

Subjectivity and Politics of Transformation in Climate Change Adaptation

Summary

Human agents and their individual life trajectories are integral components of socio-ecological systems dynamics and adaptation pathways. In this view, climate adaptation requires attending to the subjectivities involved in deliberate (political) efforts of human agents to affect socio-ecological change. However, climate adaptation tends to emphasize system-level dynamics that appear to be independent from human subjectivity. Inspired by Margaret Archer's work on human reflexivity, this paper explores how human agents' internal conversations mediate socio-ecological system-level dynamics. Agents' internal deliberations about their own lives are elicited and explored through life-story interviews and narrative analysis. The paper shows how tourism actors in Akumal, a coastal enclave in the Mexican Caribbean, construct dynamic narratives about past socio-ecological transformations. These evolving narratives become, in turn, part of processes leading to the next transformation. Understanding the cognitive processes involved in the construction of these narratives is crucial for addressing the political dimension of socio-ecological change.

Extended Abstract

Current and projected accelerating rates of climate change and ongoing development failures are compelling adaptation scholars to explore how societies can increase their capacities to purposely deliver SES transformations (Eriksen et al. 2011; O'Brien 2012; Park et al. 2012). This view highlights connection points and flows of influence between the transformative potential and expression of individual cognition, and wider systems transformations. Unlike system-level dynamics, socio-political processes consist of human agents' deliberate efforts to maintain, or alter (e.g., transform) structures. These efforts are motivated by the agents' values and beliefs about how the SES ought to be. Socio-political processes are preeminently cognitive and subjective, but they are not merely based on reasoning and rational calculation. They involve personal identities and identifications as well as the values and emotions that human agents attach to situations, outcomes and other agents, including non-humans (Grothmann and Patt 2005; Rogers et al. 2012). The main goal of this paper is to frame adaptation to climate change as SES transformations that combine system-level and socio-political dynamics. It is argued that global environmental change forces us to engage in new forms of transformative politics, or even a new "politics of transformation" characterized by complex amalgamations of system-level socio-ecological dynamics and human intentionality (Collins et al. 2012; Young 2014).

This paper takes on the task of combining the analyses of system-levels and subjectivity dynamics in SES transformations. This task starts with the elicitation of autobiographical narratives capturing the inner dialogues through which individual agents relate to themselves and their socio-ecological contexts (Bochner and Riggs 2014). We build on Margaret Archer's (2003) extensive work on "internal conversations" and their mediating role between

people's innermost concerns and the structures they confront to insert socio-political subjects in the analysis of SES transformation. According to Archer (2007) reflexivity is the cognitive process through which people resolve the tensions between their subjectively defined concerns and the objective structural contexts they confront. Archer (2007:63) defines reflexivity as the inner dialogue that allows humans to: "pose questions to ourselves and to answer them, to speculate about ourselves, any aspect of our environment and, above all, about the relationship between them".

Akumal (meaning "home of the turtles" in Maya) is a coastal SES in Mexico's Mayan Riviera located approximately 70 miles south from the major tourist destination of Cancun. Akumal is particularly interesting from the perspective of SES transformations because of its autonomy from supra-local actors. Local residents have largely controlled development and many of them are accessible, or left documents that provide insights about the purpose of past decisions and actions. Furthermore, Akumal's tourism development is closely related to the provision of, and differential access to, ecosystem services, thus ensuring richly coupled socio-ecological dynamics. In this regard, it is worth noting that the main local governance actor is an environmental NGO, *Akumal Ecological Center* (CEA for its Spanish Acronym), created in 1993 and responsible for managing more than 10 miles of coastline. Finally, Akumal is exposed to hydro-meteorological hazards, such as tropical storms, the impacts of which are likely to increase due to global climate change.

The paper describes the four SES transformations identified in Akumal through the analysis of life-story interviews. Between 1970 and 1990 Akumal went from being a practically uninhabited coastal ecosystem to becoming a tourism enclave. This was a slow-moving transformation that we name "Tourism Assemblage". It started with a clear deliberate decision by an individual, Pablo Bush, to create a particular socio-ecological structure. However, it turned into a system-level process dominated by household-level decisions from multiple agents. This set of micro-decision lead to an emergent structural transformation and the level of the SES. Thus, the assembling of Akumal's tourism enclave was predominantly spontaneous. The second major transformation, "Creation of Pueblo", took place in the early 1990s. It was dominated by the interplay of a number of deliberate and coordinated efforts aimed at either segregating tourism workers from tourism areas and beach ecosystems, or resisting that segregation. This second transformation resulted in a new urban configuration with significant socio-ecological implications. It was immediately followed by a third transformation, this time of governance structures, "Greening of Playa's Institutions", through which Playa became the first SES in the Mayan Riviera to be primarily managed by an environmental NGO. Finally, and partly as an unintended consequence of the previous three, a system-level transformation of Akumal's marine ecosystem: "Coral Reef Decline" took place. These SES transformations have mixed effects in terms of exposure and vulnerability to climate change related impacts. As we discuss in the following sections, system-level transformations (i.e., Tourism Assemblage and Coral Decline) neatly increased exposure and possibly vulnerability, while deliberate transformations (i.e., Creation of Pueblo and Greening of Playa) reduced the exposure for some people. However, it is not clear whether they actually contributed to reduce or increase socio-ecological vulnerability, despite

being harnessed by narratives that claimed intentions of reducing this vulnerability. A key question is whether reductions in exposure might have come at the price of setting the SES into a pathway of maladaptation.

A pathways approach that includes agents' subjectivities provides a useful lens to represent entwined transformations and their inertias and envision ways of steering future transformations. The analysis presented here is useful to identify obstacles to achieving more sustainable pathways that were originated or reinforced in previous transformations. Understanding suboptimal previous pathways and the subjective reasons (e.g., certain positionalities of some individuals) that make these pathways robust to change is a first step to unraveling a politics of transformation.

References

- Archer, M. S. 1995. *Realist social theory: the morphogenetic approach*. Cambridge University Press, Cambridge, UK.
- Archer, M. S. 2000. *Being human: the problem of agency*. Cambridge University Press, Cambridge, UK.
- Archer, M.S., 2003. *Structure, Agency and the Internal Conversation*. Cambridge University Press, Cambridge, UK.
- Archer, M.S., 2007. *Making our Way Through the World*. Cambridge University Press, Cambridge, UK.
- Bochner, A. P., and Riggs, N. A. 2014. *Practicing Narrative Inquiry*. In Leavy, P. (Ed.) *The Oxford Handbook of Qualitative Research*, 195-222. Oxford: Oxford University Press.
- Collins, M., Hughes, W., & Samuels, A. (2012). *The politics of transformation in the global crisis*. In Rust, M., and Totton, N. (Eds.) *Vital Signs: Psychological Responses to Ecological Crisis*, 163-174. London: Karnac Books.
- Eriksen, S., Aldunce, P., Bahinipati, C. S., Martins, R. D. A., Molefe, J. I., Nhemachena, C., O'brien, K., Olorunfemi, F., Park, J., Sygna, L. & Ulsrud, K. (2011). *When not every response to climate change is a good one: Identifying principles for sustainable adaptation*. *Climate and Development*, 3(1), 7-20.
- Grothmann T., and Patt A., 2005. *Adaptive capacity and human cognition: the process of individual adaptation to climate change*. *Global Environmental Change* 15:199–213
- O'Brien, K., 2012. *Global environmental change II: from adaptation to deliberate transformation*. *Progress in Human Geography* 36 (5) 667–676.

- Park, S.E., Marshall, N.A., Jakku, E., Dowd, A.M., Howden, S.M., Mendham, E., Fleming, A., 2012. Informing adaptation responses to climate change through theories of transformation. *Global Environmental Change* 22 (1) 115–126.
- Rogers, M., Curtis, A., & Mazur, N. (2012). The influence of cognitive processes on rural landholder responses to climate change. *Journal of environmental management*, 111, 258-266.
- Young, O. R. (2011). Foreword–Arctic futures: the politics of transformation. In Kraska, J. (Ed.) *Arctic security in an age of climate change*, xxi-xxviii. Cambridge: Cambridge University Press.