

Report on the CfAS New Initiatives Task Force Survey on Priorities for Synthetic Research

On October 6, 2020, CfAS circulated a survey that asked CfAS Associates to assist the Coalition in defining and prioritizing future directions for synthetic research initiatives. Through the survey (attached), we sought comments on 11 research themes identified by the CfAS New Initiatives Task Force, suggestions for other themes we should consider, and the priorities that should be assigned to the different themes. The survey was anonymous. By October 22, 2020 we had received 52 responses. A summary of the Associates' rankings is provided below.

Research Theme Priority Results

Theme	Score	Survey Rank
Colonialism	34.3	1
Social Inequality	29.6	2
Climate Change	27.9	3
Food Security	27.5	4
Infectious Disease	27.3	5
Enslavement, Forced Labor, and Human Trafficking	25.3	6
Demography	25.2	7
Coping with Natural Disasters	24.4	8
Archaeology of Genetic Identities and Ancient DNA	19.9	9
Town and Country / Urban and Rural	18.5	10
Creative Destruction / Resilience	12.8	11
Your entry	6.8	12

CfAS Associates Survey Cover Letter

Coalition for Archaeological Synthesis
Seeking Your Ideas Concerning Priorities for Synthetic Research

Coalition for Archaeological Synthesis Associates:

The mission of the Coalition for Archaeological Synthesis is Fostering synthesis in archaeology to expand knowledge and benefit society. The coalition is able to advance its mission by leveraging the capacities of its individual Associates and its Partner organizations.

With this email we invite you, as a CfAS Associate, to assist the Coalition in defining and prioritizing future directions for our synthetic research initiatives. Through the survey (link below), we seek your comments on 11 research themes identified by the CfAS New Initiatives Task Force, your suggestions for other themes we should consider, and the priorities you would assign to the different themes. The survey is anonymous. It has only 3 questions and should only take a short time to complete. The link to the survey is:

https://asuclas.qualtrics.com/jfe/form/SV_20uIXZnbEsJYC5T

We would be grateful if you would complete the survey today or at the latest within a week of receipt of this email. Thank you in advance for your assistance.

Jeff Altschul and Keith Kintigh, Co-Presidents

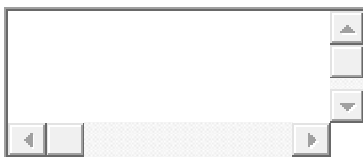
CfAS Associates Survey Instrument

Synthetic Research Priorities

Research Themes (Click Topic for More Information)

1. Colonialism
2. Climate Change
3. Social Inequality
4. Food Security
5. Coping with Natural Disasters
6. Enslavement, Forced Labor, and Human Trafficking
7. Infectious Disease
8. Demography
9. Archaeology of Genetic Identities and Ancient DNA
10. Town and Country / Urban and Rural
11. Creative Destruction / Resilience

Please offer any comments on these themes. Suggestions should include a simple phrase, and could include a description, sample research questions, and a few references.



What other research themes have substantial potential to contribute to contemporary issues with synthetic archaeological research?

Please rank order the themes from highest (1) to lowest (11/12) priority by dragging them into your preferred order.

- Colonialism
- Climate Change
- Social Inequality
- Food Security
- Coping with Natural Disasters
- Enslavement, Forced Labor, and Human Trafficking
- Infection Diseases
- Demography
- Archaeology of Genetic Identities and Ancient DNA
- Town and Country / Urban and Rural
- Creative Destruction / Resilience
- Your additional suggestion (if any).

If you would like to identify yourself, please enter your name and email address (optional).

Research Theme Text (linked)

1. Colonialism

Colonialism can be analyzed from the perspective of the colonizers and from the perspective of indigenous communities. For the colonizers, colonies can bring wealth, prestige, legitimization, and power. It can also bring an emphasis on militarism, exacerbate social inequality, concentrate political power, and create new forms of internal conflict. For indigenous communities, colonialism is commonly associated with disease, collapse of social institutions, subservience and often enslavement. Indigenous communities, however, did not respond passively to colonization. Each community was a viable social entity prior to colonialization and, most remained so afterwards. Both colonizers and indigenous communities were transformed by the experience with their cultural trajectories altered in ways that resonate today and are likely to affect them well into the future.

Perspectives on colonialism and its impacts have been strongly colored by the biases of historical accounts. Archaeology, freed of those biases, is uniquely positioned to study the long-term effects of colonialism. Traditionally, archaeology has studied colonialism from the perspective of the colonizer. Addressing colonialism from the perspective of indigenous societies has the potential of not only confronting a contested past in pursuit of social justice, but also providing communities with a reflexive examination of their social institutions and racial relationships.

Sample Research Questions

- a. What factors made indigenous societies more or less resilient to colonialism?
- b. What ideas, technologies and practices from indigenous societies influenced colonizing societies?
- c. In what ways does documentary evidence mislead us regarding the realities of the colonial experience?
- d. What residual colonial institutions remain today and how do they structure contemporary life?

References

- C. Beaulieu and J.G. Douglass, eds. 2020. *The Global Spanish Empire: Five Hundred Years of Place Making and Pluralism*. Tucson: University of Arizona Press.
- C.L. Hofman, J. Ulloa Hung, E. Herrera Malatesta, J.S. Jean, T. Sonneman and M.L.P. Hoogland. 2018. Indigenous Caribbean perspectives: archaeologies and legacies of the first colonised region in the New World. *Antiquity* 92(361): 200-216
- C.L. Lyons and J.K. Papadopoulos, eds. 2002. *The Archaeology of Colonialism*. Los Angeles: Getty Research Institute.

2. Climate Change

Climate change has been described as the “defining issue of our time” and efforts to slow or adapt to the impacts of a changing climate will undoubtedly be costly. Human communities have faced climate challenges for millennia and the archaeological record has frequently been argued to provide an archive of successful and unsuccessful experiments at various scales. Archaeology has much to offer discussions of climate response but the potential has yet to be fully realized.

Sample Research Questions

- a. What are the most appropriate time scales for assessing the impacts of climate change and social responses?
- b. How do responses to climate change co-vary with social and political configurations?
- c. Although some of the direct impacts of climate change on communities may be obvious (loss of coastal areas, declines in agricultural productivity, etc.), what are the second and third order effects on societies in the past and how might recognizing these help us predict future dilemmas?
- d. Have societies innovated their way out of climate challenges in the past? If so, how did they do it?
- e. What lessons do approaches to consultation, planning and mitigation in the context of cultural resource management have to offer in future efforts toward coordinating differing values and social environments in the creation of effective action in the face of climate change?

References

- IPCC. 2020. AR6 Climate Change 2021: Impacts, Adaptation and Vulnerability — IPCC.” n.d. Accessed July 28, 2020. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>.
- Rick, Torben C., and Daniel H. Sandweiss. 2020. “Archaeology, Climate, and Global Change in the Age of Humans.” *Proceedings of the National Academy of Sciences* 117 (15): 8250–53. <https://doi.org/10.1073/pnas.2003612117>.
- Rockman, Marcy, and Carrie Hritz. 2020. “Expanding Use of Archaeology in Climate Change Response by Changing Its Social Environment.” *Proceedings of the National Academy of Sciences* 117 (15): 8295–8302. <https://doi.org/10.1073/pnas.1914213117>.
- Thomas, Kimberley, R. Dean Hardy, Heather Lazrus, Michael Mendez, Ben Orlove, Isabel Rivera-Collazo, J. Timmons Roberts, Marcy Rockman, Benjamin P. Warner, and Robert Winthrop. 2019. “Explaining Differential Vulnerability to Climate Change: A Social Science Review.” *WIREs Climate Change* 10 (2): e565. <https://doi.org/10.1002/wcc.565>.

3. Social Inequality

In the past few decades, wealth inequality has expanded substantially across the developed world. Some have argued that this is an unavoidable consequence of economic growth and globalization, whereas others have looked to policy decisions that have weakened redistribution. To the extent that inequality is ultimately a material phenomenon, the archaeological record provides a rich basis for investigating the long-term dynamics of wealth inequality and its impacts, across a much wider range of social formations than has characterized recent economic history. Compelling answers to many questions concerning inequality require input from archaeology.

Sample Research Questions

- a. What are the effects of increasing inequality for social mobility over the long term?
- b. How much equality or inequality can a society tolerate while continuing to function?
- c. What are the costs and benefits of extreme inequality? Of extreme equality?
- d. Is it possible to have economic growth and decreasing inequality at the same time?
- e. Is there an optimal wealth distribution from the perspective of economic performance?
- f. How does wealth inequality influence other forms of inequality, such as racial or religious tension?

References

- Kohler, Timothy A. and Michael E. Smith, eds. 2018. *Ten Thousand Years of Inequality: The Archaeology of Wealth Differences*. University of Arizona Press.
- Picketty, Thomas. 2014. *Capital in the Twenty-First Century*. Harvard University Press
- Scheidel, Walter. 2018. *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century*. Princeton University Press

4. Food Security

Global demand for food is stimulating a vast transformation of the earth's surface, and to meet the needs of the estimated 2050 population food production may need to double again. Societies vary substantially in their food production systems, and archaeological studies allow one to investigate the reliability, sustainability, scalability, and environmental impacts of such systems. Data from the past can provide models for complex food production and supply networks and their integration into environmental, economic, and social systems.

Sample Research Questions

- a. What are the social, economic, and environmental requirements or effects of different kinds and/or levels of food security?
- b. Food production and distribution systems vary substantially regarding inputs of land, technology, transport, and organization. What are the relative contributions of these factors to more sustainable or resilient systems?
- c. How have responses to real, or perceived, threats to food security driven changes in political, economic and environmental landscapes?
- d. To what extent do cultural definitions of, and preferences, in food consumption drive notions of food security? What impacts does abundant food on economic and societal growth?
- e. Variable access to high quality food is an aspect of social inequality. How do such inequalities affect social, economic, and demographic rates in a society?

References.

Logan, Amanda L. 2016. An Archaeology of Food Security in Banda, Ghana. *Archaeological Papers of the American Anthropological Association* 27, 106-119.

Reed, Kelly and Ryan, Philippa. 2019. Lessons from the Past and the Future of Food. *World Archaeology* 51(1): 1-16 DOI: 10.1080/00438243.2019.1610492

Stephens, Lucas, et al. 2019. Archaeological assessment reveals Earth's early transformation through land use. *Science* 365(6456):897-902.

5. Coping with Natural Disasters

All societies face natural hazards, but they vary widely in their responses to disastrous events. Such hazards include volcanic eruptions, hurricanes, tsunamis, floods, earthquakes, wildfires, and on a somewhat slower time scale, droughts and epidemics. Although individuals tend to discount the future in assessments of risk, societies that experience disasters do sometimes take action to mitigate the impacts of future events, with insurance being a common solution. Archaeologists are able to see the conditions under which different kinds of efforts to mitigate natural hazards are, or are not, effective in the long run. Archaeologists can also document alternative approaches to natural hazards mitigation beyond rebuilding in their aftermath.

Sample Research Questions

- a. What are the time horizons over which societies address natural hazards?
- b. What kinds of social institutions or arrangements are more or less robust to the effects of natural disasters?
- c. How have responses to disaster varied with the distribution of impacts across groups of different economic or social status

- d. What are the conditions under which reactive recovery vs. proactive adaptation are preferable?

References

Cooper, Jago, and Payson Sheets (eds). 2012. *Surviving Sudden Environmental Change: Understanding Hazards, Mitigating Impacts, Avoiding Disasters*. University of Colorado Press, Boulder. https://upcolorado.com/university-press-of-colorado/item/download/363_f8e2d537663152aa918d4675bdf115ee

Jones, Lucy. 2018. *The Big Ones: How Natural Disasters Have Shaped Us (and What We Can Do About Them)*. Doubleday, New York.

Torrence, Robin, and John Grattan. 2002. *Natural Disasters and Cultural Change*. Routledge, London.

6. Slavery, Forced Labor, and Human Trafficking

In much of the world, the foundations of modern life are based in a brutal history of slavery, forced labor, and human trafficking. Between 1519 and 1867, more than 11 million Africans were forcibly migrated to the Americas and enslaved, outnumbering the Europeans who brought them. For centuries, enslaved Africans and their descendants struggled against oppression and endured the forced labor that built cities and nations. Today, movements like Black Lives Matter seek to redress the systemic racism and structural inequalities that persist from this violent and oppressive past. Slavery and human trafficking were not unique to the Atlantic world but have existed in different contexts and configurations in many societies. While slavery and human trafficking have been abolished and criminalized in most modern nations, by some measures more people are enslaved today than during the Atlantic slave trade. Every country is affected by modern forms of slavery which, according to the Global Slavery Index, “prosper in...environments of conflict, corruption, displacement, discrimination and inequality.”

Sample Research Questions

- a. Why has slavery been so pervasive in human history?
- b. What social conditions encourage or inhibit the emergence and persistence of slavery, forced labor, and human trafficking?
- c. What are the short- and long-term economic, social, and physical impacts of slavery, forced labor, and human trafficking on affected populations?
- d. What are the parallels between today’s working classes and yesterday’s slaves?
- e. What sort of work did slaves do in different societies, and how did this impact who slaves were?
- f. How have social institutions profited economically and otherwise through time from legacies of enslavement, forced labor, and human trafficking?

References

Berlin, Ira. 1998. *Many Thousands Gone: The First Two Centuries of Slavery in Mainland North America*. Harvard University Press, Cambridge.

Blakey, Michael L., and Lesley M. Rankin-Hill (editors). 2009. *Skeletal Biology of the New York African Burial Ground*. *The New York African Burial Ground: Unearthing the African Presence in Colonial New York*, vol. 1. Howard University, Washington, D.C.

International Labour Office (ILO). 2017. *Global Estimates of Modern Slavery: Forced Labour and Forced Marriage*. International Labour Office (ILO), Geneva.

Marshall, Lydia Wilson (editor). 2014. *The Archaeology of Slavery: A Comparative Approach to Captivity and Coercion*. Southern Illinois University Press, Carbondale.

Payne, B. Keith, Heidi A. Vuletich, and Jazmin L. Brown-Iannuzzi. 2019. Historical Roots of Implicit Bias in Slavery. *Proceedings of the National Academy of Sciences* 116(24):11693–11698.

Walk Free Foundation. 2018. *The Global Slavery Index*. Walk Free Foundation, <https://www.globallslaveryindex.org/resources/downloads/>

7. Infectious Disease

Globally, the coronavirus pandemic has had far-reaching and continuing effects on mortality, health, and well-being. Economies, social interactions, and food security and many other aspects of society have also been deeply affected. Moreover, negative consequences of the pandemic have disproportionately affected disadvantaged and oppressed social groups. Two thirds of all infectious diseases in humans today derive from pathogens, like coronavirus, that jumped from animals to humans. The emergence of zoonotic disease is stimulated by environmental change, decreases in biodiversity, and the intensification and expansion of human settlement and food production. Global health organizations warn that climate change and ongoing disturbance from human activity will only increase the risk of future pandemics.

Infectious disease outbreaks have occurred repeatedly throughout the human past and with devastating effects. The impact of novel European pathogens on Native American populations, for example, caused widespread demographic collapse that led to major socio-political transformations and drastic disruption of indigenous subsistence practices, cultural traditions, and social reproduction. Archaeologists and genetics are also acquiring a new ability to study the long-term co-evolution of people and pathogens.

Sample Research Questions

- a. What social, ecological, and immunological factors make human populations more or less susceptible to pathogenic disease?

- b. What are the long-term consequences of disease burdens for political economy, social and economic stability, food security, and demography?
- c. What role do human social arrangements and relationships with other species play in the evolution of pathogens?
- d. Infectious diseases spread through interpersonal contacts, which are more frequent in larger and denser social settings. What strategies have societies followed to reduce disease burdens while taking advantage of sociality?

References

- Crosby, Alfred W. 1986. *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*. Cambridge University Press, Cambridge, England.
- Di Marco, Moreno, et al. 2020. Sustainable Development Must Account for Pandemic Risk. *Proceedings of the National Academy of the Sciences* 117(8):3888–3892.
- Jones, Bryony A., et al. 2013. Zoonosis Emergence Linked to Agricultural Intensification and Environmental Change. *Proceedings of the National Academy of the Sciences* 110(21):8399–8404.
- Larsen, Clark Spencer. 2018. The Bioarchaeology of Health Crisis: Infectious Disease in the Past. *Annual Review of Anthropology* 47:295-313.
- Mühlemann, Barbara, et al. 2020. Diverse variola virus (smallpox) strains were widespread in northern Europe in the Viking Age. *Science* 369(6502):eaaw8977.
- Reff, Daniel T. 1991. *Disease, Depopulation, and Culture Change in Northwestern New Spain, 1518–1764*. University of Utah Press, Salt Lake City.

8. Demography

A long research tradition stretching back to Darwin and Malthus recognizes that demographic processes are central for the long-term fates of human societies. A generation ago, many worried that population growth would soon overwhelm our food production systems, with the People’s Republic of China’s one-child policy being a notable response. Today, in contrast, the reproductive rate has fallen below the replacement rate in most developed nations. There is a pressing need to understand general relationships between demographic rates and socio-economic processes to help society respond productively to current trends. Demographic and socio-economic rates are increasingly obtainable for past societies through studies of archaeological settlement data, trash assemblages, and skeletal remains. Synthetic archaeological research on this topic creates an opportunity for unified study of demographic rates and their long-term impacts on human society.

Sample Research Questions.

- a. Does the decoupling of affluence and population growth expose a contradiction in evolutionary theory?

- b. Why are societies with large middle classes failing to reproduce themselves? What role do gender roles play in this process?
- c. Are there general relationships between economic and demographic processes?

References

- Bricker, Darrell and John Ibbitson. 2019. *Empty Planet: The Shock of Global Population Decline*. Crown Books.
- Erlich, Paul R. 1968. *The Population Bomb*. Ballantine Books
- Morland, Paul. 2019. *The Human Tide: How Population Shaped the Modern World*. Public Affairs Books.

9. Archaeology of Genetic Identities and Ancient DNA

Genetic information from individuals and populations can be assessed to produce statistical clusters of people who are more similar to each other than they are to others, with consequences for modern understandings of identity and belonging. To what extent do such clusters represent historical phenomena known to the populations in question? What were the historical, social, and environmental drivers that produced these clusters and how can archaeologists and geneticists most effectively combine their datasets, to produce the most probable explanatory models? Full genomes can now provide detail about skin, eye, and hair color, as well a variety of information about disease prevalence and resistance. How can the results of these analyses be communicated to the public without feeding racist, nationalist, or other interest group agendas?

Sample Research Questions

- a. How do historical and environmental processes shape genetic pasts at different scales, from small communities to populations?
- b. How are past genetic histories impacting upon and shaping modern conceptions of identity and belonging?
- c. To what extent did past peoples recognize the genetic groups recovered through archaeogenomic analysis?
- d. How do group identities relate to genetic differences across societies?

References

- Eisenmann, Stefanie, et al.. 2018. Reconciling material cultures in archaeology with genetic data: the nomenclature of clusters emerging from archaeogenomic analysis. *Scientific Reports* 8: 13003 [DOI:10.1038/s41598-018-31123-z](https://doi.org/10.1038/s41598-018-31123-z)
- Frieman, Catherine J., and Hofmann, Daniela. 2019. Present pasts in the archaeology of genetics, and migration in Europe: a critical essay. *World Archaeology* 51 (4), 528-545 DOI:10.1080/00438243.2019.1627907

10. Town and Country/Urban and Rural

Currently more than half of the world's population lives in urban areas and that number is expected to continue to grow. Beyond the challenges and opportunities that this trend toward urbanism creates, there is an increasing awareness in many realms of research of a divergence in outcomes associated with urban and rural life in the contemporary world. Many rural areas are marked by higher age-adjusted mortality and lower socioeconomic output per capita than urban areas whereas urban settings are often marked by greater inequality and challenges associated with sprawl and unconstrained urban growth. The differences between urban and rural settings are not strictly dichotomous, however, and regions of high and low population are interconnected and interdependent in many ways. This situation is not a new one and the archaeological record is replete with examples of extended periods of urbanization and deurbanization and rural-to-urban and urban-to-rural migrations of the short- and long-term associated with a variety of outcomes. Thus, the archaeological record can provide important and underused information on the nature and trajectories of change among urban and rural areas.

Sample Research Questions

- a. Do we see the same disparities between rural and urban life across different kinds of social and political regimes?
- b. How predictable are the divergent outcomes between rural and urban settings?
- c. Are their strategies employed by past societies that have helped to ameliorate or have exacerbated such disparities?
- d. Are there insights in the archaeological record that can help us address contemporary concerns in the relationships between rural and urban areas?

References

- Carballo, David M., and Brent Fortenberry. 2015. Bridging Prehistory and History in the Archaeology of Cities. *Journal of Field Archaeology* 40 (5): 542–59. <https://doi.org/10.1179/2042458215Y.00000000019>.
- Matthys, Christa, Jan Kok, and Richard Paping. 2018. "Urban-Rural Differences in Historical Demography: Introduction. *Historical Life Course Studies* 6 (1): 1–10.
- Singh, Gopal K., and Mohammad Siahpush. 2014. "Widening Rural–Urban Disparities in Life Expectancy, U.S., 1969–2009. *American Journal of Preventive Medicine* 46 (2): e19–29. <https://doi.org/10.1016/j.amepre.2013.10.017>.
- Smith, Michael E. 2010. Sprawl, Squatters and Sustainable Cities: Can Archaeological Data Shed Light on Modern Urban Issues? *Cambridge Archaeological Journal* 20 (2): 229–53. <https://doi.org/10.1017/S0959774310000259>.

11. Creative Destruction / Resilience

An element of many models of economic growth is the idea that economic growth in industrial societies is cyclical and depends on creative destruction in the sense of loss of existing capital as people exploit new opportunities due to innovation. Is this generally true in industrial societies and is this idea useful in understanding the dynamics of non-industrial societies? Resilience theory in ecology posits an adaptive cycle that similarly includes phases of release and reorganization that scholars have also applied to social systems. Does that cycle help us understand the long-term trajectories of coupled social and ecological systems?

Sample Research Questions

- a. Under what conditions is creative destruction helpful for improving living conditions and when is it not?
- b. How useful is the adaptive cycle of resilience theory in helping us understand social dynamics.
- c. Creative destruction is often opposed by entrenched interests. Do societies vary with regard to their embrace of or resistance to creative destruction?

References.

Schumpeter, Joseph A. 1994 [1942]. *Capitalism, Socialism and Democracy*. London: Routledge, London. ISBN 978-0-415-10762-4.

Resilience Alliance. 2020. Adaptive Cycle. <https://www.resalliance.org/adaptive-cycle>