

Is Complexity the New Framework for the Study of Global Life?

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Sponsors: The Rachel Carson Center for Environment and Society (RCC)

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The workshop took place 11 – 12 February 2011 at the Rachel Carson Center for Environment and Society. Participants at this workshop considered the proposition that in order to cope with the escalating complexity of global life, the discipline of political science needs to abandon its predilection for linear models, accept unpredictability, respect (and utilize) autonomy and creativity, and respond flexibly to emerging patterns and opportunities. Obviously, not all political scientists are enthralled by the orderly paradigm of the discipline; however, the contention is that despite the commonsensical complexity of politics and the undeniable evidence of divisions within the discipline, it still remains dominated by an empiricist vision of an orderly Newtonian framework. Thus, while political scientists have often employed the metaphor of complexity, the potential theoretical and policy contributions emerging from the analytical principles of “Complexity Thinking (CT)” have been largely relegated to the margins.

CT is the candidate name for a new framework for explanation and understanding, developed in evolutionary biology and related natural science disciplines, for the exploration of non-linear, emergent, adaptive, and dissipative systems and phenomena. Complexity can be observed across a range of both physical and social systems. While at this workshop participants acknowledged that social systems are of a particular character, they are nonetheless embedded in and interacting with non-human systems. Most participants agreed that political science has desisted from engaging with CT propositions because of its skepticism about the application of biological/natural sciences approaches and language in their investigations. Thus, despite the intellectual challenges posed by the growing awareness of interdependence and connectedness between human and non-human systems, the mainstream of political science investigations are, on the one hand, dominated by the de-

terministic and parsimonious tools of the traditional reductionist Newtonian mode of investigation and, on the other hand, underpinned by an inherent anti-biologism (if not biophobia). As a result, political science (in general) has been anthropocentric and has tended to ignore the links between the social world and the rest of the material world.

The workshop addressed this shortcoming by engaging the participants in a conversation on the characteristics and consequences of CT when applied to the inquiry of political science. The speakers at the workshop were Christine Brachthäuser—Lecturer of World Politics at the University of Tübingen (Germany); Andreas Duit—Research Fellow in Environmental Politics at Stockholm University (Sweden); Erika Cudworth—Senior Lecturer in International Politics and Sociology, University of East London (UK); Jonathon Louth—Lecturer of Politics at the University of Chester (UK); Klaus Mainzer—Director of Carl von Linde Academy at the Technical University of Munich (Germany); and Jürgen Scheffran—Professor of Climate Change and Security at the University of Hamburg (Germany).

The workshop began on 11 February 2011 with the papers by **ERIKA CUDWORTH**, who spoke on “Complexity, Ecologism, and Posthuman Politics” and with **CHRISTINE BRACHTHÄUSER’S** “Explaining Global Governance: A Complexity Perspective.” Both papers outlined different aspects of the complexity paradigm and its impact on the study of global life. They also offered a summary of the basic concepts of CT and a comparison of CT’s explanatory power with that of different mainstream approaches. The contention proffered during the discussions of the first session was that CT’s aspiring meta-theory provides a more useful paradigm for political science than any current alternative. The second session included presentations from **JONATHON LOUTH** on “Global Order: Resilience, Ramifications and Unintended Consequences” and **ANDREAS DUIT** on “Resilience Thinking: What is it Good For?” Both papers demonstrated that the recognition of complexity presents a unique policy-making paradox—it seems to teach that we cannot predict what results our policy choices are likely to have over time. In this setting, the suggestion that emerged during the discussions was that when outcomes are radically resistant to prediction, they are also necessarily resistant to the sort of deliberate control that policy-making traditionally assumes possible and necessary.

On the second day, 12 February 2011, the workshop included presentations by **KLAUS MAINZER** on “Self-Organization, Control, and Risks in Complex Dynamic Systems” and **JÜRGEN SCHEFFRAN** on “Adaptive Complexity and Stability in Climate-Society Interaction.” This session addressed the question of political action under the conditions of complexity. The presenters drew attention to the inherent ambivalence of global life underpinning the contingent interac-

tions between human and non-human systems. As actors interact with physical, technological, or natural systems, they alter not only the system but also the incentives, payoffs, and strategies of future actors. The discussions focused on concepts and frameworks of adaptive complexity, which can provide practical tools for influencing multiple decision points and adjusting decision-making actions along the causal chain to protect human security, develop social livelihood, and strengthen societal resilience. The suggestion proffered by a number of participants was that there needs to be a more serious conversation on the ethics and politics of engaging CT in the social scientific inquiry.

The workshop provided a unique opportunity for structured and informal conversations on the impact and implications of CT. As a result of the workshop, there are several collaborative initiatives that the participants at the workshop are currently exploring. More significantly, in terms of propagating the discussions at the workshop, there will be an edited collection titled *World Politics at the Edge of Chaos: Reflections on Complexity and Global Life*, which has been contracted by the State University of New York Press (Albany, NY). The volume will include contributions both from the presenters at the workshop as well as other invited contributors. Reflecting the spirit of the workshop, the projected volume intends to challenge the anthropocentric nature of the study of international relations.

Thus, while not a panacea, CT promises to generate new ideas and new arguments for tracking the evolution of global life through periods of discontinuous change, in ways that promise to better over time both understanding and action. One of the points made during the workshop was that the application of CT to the study of world politics urges it to account for the interactions between socio-political systems and the ecologies that they inhabit. The contention is that the recognition of the unpredictability and randomness of such socio-political and biophysical interdependence removes the constraints on analytical imagination and allows IR—as a discipline—to rethink what it is that it wants to study.

--Emilian Kavalski