature. These include the anthropogenic and (neo) deterministic paradigms in the study of human-environment relationships; the specific methods and theories developed in environmental anthropology and archaeology; the booming field of resilience theory and the contribution of complex systems theory to the elaboration of the concept of Social-Economic Systems (SES); and the problematic use, in Ancient History, of notions such as “collapse,” “dark age(s),” or “intermediate period(s).” The second part of the seminar was then devoted to a series of case studies, in which the current state of research was presented (and critically analyzed) for the following historical episodes in all three areas that are the focus of the project: the beginning of the Early Bronze Age circa 3000 BCE and its demise around 2200 BCE (the so-called 4.2k event); the end of the Late Bronze Age circa 1200 BCE (the so-called 3.2k event); and the Early Iron Age, from the so-called Dark Age of the twelfth to tenth centuries BCE to the rise of *poleis* in Greece during the eighth century BCE, the rise and demise of Assyria between the ninth and seventh centuries BCE, and those of the Third Intermediate Period in Egypt. The seminar closed on a discussion of the concept of the Anthropocene, and its implication for the studies of climate change and human interaction with their environments in the past.

At the junction of research and pedagogy, the seminar was predicated on the idea that, in such an interdisciplinary endeavor, every participant (students and faculty alike) could disseminate their advanced knowledge and mastery of the data, methods, and literature of their respective field or subfield to the group, from Assyriology to bioarchaeology. The seminar’s syllabus was thus established collaboratively by all the project members and discussions brought to the tables (both physical and virtual) expertise and insights, but also questions, from a very diverse set of perspectives. The ambition was to develop a common language among project members with very different academic backgrounds, and with the students who partook in the seminar. This allowed for true collaboration, rather than simply juxtaposing research conducted in the three different areas of the project. This gives 3CEA a truly interdisciplinary and collaborative dimension that is rarely attained in such endeavors, and the insights gained from the seminar have already impacted the way research is being conducted within the three subprojects on Egypt and Nubia (Buzon, Moeller, Sarrazin, Whitmore), Anatolia and the Eastern Mediterranean (Beckman, Kearns, Leonard, and Lysen), and Mesopotamia (Crisostomo and Reculeau). While the results of these investigations are set to be presented during 3CEA’s final conference in the fall of 2020, some preliminary results of the Mesopotamia subproject have been presented by Jay Crisostomo and Hervé Reculeau during the 2019 Annual Meeting of the American Oriental Society (held in March 2019 in Chicago), in a paper titled “Assyrian Sources and the Assumed Climatic Crisis at the End of the Late Bronze Age (twelfth to tenth centuries BCE).”

Michele Buzon and Katie Whitmore presented their work on skeletal data from Tombos (Sudan) at the 46th Paleopathology Association Annual Meeting (Cleveland, March 27–29, 2019), in a paper titled “Pathological Changes Associated with Resorption of a Proximal Femur from New Kingdom Tombos, Injury or Disease?” Catherine Kearns presented a paper titled “Weathered Things: Climate and Environment in Mediterranean Landscape Archaeology” at the Conference Environmental Entanglements: Climate and Pheysis in the Ancient World (University of Western Ontario, September 21, 2019) and published an article titled “Discerning ‘Favorable’ Climates: Science, Survey, and the Cypriot Iron Age,” in a volume she coedited with S. Manning, *New Directions in Cypriot Archaeology* (Ithaca, NY: Cornell University Press, 2019), 266–94.

Additional elements on 3CEA can be found in a joint interview of Catherine Kearns and Hervé Reculeau for *Tableau*, the journal of the Humanities Division of the University of Chicago ([tableau.uchicago.edu/articles/2019/05/two-perspectives-ancient-climate-change](http://tableau.uchicago.edu/articles/2019/05/two-perspectives-ancient-climate-change)), and in the latter’s interview for the OI Oral History Project ([www.youtube.com/watch?v=albBUlAielc](http://www.youtube.com/watch?v=albBUlAielc)).

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