Towards a General Theory of Cultural Evolution – Call for papers

Integrating Approaches across the Social and Natural Sciences to the Study of Cultural Evolution

Organizers: Axel Paul (U Basel, Switzerland), Oliver Schlaudt (Eurac Research, Bolzano, Italy), Ramy Youssef (U Basel, Switzerland)

Location and Date: Basel, June 10–12, 2027

Over the past decades, the concept of development has largely disappeared from social theory. In reaction to the teleological excesses and normative biases of classical evolutionism, historical change came to be understood primarily in terms of contingency, local dynamics, and structural configurations. Yet this retreat has come at a cost: it has left the social sciences without a robust conceptual language for addressing long-term transformations.

Today, however, the question of development returns with renewed urgency. Across disciplines, large-scale accounts of human history have begun to reconstruct long-term trajectories, from deep history to the present. Examples range from broad historical syntheses (Christian 2004, Morris 2010, Bellah 2011, Harari 2014, Scheidel 2017, Graeber/Wengrow 2021) to theoretical contributions in cultural evolution research (Laland 2017, Löffler 2019, Renn 2020, Schlaudt 2022, Turchin 2025). At the same time, contemporary transformations challenge established frameworks: shifting geopolitical orders, the rapid expansion of artificial intelligence, and the planetary consequences of human activity all raise questions about the direction, dynamics, and limits of societal change. What is at stake is not simply a theoretical problem, but a question of basic orientation: how to understand development without falling back into teleology.

The conference seeks to address this problem by bringing into dialogue two fields that have largely evolved separately: historically oriented sociology and cultural evolution research—both understood in a broad sense, the former including the history of technology and science and technology studies (STS), the latter extending to perspectives from Earth system science.

Cultural evolution research has developed a rich conceptual toolkit for analysing the emergence, transmission, and stabilization of cultural traits. It investigates processes such as innovation, social learning, selection, niche construction, and cumulative cultural evolution. (Boyd/Richerson 1985, Smith/Szathmáry 1995, Mesoudi 2011, Haidle et al. 2015, Henrich 2016). At the same time, its explanatory frameworks often remain focused on local processes and struggle to account for large-scale historical transformations.

Historical sociology, by contrast, has long been concerned with macro-level dynamics: the emergence of institutions, the differentiation of social systems, and the formation of large-scale structures such as states, economies, and global networks (Mann 1986–2013, Luhmann 1997, Chase-Dunn 1997, Acemoglu/Robinson 2012, Nolan/Lenski 2014). Yet it has largely abandoned the attempt to conceptualize development as such (see, however, Dux 2000, Sanderson 2007).

This situation suggests a productive tension rather than a contradiction. Cultural evolution research offers models of how change occurs; sociology provides accounts of how it stabilizes,

scales, and becomes historically consequential. Bringing these perspectives together may allow us to reconnect micro-level processes with macro-historical trajectories.

At the same time, a third line of inquiry has gained increasing relevance: research on major transitions in evolution and, more broadly, on the evolution of evolutionary processes themselves (Smith/Szathmary 1995, Szathmary 2015, Bonner 2019, de Castro/McShea 2022). From the emergence of symbolic communication and cumulative culture to the rise of complex technological systems, human history can be understood as a sequence of transitions that transform not only social structures, but the very mechanisms of variation, selection, and inheritance. Recent work has extended this perspective to the role of information in the biosphere and to the energetic constraints shaping evolutionary dynamics. From this angle, developments such as artificial intelligence appear not merely as technological innovations, but as potential shifts in the architecture of cultural evolution proper (Gillings et al. 2016, Müller et al. 2026).

The conference proposes to explore these questions along three analytical axes.

First, we ask whether and in what sense it is meaningful to speak of development at all. Certain long-term trends—demographic growth, increasing connectivity, expanding technological capacities, rising institutional complexity—are widely documented. Yet their interpretation remains contested. Do they constitute elements of a broader process, or are they simply the cumulative outcome of heterogeneous local dynamics?

Second, we address the mechanisms of cultural change. Cultural evolution research highlights processes such as selection, learning, and cognitive attraction, while sociological approaches emphasize institutions, power relations, and emergent system dynamics. Rather than choosing between these perspectives, the task is to understand how different levels of explanation interact and under which conditions local processes generate durable historical patterns.

Third, we focus on major transitions and structural transformations. Across different regions and historical contexts, certain developments—sedentarization, state formation, the emergence of writing, the expansion of economic networks—display striking regularities. These patterns raise the question of whether there exist recurrent forms or thresholds of cultural evolution, and how such transitions relate to changes in the underlying mechanisms of development.

The aim of the conference is not to promote a unified theoretical framework, but to clarify the scope of the problem. We seek bringing together contributions that engage with the question of development from different disciplinary perspectives, and that are willing to confront both the possibilities and the limits of existing approaches. What we are interested in are not convergent positions, but productive tensions: between micro and macro, contingency and regularity, local processes and global patterns.

Reconsidering development under contemporary conditions is not merely a matter of disciplinary integration. It may provide conceptual resources for understanding one of the central questions of our time: the trajectory of human societies within an increasingly constrained Earth system, and the transformations—technological, ecological, and cognitive—that are likely to shape it.

Confirmed speakers are (in alphabetical order): Erle C. Ellis (Geography, Baltimore), Miriam Haidle (Archaeology, Tübingen), Axel Kleidon (Earth System Science, Jena), Davor Löffler

(Sociology, Berlin), Andrea Migliano (Biology, Zurich), Simone Pika (Biology, Osnabrück), Jürgen Renn (History of Science, Jena), and Peter Wagner (Sociology, Barcelona).

We welcome paper and presentation proposals from all disciplines addressing any of the three thematic axes of the conference. Proposals should not exceed 300 words and should be specific while highlighting aspects of broader relevance to a theory of cultural evolution.

We intend to cover participants' travel and accommodation expenses and are currently applying for the necessary funding.

Please send your proposal, together with a very short CV (including your formal university education, areas of expertise, and a selection of key publications),

by **August 30, 2026** to ramy.youssef@unibas.ch.

References

Acemoglu, Daron; Robinson, James A. 2022. *Why Nations Fail? The Origin of Power, Prosperity, and Poverty*. London: Profile.

Bellah, Robert N. 2011. *Religion in Human Evolution: From the Paleolithic to the Axial Age.* Cambridge, MA: Harvard University Press.

Bonner, John T. 2019. The Evolution of Evolution. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* 332 (8): 301–306. doi: 10.1002/jez.b.22859.

Boyd, Robert; Richerson, Peter J. 1985. *Culture and the Evolutionary Process*. Chicago: University of Chicago Press.

Chase-Dunn, Christopher; Hall, Thomas D. 1997. *Rise and Demise: Comparing World-Systems.* New York: Avalon Publishing.

Christian, David. 2004. *Maps of Time: An Introduction to Big History.* Berkeley, CA: University of California Press.

de Castro, Carlos; McShea, Daniel W. 2022. Applying the Prigogine View of Dissipative Systems to the Major Transitions in Evolution. *Paleobiology* 48 (4): 711–728. doi: 10.1017/pab.2022.7.

Dux, Günter. 2000. *Historisch-genetische Theorie der Kultur.* Weilerwist: Vellbrück.

Gillings, Michael R.; Hilbert, Martin; Kemp, Darrell J. 2016. Information in the Biosphere: Biological and Digital Worlds. *Trends in Ecology & Evolution* 31 (3): 180–189. https://doi.org/10.1016/j.tree.2015.12.013.

Graeber, David; Wengrow, David. 2021. *The Dawn of Everything: A New History of Humanity*. New York: Farrar, Straus and Giroux.

Haidle, Miriam N.; Bolus, Michael; Collard, Mark; et al. 2015. The Nature of Culture: an Eight-Grade Model for the Evolution and Expansion of Cultural Capacities in Hominins and Other Animals. *Journal of Anthropological Sciences* 93: 43–70.

Harari, Yuval Noah. 2014. *Sapiens: A Brief History of Humankind*. London: Harvill Secker.

Henrich, Joseph. 2016. *The Secret of Our Success. How Culture is Driving Human Evolution, Domesticating our Species, and Making Us Smarter*. Princeton: Princeton University Press.

Laland, Kevin N. 2017. *Darwin's Unfinished Symphony*. Princeton: Princeton University Press.

Löffler, Davor 2019. *Generative Realitäten I: Die technologische Zivilisation als neue Achsenzeit und Zivilisationsstufe.* Weilerswist: Velbrück.

Luhmann, Niklas. 1997. *Die Gesellschaft der Gesellschaft.* Frankfurt: Suhrkamp.

Mann, Michael. 1986–2013. *The Sources of Social Power*. Cambridge: Cambridge University Press.

Mesoudi, Alex. 2011. *How Darwinian Theory Can Explain Human Culture and Synthesize the Social Sciences*. Chicago: Chicago University Press.

Morris, Ian. 2010. *Why the West Rules—For Now: The Patterns of History, and What They Reveal About the Future*. New York: Farrar, Straus and Giroux.

Müller, Viktor; Steels, Luc; Szathmáry, Eörs. 2026. Evolvable AI: Threats of a New Major Transition in Evolution. *PNAS* 123 (17): e2527700123. https://doi.org/10.1073/pnas.2527700123.

Nolan, Patrick, Lensky, Gerhard. 2014. *Human Societies. An Introduction to Macrosociology.* Oxford: Oxford University Press.

Renn, Jürgen. 2020. *The Evolution of Knowledge: Rethinking Science for the Anthropocene.* Princeton: Princeton University Press.

Sanderson, Stephen K. 2007. *Evolutionism and Its Critics: Deconstructing and Reconstructing an Evolutionary Interpretation of Human Society.* Boulder: Paradigm Publishers.

Scheidel, Walter. 2017. *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century*. Princeton, NJ: Princeton University Press.

Schlaudt, Oliver. 2022. *Das Technozän: Eine Einführung in die evolutionäre Technikphilosophie.* Frankfurt: Klostermann.

Smith, John M.; Szathmáry Eörs. 1995. The Major Transitions in Evolution. *Nature* 374 (6519): 227–232. doi: 10.1038/374227a0.

Szathmáry, Eörs. 2015. Toward Major Evolutionary Transitions theory 2.0. *PNAS* 112 (33): 10104–10111. https://doi.org/10.1073/pnas.1421398112.

Turchin, Peter. 2025. *The Great Holocene Transformation: What Complexity Science Tells us About the Evolution of Complex Societies*. Chaplin: Beresta Books.