

Evolution of Cultural Complexity

September 20, 2017 (8:30-18:30) Cancun, Mexico

Scope of the Satellite

Human sociocultural evolution has been documented throughout the history of humans and earlier hominins. This evolution manifests itself through development from tools as simple as a rock used to break nuts, to as complex as a spaceship able to land man on other planets. Equally, we have witnessed evolution of human population towards complex multilevel social organisation.

Although cases of decrease and loss of this type of complexity have been reported, in global terms it tends to increase with time. Despite its significance, the conditions and the factors driving this increase are still poorly understood and subject to debate. Different hypothesis trying to explain the rise of sociocultural complexity in human societies have been proposed (demographic factor, cognitive component, historical contingency...) but so far no consensus has been reached.

Here we raise a number of questions:

1. Can we better define sociocultural complexity and confirm its general tendency to increase over the course of human history?
2. What are the main factors enabling an increase of cultural complexity?
3. Are there reliable way to measure the complexity in material culture and social organisation?
4. How can we quantify and compare the impact of different factors?
5. What causes a loss of cultural complexity in a society? And how often these losses occurred in the past?

Goals

In this satellite meeting we want to bring together a community of researchers coming from different scientific domains and interested in different aspect of the evolution of social and cultural complexity. From archaeologists, to linguists, social scientists, historians and artificial intelligence specialists - the topic of sociocultural complexity transgresses traditional discipline boundaries. We want to establish and promote a constructive dialogue incorporating different perspectives: theoretical as well as empirical approaches, research based on historical and archaeological sources, as well as actual evidences and contemporary theories. We are particularly interested in formal approaches which enable more constructive theory building and hypothesis testing. However, even establishing common vocabulary of terms and concepts and discussing the main methodological challenges in studying sociocultural complexity is an important step towards a more cohesive framework for the understanding of cultural evolution in general and for individual research case studies in particular. Our approach is informed by the convergence between simulation and formal methods in archaeological studies and recent

developments in complex systems science and complex network sciences.

The session will focus but is not limited to:

- Social dynamics of innovation,
- Cumulative Culture and social learning.
- Evolution of Technology,
- Cognitive Process, Creativity and Innovation.
- Population Dynamics and Demographic Studies.

Tentative Program

The topic of the satellite is very timely and of high interest to a wide and diverse group of researcher in complex systems. We believe the best format to successfully push forward the discussion is a one day satellite that allows considerable time for exposing all the relevant point of views and promote further discussion. Thus we propose a satellite with 10 presentations, 4 on the morning and 6 on the afternoon. They will include 45min presentations+questions by the Invited Speakers, as well as 30min presentations+questions chosen from the submitted abstract.

We propose to end the day with a 1h30 panel discussion.

Attendance

Including the 4 invited speakers, the 6 accepted speakers and the 5 organizers, we expect between 30 to 50 persons.

List of potential Invited Speakers

Given the availability of the speakers, a particular attention will be paid to keep a balanced gender ratio. The follow list doesn't reflect any preferential order.

Enrico Crema (University of Cambridge)
Alex Bentley (University of Houston)
Mark Collard (Simon Fraser University)
Alex Mesoudi (Exeter University)
Ruth Mace (University College London)
Robert Boyd (Arizona State University)
Michelle Ann Kline (Simon Fraser University)
Anne Kandler (Max Planck Institute for Evolutionary Anthropology?)
Stefani Crabtree (Pennsylvania State University)
Tim Kohler (Washington State University)

Andre Costopoulos (McGill University)
Victoria Reyes-Garcia (ICREA & ICTA-UAB)
Joe Henrich (University of British Columbia)

Organising Committee

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