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## Path-Dependency in the Governance of the Danube Delta

Kristof Van Assche, Raoul Beunen, Joren Jacobs and Petruta Teampau

**Kristof van Assche** is Associate Professor at the Communication & Innovation Studies, Wageningen University, The Netherlands & Associate Professor at the ZEF/Center for Development Research, Bonn University, Germany (Corresponding author) | **Raoul Beunen** is Assistant Professor at Wageningen University. P.O. Box 47, 6700 AA Wageningen, the Netherlands [raoul.beunen@wur.nl](mailto:raoul.beunen@wur.nl) | Joren Jacobs is Researcher at Nijmegen Centre for Border Research, Radboud University | Petruta Teampau is Lecturer Political Science at Babes Bolayi University, Cluj- Napoca.

### ABSTRACT

In this paper, we revisit the utility of the concepts of path dependence and interdependence for the analysis of participatory environmental governance. We investigate the evolution of environmental governance in the Romanian Danube delta, and, starting from an observation of problematic citizen participation, demonstrate how specific patterns of path -and interdependence shaped both the present situation and the reform options. For the delta, it is argued that direct citizen participation, without working on other institutions, would not solve the problems observed, but would rather reinforce unwanted informal institutions (cf Ledeneva, 2005). Theoretically, we utilize a combination of path dependence theory and social systems theory, allowing for a grasp of both rigidity and flexibility in the evolution of governance systems. Empirically, expert and lay interviews, long term observation, and a analyses of policy documents underpin our analyses.

**Key words:** path- dependence, interdependence, environmental governance, Danube Delta, social systems, institutions

### INTRODUCION

The Danube Delta is a large wetland area (ca 6000 km<sup>2</sup>), located on both sides of the Ukrainian/ Romanian border, where the river Danube diffuses into the Black Sea. On both sides of the border, green discourses are institutionalized now. Ecological futures are officially preferred, as testified by the designation of most of the Delta as Unesco Man and Biosphere Reserve (1993). A broad consensus exists on

the ecological value and vulnerability of the Danube delta, among international, national, and regional actors (IUCN, 1991,2; Baboianu & Goriup, 1995; Grimmett & Jones, 1989; World Bank, 1994a; Euroconsult & IUCN, 1993; DDBRA, 2008), a consensus less shared locally (Van Assche et al, 2009; Bell, 2004). There is also a consensus that the area can be attractive for various forms of tourism, and that sustainable, small scale tourism is preferable (DDBRA, 2008).

Most of the Delta is now protected, but issues remain. Many observed already the problematic governance situation, marked by privatized common pool resources, criminalized traditional livelihoods, and lacking citizen participation. (Apostol et al, 2005; World Bank, 2005; Van Assche & Teampau, 2009) Focusing on the Romanian part, the largest part, of the delta, we attempt to reconstruct the evolution of environmental governance for and in the delta, to get a better understanding of how this situation came about, and to evaluate reform options.

We will frame our analysis of this developmental pathway in terms of flexibility and rigidity, where rigidity is understood as emerging from a combination of path dependence and interdependence. Path dependencies, broadly defined as legacies of the past restricting development options are thus placed in a broader theoretical frame, enabling a more refined assessment of what can be easily changed, and what not. Social systems theory, in the evolutionary version of Niklas Luhmann, offers the possibility to think of both flexibility and rigidity in governance, and integrates well with insights institutional economics (North, Greif, Ostrom) has to offer in this regard.

#### METHOD

We rely on fieldwork (observations and interviews) in the Romanian Danube Delta in 2003 and the years 2006 til 2009 and more briefly on the Ukrainian side in 2009 (Teampay & Van Assche, 2009, 2010; Van Assche et al., 2009; 2008). Interviews with governmental actors in the Romanian Delta took mostly place in 2006 and 2007 (Tulcea, Bucharest), and, to provide context, on the Ukrainian side in 2009 (Odessa, Vilково). In 2006 and 2008, we also focused on local actors, particularly in Sulina. Additionally, expert interviews were conducted (in 2008 and 2009), over the phone or face-to-face (in the Netherlands and Germany) with people involved in policy formation or implementation for the area. Interviews took from 1 to 3 hours and were introduced with a short topics list. Observation, in the villages and the

marshlands, helped to get a better understanding of the landscape, the legacy of previous policies and plans, and the implementation or non-implementation of current ones.

Interviews were coded for emerging narratives, as were policy documents and studies by international and non-governmental organizations. This combination of interviews, discourse analysis and observation served to reconstruct the evolution of policies for and in the Delta, the actors involved, the driving concepts, images and ideologies, the implementation process, and, ultimately, the influence of previous decisions, investments, ideas, and organizational forms on the reproduction of the governance system.

In the course of the paper, we will indicate as carefully as possible on which empirical grounds claims are made, to distinguish between various sources utilized. For reasons of privacy, we do not use interview quotes; another reason to omit quotes is that we want to avoid the impression of quotes proving arguments. Arguments are mostly grounded in a combination of sources, in patterns observed over the years. In order to allow the reader to grasp the interdependent evolutions that shaped the present decision-space, we will outline the observed pattern of relevant path and interdependencies, while providing more detailed empirical references for a nested case study of international roots and Romanian transformations of the current institutions. Thus, we intend to provide both necessary overview and insight in the detailed mechanics of governance evolution.

With regards to empirical applications of systems theory, we can say that this field is in full development, and that in the present study, Luhmann c.s. primarily enabled us to construct a consistent conceptual framework to investigate both rigidity and flexibility. In the field, and in the later analysis of documents and interview notes, this systems framework directed the attention towards co-evolution: why did this this institution, this concept, this practice emerge in this context, and how is it linked to

other evolutions? As such, it forces the researcher to continuously envision alternative evolutionary paths: why did this happen, not that? This approach tends to de-naturalize governance evolution, showing the contingency of a specific pathway, and thus allowing for a sharper reconstruction of driving forces and dependencies.

#### PARTICIPATORY GOVERNANCE AND NATURE CONSERVATION

It is not new or revolutionary to assert that 'nature' is socially constructed, and that, with a multiplicity of perspectives on nature should come a measure of citizen input in the governance of 'natural' areas (Ellen & Fukui, 1996; Descola & Palsson, 1996) More inclusive regimes for environmental governance have been argued for, in and outside parks and reservations. (O'Riordan, 2002; Stringer et al, 2006, 2009; Turnhout, 2004; Buijs, 2009). Many scientists, nature organizations and later governments have taken a "participatory turn" (Stringer et al, 2006, and O'Riordan, 2002).

While the new ideas were successful in terms of a wide distribution in various influential networks, their implementation has proven to be more complicated (Fischer, 2000, 2009; Latour, 2004; Stringer et al, 2006). Just as in other domains of policy and governance, many forms and intensities of citizen participation exist, and the results and assessments are as varied (Mannigel 2008). O'Riordan and Stoll-Kleeman (2002) list obstacles frequently encountered in the attempts to establish participatory biodiversity conservation, ranging from disillusion with results, over differentials in knowledge and engagement, to lacking common language, entrenched interests, participation fatigue, harmful compromise. They also acknowledged that really including the most vulnerable groups is a perennial challenge.

In the Danube delta, all these obstacles and more could be observed. In 1991, the Romanian Delta received Unesco recognition as a Natural World Heritage Site, a recognition later followed by others

(see below) and, according to most documents, and most actors interviewed, this was a pivotal point in the protection efforts. From the very beginning, virtually all international actors, including the ones with clearly green goals, stated the importance of (regulated) local economic development, and of local participation. From the very beginning, virtually all parties were worried, and after a few years, gravely concerned, about the lack of local participation (e.g. World Bank, 1994a, 2000, 2005; Apostol et al, 2005; Bell, 2004). Discussions within IUCN, WWF and RIZA, all involved in early discussions, came back to this topic regularly (interviews with Erika Schneider, Paul Goriup, Aitken Clark, Angheluta Vadineanu, Hans Drost, and others).

In the following paragraphs, we will develop a theoretical framework to understand the specificity of the developmental pathway of environmental governance in the Romanian delta. This can help explaining how citizens and their livelihoods stayed low on the priorities of decision-makers. We will argue that legacies from the past structured and restricted the options at any point in the evolution of the governance system, leading to the present situation, and to a unique set of challenges arising from that evolution. This framework, we argue, is useful for the analysis of evolving governance anywhere.

#### Path dependence

Legacies of the past in governance can be theorized in many ways. We opt for a combination of the familiar concept of path dependence with the less familiar of interdependence, under the umbrella of social systems theory. Both path- and interdependence constitute rigidities in the evolution of governance, but cannot fully determine that evolution. In other words, there will always be a dialectics of rigidity and flexibility. It is in that dialectics that options and choices are shaped.

Path-dependence was first theorized under that name in political science in the early eighties (see North, 2005 for an overview; also Eggertsson, 1990, 2005; Avid, 2007), while the phenomena re-

ferred to were already observed and theorized in anthropology and history (Claude Levi- Strauss, Mary Douglas, Edmund Leach, Fernand Braudel and others). Institutional economics and policy studies adopted it from political science (e.g. Ostrom, 1990; North, 1990; Eggertsson, 1990), and more recently urban planning picked up the idea (e.g. Healy, 2006; Rast, 2009; Van Assche, 2010).

Mahoney (2000) explains, in line with North (2005) how different definitions are scattered over the literature, but can be summarized under the heading 'history matters', by restricting the options available in decision- making. Choices made in the past shape present choices. Mahoney (2000, 2001) and Kay (2005) also criticize too broad notions of path dependence as obscuring the actual functioning of the restrictive mechanisms, intimating that dependence on the past can take on many shapes. Terry Karl (1997) directs the attention at early stages in a process being more important, more decisive, than later events in shaping the dependency pattern. Some economists (cf North, 1990; Ostrom, 1990) theorize on limited pools of resources, where the order of taking or extracting has an effect on the options and strategies of later actors and later choices (cf. also Coombs & Hull, 1998).

Economists (eg. Greif, 2007, North, 2005) point out that institutional patterns can guarantee increasing returns for all participants, by continuous use. Reputations, trust, rule of law, fit in this category. Over time, it becomes harder to conduct business, to complete transactions outside these institutions, because trust levels will be too low, perceived risks too high. Historians, anthropologists and some sociologists added other reasons for institutional settings to stay intact: power relations, legitimation procedures, organizational and larger cultures, as shared understandings of the situation. (Braudel, 1996; Foucault, 2003, Douglas, 1987, Scott, 1998) Another type of path dependence distinguished in the literature (Mahoney, 2000) is that of the reactive sequence, where each step is dependent on the pre-

vious step as in a chemical reaction, as a precondition and/or a trigger.

It may be clear that various definitions of path dependence rely on various disciplinary frames, methodologies and preoccupations to focus on this or that mechanism linking past decisions to present options. As it is clear that all these approaches share the interest in legacies of the past shaping current decision- making. Since this entails that not every decision is possible from every position, a governance system cannot be entirely flexible in its evolution, including its attempts at self- transformation. (Seidl, 2005) That's why we preliminarily define path dependence as rigidity in the development of an organization, institution, or society, that can be ascribed to legacies from the past. Which mechanisms linking past and present prevail, has to be empirically established in individual cases. With Kirk et al (2007), talking about environmental policy implementation, we believe that path dependencies can reinforce each other –e.g. resource allocation decisions, painfully acquired organizational structures, traditional disciplinary backgrounds.

Leaning on Niklas Luhmann's social systems theory (1989, 1990, 1995, 2000, 2008), we will reframe the concept, emphasizing structural linkages between path- dependence and interdependence in the evolution of governance systems. Such a conceptual reframing, we argue, increases the potential of the concept in the analysis of policy and planning. We argue that an analysis of rigidities has to be combined with an analysis of flexibility in the system.

#### PATH DEPENDENCE AND INTERDEPENDENCE

Luhmann seldom uses the term path-dependence, since in his theoretical frame it covers a number of distinct concepts and phenomena. His theory, however, casts a different and eminently useful light on path- dependence in its relation to interdependence because of its radical evolutionary character. Social systems are the product of past encounters with their environments, in structure, elements, and procedures (Luhmann, 1995, 2000).

Society for Luhmann is the encompassing social system, the environment of co-evolving social systems. He distinguishes three categories of social systems: function systems, organizations, and interactions (Luhmann, 1995). Interactions are conversations, short-lived meetings involving a limited number of people, swiftly emerging and dissipating social systems, with only limited capabilities in processing environmental complexity. Organizations can persist considerably longer, reproducing themselves by means of recursive series of decisions, decisions referring to previous decisions taken in the organization. Function systems, such as law, politics, economy, religion, science and art, fulfil a function in society, albeit one that gradually emerged in history, and is continuously evolving. They are environments for many organizations and interactions, without reducing any of those to the status of elements of a function system (Hernes & Bakken, 2002; Seidl, 2005).

In the current governance of the Romanian delta, the most important organization is DDBRA, the Danube Delta Biosphere Reserve Authority, responsible for nature conservation and sustainable development of the Delta. It partly fulfills the functions of local and regional government (function system of politics), but not entirely. It has a law enforcement arm, an educational arm, a scientific division, an accounting department, and others. That means that the organization DDBRA is embedded in the function systems education, science, economy, law, with decision-making shifting from one function system to another in higher level meetings. Those meetings themselves have their own dynamics, with communications feeding off previous communications, making them interactions.

The most basic elements of a social system, according to Luhmann, are neither people nor actions, but communications. People, or more precisely individual minds, are psychic systems which share with social systems the medium of meaning, and can therefore co-evolve with social systems (Luhmann, 1995). Each social system constructs an image of itself and the outside world, including the significance

of people, in a unique form of communication, based on grounding distinctions underlying distinct procedures to process environmental complexity (King & Thornhill, 2003). The system of law sees people, for instance, as natural persons (who act legally or illegally), while the political systems sees them as voters.

For an organization as DDBRA, with its multi-dimensional role and varied responsibilities, this already engenders a high level of complexity in dealing with the people living in the DDBRA. Maintaining a consistency in dealings with those people will structurally be difficult, because of the variety of distinct perspectives in the decision-making of the organization, perspectives that in all likelihood will be partly incompatible (is the local a potential criminal, a student, a voter, a financial burden?)

For Luhmann, a social system emerges out of its environment when it becomes operationally closed, meaning that its boundaries become established, that everything within the system is a product of the system itself, disallowing direct penetration of the environment into the system (Seidl & Becker, 2005). Operational closure implies self-reference, since every reference to the external environment has to utilize elements, procedure, and structures that are products of the system itself (Luhmann, 1989). Self-reference and operational closure are the foundation for the autopoietic reproduction of a system, according to Luhmann. Every system is continuously reproducing itself, in and through its own operations. Elements, structures and procedures utilized in and by a system in its ongoing reproduction, gradually transform each other in the process, while the system as a whole adapts to changing environments. Every autopoiesis is unique and every mode of reproduction is unique, since it incorporates, in structure, elements, and procedure, a unique history of adaptations to shifting sets of environments (Luhmann, 1995).

Every decision taken in and by the DDBRA will be shaped by the conditions of the organization, by the image the organization has of itself and its duties,

its resources, its limitations, the outside world. It will only be recognized as a decision by its members if it is taken in a recognizable decision-making situation, and if the content and form fits a pattern established in previous decisions, if the implied implementation procedures will be recognized as such. Organizations like DDBRA develop a shared semantics that enables a shared understanding of self, environment and the prevailing forces in the decision-situation. Over time, series of decisions can reshape semantics, procedures and assumptions, but each individual decision will be the product of the decision-environment.

#### Path dependence

Autopoiesis is a very powerful concept in the analysis of path-dependence, since it allows for a refined articulation of types of legacies in the reproduction of the system. In an evolutionary constructivist theory such as this, path dependencies are pervasive, since literally every feature of the system and its mode of reproduction bears the mark of past external and internal environments (Van Assche et al, 2009). Path-dependencies, therefore, can exist at the level of structures, elements and procedures, and they can reflect adaptations to organizations and/or function systems. An organization, e.g., can in its decision-structures, its semantics (elements), its decision-style and procedures (procedure) reflect former adaptations to competing organizations, but also to changes in the legal environment (Seidl, 2005).

DDBRA e.g. expanded its education and communication environment after external critiques, which in turn altered its tone in external communications and its dealings with villagers. Interactions with village schools increased, and the image of the local as a person to be educated and informed, became more prevalent in internal communications. If that image would become dominant over time, then the hierarchy in DDBRA would shift, and both content and style of decision-making would move towards the function system of education.

#### Interdependence<sub>1</sub>

Systems are the product of histories of mutual adaptation, of interdependent evolution. Elements, structures, and procedures betray a history of adaptations not just to external environments, to other systems, but also to internal environments, to the structures, elements, and procedures in place (Luhmann, 1989). Modern society is described by Luhmann as highly differentiated, which means that more and more sub-systems are emerging, becoming operationally closed and autopoietic. This implies that subsystems become more specialized and more dependent on other systems (King & Tornhill, 2003; Fuchs, 2001). Co-evolution of social systems allowed for their increasing differentiation. Due to its highly selective observations, each system processes only a fraction of the environmental complexity available to it, but this reduction is compensated for by the observations of other systems, utilizing specialized distinctions. (Van Assche & Verschraegen, 2008). To respond to the environmental issues of the Danube delta, the existence of specialized nature organizations, of academic organizations studying ecology and pollution, of a political function system brokering collectively binding decisions was necessary; only with this diverse group of operationally closed but interaction systems, it became possible to grasp the issues, to formulate and implement adaptations.

Because of operational closure, other systems can only resort effects in a system if they trigger observations that can be incorporated in its autopoiesis (Luhmann, 1989, 1990). In Luhmann's words, systems do not communicate with each other, but about each other (Luhmann, 1995). Repeated interactions between systems are common, co-evolution is not uncommon, but interaction and co-evolution do not entail a disruption of autopoiesis, or a breach of operational closure. Operational closure creates the conditions for the intricate web of path dependencies and interdependencies we can observe in a dif-

ferentiated society (Hernes & Bakken, 2002; King & Tornhill, 2003).

So, while DDBRA's functions overlap with local government, it does not replace local government completely, and hence has to deal with municipal and county organizations. In the communication with these organizations, the image of the others built up over the years, shapes the interactions. The mutual distrust that emerged and evolved as a result of unclear delineation of responsibilities, will also affect the DDBRA communication about itself. A history of interdependence becomes a path dependence for the system that affects more directly its self-transformation.

A consequence of high differentiation and operational closure is that none of the many systems in society can directly steer the others. Politics cannot be conceived as the center of society, the seat of command (Luhmann, 1990). Every attempt to steer a system, will be interpreted by that system in its own terms, causing a response that can never be entirely predicted. 'Implementation' of policies, looks perilous from the start in this perspective, since politics and administration can never overcome the partial opacity of the other systems (Luhmann, 1989, 1990; cf Pressman & Wildavsky, 1979). In other words, the combined effects of interdependence and path dependence in a differentiated society cannot be described as determinism. With all the forms of rigidity listed above, many forms of flexibility counterpoise them, both at the level of a social system, and at the level of society.

#### Flexibility

What we call flexibility, a counterbalance to rigidity, can be described in Luhmannian terms as the effects of the unpredictability of the environment (Luhmann, 1989), plus the autonomy granted to a system by the distance from the environment (Luhmann, 1995, 2005; Seidl & Becker, 2005). In an autopoietic system, its reproduction is only possible when structures and procedures are in place that allow for observations, attributions of meaning to an external

environment that can never be accurately predicted in its behavior, and never entirely depicted in its complexity (Luhmann, 1989; Van Assche et al, 2010). Every interpretation of the environment is necessarily a simplification.

When locals unexpectedly refuse to obey DDBRA rules the organization considers crucial to its goals (e.g. by roasting pelicans), this might trigger a new semantics of the local, maybe even a restructuring, speeding up, of decision procedures on certain topics. At the same time, the interpretation of that local behavior will follow schemes derived from internal semantics and procedures that might allow it to be recognized as provocation, thus inspiring a charm offensive unexpected in the villages.

Environmental adaptation never ceases, and the very requirements for autopoiesis, for the unbroken chain of communications reproducing the system, introduce a degree of flexibility. Elements, structures and procedures slowly transform each other, in a process of adaptation that does not mirror, but translates change in the external environment. Social systems internalize an image of themselves in their environment, a procedure called re-entry, and are capable of conceptualizing choices, conceived as leading to more or less desirable positions vis-à-vis changing environments (Seidl, 2005). It is such re-entry that allows DDBRA to reflect on its role, on its expectations towards and responsibilities for the locals, and to change its semantics regarding those locals. A new self-image can generate a new attitude towards locals, and vice versa.

Regarding the second source of flexibility, the distance between system and environment, we can repeat that operational closure, the impossibility of direct influence of the environment, is precisely what allows the system to adapt to that environment without dissolving in it. Distance allows for interpretation, interpretation enables adaptation, while interpretation is only possible if several possibilities are available (Seidl & Becker, 2005). The delineation of those options, and the choice process between them, will be marked by the history of the system,



but history never annihilates the alternatives (Van Assche et al., 2009). In evolutionary terms, one can say that at any given stage, the system can take various different paths, but only if the system can make sense of them, and if they are structurally possible.

If new laws would, for example force DDBRA to function as a hospital, those laws cannot be rendered meaningful in terms of its present functioning, and the organization is likely to break down, stop self-reproduction, or to ignore the new law and continue its present autopoiesis. A third option might be to use formal and informal networks to repeal the law.

In our discussion of forms of flexibility, we have to mention the difference between the mode of reproduction of a system, and its self-descriptions. In organizations, e.g. a company, the images of self that are internally produced to guide interactions with clients, competitors, government, do not necessarily reflect the features of its autopoiesis. The distance between image and reality can cause problems, but, just like in the case of the system/ environment boundary, distance creates flexibility (Hernes & Bakken, 2002; Seidl, 2005). There is only one autopoiesis in a system, but the fact that this is partly beyond the grasp of its own interpretive machinery, allows for a flexible construction of images of self. This, in turn, opens the door to a wider variety of developmental pathways (As with North, 2005; Greif, 2007; Ostrom, 2005). An organization can see itself as focused on scientific nature conservation, while in practice it has evolved in such a way that most decisions revolve around economic and political lobbying, or law enforcement, or land management. This opens up more pathways than either a law enforcement organization or a scientific conservation organization would face.

What can this perspective on path dependence and interdependence mean for the analysis of governance in the Danube Delta?

## THE DANUBE DELTA

### Brief history

We briefly outline a few aspects of the history of the Delta, and some of the larger legacies that can serve to contextualize the more minute histories leading up to the present institutional arrangement for the delta, and the difficulties to include citizens in decision-making. This is, in other words, not a comprehensive picture of all the dependencies that could be traced in the delta's history, not a tableau capturing the full interweaving of past and present in its governance, rather a selection of storylines that illustrate the most important aspects of that interweaving.

The Danube Delta is an inaccessible area, on the edge of empires (Iordachi, 2002; Van Assche et al, 2009), a marginal area in economic, cultural, and political sense (Van Assche et al, 2008), yet with strategic importance. The marshes were crossed by national boundaries in rapidly shifting patterns, ownership and control were often not clear, and villages were frequently razed to the ground. On the Ukrainian side, a commonplace assertion was that 'we belonged to six different countries in 200 years'. The Delta belonged to the Ottoman Empire since the 15th century, but already ca 1780, Russia encroached, and streams of refugees entered and fled. In 1812, Russia conquered part of the area, and Chilia became a border town. Since 1829, Russia was de facto in control of the whole delta, thanks to a series of quarantine stations. (Krehbiel, 1918)

After the Crimean war, lost by the Russians, the treaty of Paris (1856) established the European Danube Commission (CED), an international organization that governed the cities of the lower Danube until World War II, and had its seat in Sulina for most of that period. (Rosetti et al, 1931, Van Assche, Devlieger et al, 2009) The rest of the delta was nominally Romanian since 1878, after another Russian-Ottoman war, with this time the young Romanian

state joining the Russians; Chilia and the Stambul channel again became the border. With the CED and its expanded opportunities came Armenians, Jews, Greeks, and also western Europeans. In the – relatively young- villages of the marshes and the islands lived mostly Russian and Ukrainian speaking minorities (Gastescu, 1993, 1996); fishing, small scale agriculture, and herding were the main activities. 18th and 19th century maps show different villages in different places, with different names, a highly dynamic environment (Panin & Overmars, 2011).

After the dissolution of the CED in 1936, Romania controlled the delta for a while, but after the war, Stalin decided to split off Moldavia from Romania, and attached the northern part of the delta to Ukraine (Tismaneanu, 2003). Under communism, patches of the delta were protected as nature, preserved for scientific study (IUCN, 1992; Goriup, 1994). Letea forest (1938), the Caraorman dunes and forest (1940) received protected status before communism. But most of the area was opened for relentless development. Some land reclamation projects dated from the early 20th century, and were undertaken under the auspices of the CED: the so-called Dutch and French gardens, relatively small projects on river levies. (Pons in IUCN, 1992) While earlier communist policies focused on boosting fish production and the processing of reed (for cellulose), the pressure on the delta was increased in the late seventies and early eighties, when the so-called ‘Complex plan for the development of delta’ was launched, a package of policies that envisioned much of the marshes as agricultural land (Pons, 1987; Pons & Phons-Ghitulescu, 1990; IUCN, 1990, 1992; Gastescu, 1993) The ‘complex plan’ built on several decades of piecemeal expansion of canals to the fishing lakes in the backswamps and on smaller reclamation projects, organized by Centrala Deltei (established 1970), the holding organization responsible for the development of the delta under communism. Central Deltei worked together with the older institute for land reclamation and design (1932), later morphed

into the DDNI, the Danube Delta National Institute for Research and Development (1990). It seems that the ‘complex plan’ was in fact not one plan but a series of evolving proposals from the mid- 70s until the late eighties, an evolving comprehensive plan for the whole delta. According to our sources, the most influential versions were probably the 1975 and 1982 versions, but adaptations were made until the end of the regime, and even afterwards (interviews Mrs. Pons, Schultz, Vadineanu, Goriup).

All versions expanded the protected areas, but simultaneously greatly expanded land reclamation, forestry projects, and fish polders. (Reed production was already over its peak.) The council of ministers declared 41,500 ha protected in 1975 (Unesco, 1991). In practice, the plans would mean a significant reduction of areas with a more or less natural character. Interviews with older Romanian experts indicate that under Ceaucescu, the protected area were really protected, only accessible for scientific research, modeled after the Soviet protected areas, zapovedniki. Unesco, who designated a part of the delta already as World Heritage Site in 1971, was deeply worried about the plans, and sent a delegation in 1979 (interviews Mrs Pons, mr Schultz, Vadineanu)

Sulina and Maliuc were vigorously urbanized, Romanians from other regions were brought in to work in the fish farms, the canning factory, and reed cultivation,. Some of the hard labor was done by scores of political prisoners, and their omnipresence rendered large tracts of the marshes even more inaccessible for the villagers. Minorities were not trusted, many ethnic groups migrated, and those who stayed either assimilated or marginalized (Van Assche et al, 2008; Van Assche & Teampau, 2009). Semi- nomadic land use declined, since it was clearly at odds with the government’s development plan (Gastescu, 1993). Romanization and increased government control did not succeed completely, however, and the vast marshes could still keep a secret. People in the villages still perceived themselves as far removed from the center of power and control,

and could work around many rules (Teampau & Van Assche, 2009). People still crossed the border regularly, family and professional networks covering both sides of it. Lipovan (Russian old believer) fishing expeditions still traveled far and wide (Prigarin, 2010), while Ukrainian vegetables fed Romanian villages (Teampau & Van Assche, 2009).

#### Broader path dependencies

These aspects of the history of the delta, already point at several path dependencies framing the development of conservation regimes. Under communism, Romania and the USSR gradually became alienated, and the Russian and Ukrainian speaking minorities in the delta were looked at with suspicion. After communism, the border remained in place, and EU accession fortified it. While the delta functions as one eco- system, and it would greatly benefit from a unified governance structure, the presence of the EU border and all the issues it triggers (smuggling, immigration) makes it virtually impossible to achieve the necessary levels of trust and cooperation. In 1998, the Danube delta received a Unesco- designation as Trans- boundary reserve, and the EU itself tried to intensify cross- border cooperation, but according to most observers (including ourselves), these initiatives had little impact on actual governance. One can say that the national boundaries became system boundaries (nations as organizations), and as such embody a structural path- dependence, while each nation developed its own semantics, including images of self and other, that reinforced the difference. Since per country the rules and traditions of governance started to diverge, this introduced a procedural path dependence, making it even more difficult to envision and implement an ecologically advisable unified management.

Probably related to its position in an unstable geopolitical fringe, there is clearly a legacy of marginality, a lack of identification with any level of government (Bell, 2004; Van Assche et al, 2009; cf Pusca, 2009), let alone cooperation and communication between levels of government (Van Assche et al, 2009; Van Assche et al, 2008). A weak belief in the rule of

law, in government policies in general, seems to be engendered by locally reproduced narratives of marginalization (Teampau & Van Assche, 2009), and by a history of not- perceiving the benefits of government (Boja & Popescu, 2000; World Bank, 2005). In this situation, cooperation with and participation in government, and the long time horizons necessary for environmental planning and sustainable development policies (Beunen et al, 2009; Jessop, 2007; Latour, 2004), are unlikely to occur. Communication, according to Luhmann, and hence the emergence of social systems, is only possible when disbelief, or suspicion, is functionally suspended (Luhmann, 1995, 2005). So, a path dependence largely rooted in semantics, elements of communication (outsider images, images of government and law) can introduce structural rigidities, impediments to functional differentiation and the formation of organizations that can capitalize on it.

A legacy of the communist land reclamation and economic development policies is a drastically altered landscape, with failed polders, failed industries, failed reed culture and aquaculture (Goriup, 1994; Bell, 2004), a wet ecosystem dysfunctional because of increased partitioning (Pons, 1987, 1990; IUCN, 1992). Communist subsidies and other incentives brought many people to this unforgiving area, otherwise offering few people a livelihood. In systems terms, these physical factors are the effects of actions triggered by previous states of social systems, but now existing as externalities, limiting development as resistance, or irritation (Luhmann, 1989, 1990).

#### TOWARDS THE PRESENT

How did, in this context, the current regime of nature conservation governance emerge? Foreign governments and nature organizations had been deeply worried about the state of affairs in the delta, and the potentially disastrous consequences of the yet unfinished development scheme (interviews Mrs Schneider, Mrs Pons, Mr Goriup). A meeting in Moscow, late 1989, of various nature organizations led to a group

excursion to the Delta in 1990. Mr. and Mrs. Pons were present, Erika Schneider (WWF), Angeluta Vadineanu, Romanian Minister of Environment, Liz Hopkins and Paul Goriup (IUCN), Aitken Clark (Norfolk Broads Authority) and several others. (interviews with Aitken Clark, Paul Goriup, Mrs Erika Schneider, Mrs Pons- Ghitulescu; also Goriup, 1994, IUCN, 1992, Unesco- MAB, 1998). The consortium of organizations decided to study the issues of the Delta more deeply, leading to a symposium in September 1991 (the results of which became IUCN, 1992), and to a concerted effort to effect legal protection and write a management plan.

According to virtually all accounts (interviews and literature), a turning point in the fate of the delta was the recognition of virtually its entirety (5470 km<sup>2</sup>) as a Unesco Natural World Heritage Site in late 1991 after extensive lobbying by Angeluta Vadineanu, and the consortium of organizations already mentioned, led by IUCN (see IUCN, 1992). The notes of the Unesco meetings in Paris of July 10 and December 9, 1991, show a general willingness to accept the nomination, but also reservations and worries, related to the unclear legal status of the delta, as well as the lack of a management plan. Jacques Cousteau, French oceanographer-cum-celebrity, visited the delta, and brought up its conservation status in influential circles. Cousteau's friend Jacques Attali, close to French president Mitterrand, and at that time president of the European Bank for Reconstruction and Development (EBRD), proved instrumental in freeing up funds for the Delta. The commitment of EBRD, in conjunction with the recognition by Unesco, proved enough to open the doors at World Bank, more precisely, to the Global Environment Facility (GEF) funds, with World Bank as implementing agency. World Bank provided the bulk of the funding for the formation of the DDBRA, the Danube Delta Biosphere Reserve Administration. (IUCN 1991, Euroconsult, IUCN, 1993; World Bank, 1994a; ; notes of the unesco meetings: Unesco, 1991; Goriup, 1994) World Bank focused first on Romania, later decided to split the \$6,000.000 for capacity building for na-

ture conservation between Romania and Ukraine (\$1,500.000). EBRD was planning to support the economic development of the area, as part of a strategy integrated with the World Bank conservation efforts. Paul Goriup, resident advisor for IUCN, worked with Euroconsult (now Arcadis), a private consultancy firm, on the planning for local economic development initiatives (Euroconsult & IUCN, 1993; interviews at Arcadis). They developed, in a consultative process, several scenario's for the sustainable development of the delta. Goriup also worked with DDBRA on the 1995 draft management plan (Baboianu & Goriup, 1995). While the 1992 IUCN report reveals the scientific and activist enthusiasm of an interdisciplinary group sharing an embryonic vision, the 1995 draft plan reveals the political pragmatism of the new Romania, and, already, a crumbling belief in ambitious planning schemes.

Vadineanu already had to threaten the Romanian parliament in 1992 with loss of the Unesco- designation (interview Prof Vadineanu) to get a protection law passed that was promised to Unesco. In the end, the law was passed (Law 8217, December 1993), and the Danube Delta Biosphere Reserve was officially created, with, according to the law, attention for nature conservation and local livelihoods. Unesco accorded the new reserve the status of Man and Biosphere Reserve. The traditional MAB zoning (core areas, buffers and economic zones) was inscribed in the law. MAB status requires co- management of an area, including participation of local residents, ngo's, and substantial volunteering.

As said before, from the very beginning virtually all international actors were convinced of the importance of (regulated) local economic development, and of local participation. As said, virtually all parties were worried about the lack of local participation. Internal discussions in all the organizations involved, circled around the participation issue (interviews with Erika Schneider, Paul Goriup, Aitken Clark, Angheluta Vadineanu, Hans Drost, and others). EBRD withdrew its funding for local economic development in 1995, according to our sources (in

IUCN and WWF) out of concern that the capacity to utilize these resources well, was absent. In other words, the suspicion was that regional and national corruption, plus the conspicuous absence of locals in the previous years, would produce a resource allocation that would not benefit local development as intended.

Workshops organized in 92-93 for EBRD by Euroconsult, supposedly a participatory process leading to a regional investment strategy, were routinely dominated by local mayors, and state actors at the regional level. (Steward, in Norsworthy, 2000, a World Bank initiative, warned that stakeholders are not the same as locals, and that the loyalty of consultants cannot be assumed to be with the locals; cf also Reed, 2008) DDBRA in the meanwhile, with a scientific council originally intended as site of citizen input, even participatory governance (interviews Paul Goriup, Erika Schneider, Aitken Clark) effectively transformed this council into an empty shell, a meeting place for DDBRA management and County officials.

DDBRA, moreover, with its broadly defined authority (including planning and zoning) in the biosphere reserve, became quickly appreciated as a valuable prize in national politics, with a DDBRA governor position ranked just below an appointment as minister; this increased the impact of national politics in the DDBRA, and conversely, reduced local participation further. EBRD initially wanted to make DDBRA independent of the Ministry of Environment (Euroconsult & IUCN, 1993), a situation that would have been more auspicious, according to the World Bank (1994b, 2000, 2005) for a close cooperation with the local communities in drafting the management plan.

However, in the early nineties, with a local economy in shatters, a green future for the Delta looked acceptable to most Romanian actors. New resources did materialize, the Unesco designation and some related public relations efforts (e.g. involving members of the British Royal Family) brought a patina of prestige to wetland conservation and res-

toration efforts. With regards to wetland restoration, WWF took a leading role. WWF had gained experience, built a knowledge base for wetland restoration projects in Western Europe, in projects initiated by its Auen institute in Rastatt (e.g. Marin & Schneider, 1997; Schneider, 1990; 2007). WWF worked with DDBRA, vigorously supported by DDNI, on restoration projects, while the institutional frame of the reserve was still crystallizing. In the Unesco MAB advisory board, consisting of IUCN, WWF and a few other organizations, a new style of national park, in Britain, had drawn favorable reviews.

The Norfolk Broads authority was considered by both Romanians (e.g. the first governors of DDBRA) and western organizations (especially the nature organizations) a potential model for the DDBRA. Its then- director, Aitken Clark, organized exchange programs, bringing DDBRA staff to England, and bringing some of his staff to the Danube Delta (interviews Aitken Clark, Sandra Bell, Meg Amsden).

The Norfolk broads, established later than most English national parks, in a more populated area, offered a model of a multi- use landscape with high ecological value (IUCN, 1992; Baboianu & Goriup, 1995). Whereas the level of landscape intervention (e.g. to clean up algae) in the Broads could not reasonably be emulated in the Danube Delta –due to issues of scale and resources- the Broads’ extensive education programs and collaborative management practices were seen by many experts as the best available example for the Delta. Whereas the general spatial structure of the Danube Delta Biosphere reserve (core areas, buffers, economic zones) was inspired by a best- practice conception embraced by both Unesco and IUCN (and derived from ecological network theory), the organizational structure first envisioned (e.g. IUCN 1992) was inspired by the Norfolk Broads.

In the Norfolk Broads, the idea of claiming planning and zoning authority was rendered acceptable in the region by conceiving planning and zoning as a profoundly participatory process. In the

Danube Delta, a much larger area with ca. 20 villages, the planning authority was claimed, but participatory planning never materialized. Local municipalities were not well-informed about the DDBRA (Bell, 2004, Apostol, 2005, and interviews) and hardly realized the consequences for local planning. Furthermore, trust levels were low and responsibilities not clearly demarcated (e.g. regarding the remaining planning powers of the municipalities in the Delta). With the institutionalization of green discourses, the remaining economic assets were not touched by those perspectives on the delta. Those assets –reed, recreational land and mostly fish- were privatized. A fish concession was introduced, whereby the former common pool resources were concentrated in the hand of a small group of well-connected concessionaries, reducing fishermen to employees of these new owners, without giving them a right to unionize, without economic and legal protection. (Belacurencu, 2007; Apostol et al, 2005; Dumitrescu, 2003)

The fish concession system, established in 2000 (and enabled by openings in the 1993 law) is still in place, despite critiques on many sides (interviews), despite lack of investment (Belacurencu, 2007), lack of protection of individual fishermen. Stocks of zander and pike, valuable species, are nearly depleted. (Navodaru et al, 2001, 1999) DDBRA is often perceived as an unfair and mostly absentee landlord. Many local people complain about false promises by DDBRA, and feel abandoned. Waste collection, water and sewer provision (many locals drink Danube water) are DDBRA responsibilities, but largely unfunded mandate; budgets are insufficient to take up these responsibilities (Stiuca & Nichersu, 2006; Dumitrescu, 2003).

Also in 2000, a new DDBRA communication and information strategy saw the light (DDBRA, 2000), after recurring critiques by World Bank, IUCN, and others. However, as Apostol et al, in line with World Bank, 2005, state, informing citizen is not the same as enabling participation. While the procedure leading to the 2005 Master Plan involved

more substantial interaction with fishermen and other stakeholders than the procedure towards the 1995 draft management plan (Bell, 2004), the 2005 plan itself (cf Stiuca & Nichersu, 2006, interviews at DDBRA, DDNI) did not incorporate many of the concerns vented in these interactions, and the governance structures and procedures of DDBRA were not significantly altered. In recent years, an increased interest in tourism development (DDBRA, 2008) was again, not translated in increased citizen participation on that possible avenue for local economic development.

#### Dependencies

The institutionalization of green discourses in DDBRA redrew the landscape of power, and shaped the options available for future development. The unclear demarcation of powers versus county and municipalities caused conflicts that never subsided (interviews in Tulcea, Sulina, Chilia; World Bank, 2005; Apostol et al, 2005; Bell, 2004 Bell et al., 2001; Van Assche et al, 2009; Galatchi, 2009; Stringer et al., 2009 for the Romanian context), while the organization never received the means to get a grip on its exceptional obligations (environmental quality, planning, welfare and health of the locals, guaranteeing local livelihoods) An organizational structure advised by foreign organizations and intended to enable participatory governance was reinterpreted in such a way that local livelihoods became almost impossible within the confines of the law (Norsworthy, 2000; Bell, 2004). In systems terms, the already hampering differentiation (and hence autopoiesis) of the economic and political system, became even more problematic: steering attempts were presented as scientifically grounded but perceived as driven by material considerations of old elites (Van Assche & Teampau, 2010). A new organization, DDBRA, started to reproduce itself and the mandate of this organization interrupted the autopoiesis of politics and economy in the local communities, while the problematic authenticity of its semantics further aggra-

vated the trust issue (as in Stringer et al, 2006; O’Riordan, 2002; Kothari, 2001).

The representation of locals became structurally impaired due to this hierarchical re-interpretation of a more open governance model. It is worth underlining that the Norfolk Broads model, the Unesco Man and Biosphere charter, the World Bank/EBRD vision, were all undermined, even perverted, in implementation by the hierarchical and exclusionary re-interpretation. Combined with the elite privatization of resources, it reinforced the opacity of the governance system, as it was known that national and international environmental organizations, scientists, and media, would not be charmed by the arrangement. This opacity, in other words, smoothens the self-reproduction of the current governance system, and impedes its transformation. In addition to hierarchy and elite control, opacity enters the conditions of reproduction that shape its pathway.

#### Differentiation and dependence

The way actors develop, and their mode of participation in governance, hinges on the developmental pathway of the other actors, on the evolving patterns of interaction and rules of engagement, in other words, on a history of differentiation and adaptation. This applies to organizations (some of them actors) as it applies to function systems. Moreover, the development of organizations hinges on the wider differentiation of function systems in society (Seidl & Becker, 2005; Hernes & Bakken, 2002).

According to Luhmann, in modern society, traces of older forms of organization persist (Luhmann, 1995), hierarchy being the one we have to mention here. Hierarchical societies had a centre, whereas differentiated ones don’t (King & Tornhill, 2003). While the general evolution of world society is towards higher differentiation, this evolution was and is by no means straightforward; locally and temporally, de-differentiation can occur, which means for Luhmann that the autopoiesis of function systems is disrupted, often by steering attempts of politics (or religion). This disallows the social systems to

apply system-specific codes in the interpretation of their environments (Van Assche & Verschraegen, 2008).

Communism, in this perspective, is a de-differentiating ideology par excellence, since its core beliefs propose a unified social project, driven and controlled by politics and administration (Van Assche & Teampau, 2010; Sievers, 2002; Scott, 1998). Transition, then, to a free market and to electoral democracy, has to be understood as a path towards differentiation, including a separation of powers (Elster et al., 1998). Since the starting point of each country, each community, with regards to the state of differentiation will differ, and since the images of market and democracy imported and interpreted there, will differ, the pathways will diverge.

In Romania, with its belated transition, communist de-differentiations can still be traced (Verdery, 2003; Pusca, 2009). Studying the governance of the delta, it is clear that its evolution is marked by a legal system still dependent on politics, an economic system depending on political connections and a passive legal system (Belacurencu, 2007; World Bank, 2005; Apostol et al, 2005; Badescu & Sum, 2003, 2004), and a scientific system imbued with the superiority of natural sciences and, again, servitude to politics (as analyzed by Fischer, 2000 and Latour, 2004).

At the level of organizations, the new actors DDBRA (and to a lesser extent DDNI) changed the game, their existence being a sign of initial openness to foreign green rhetoric (and organizations), and their functioning showing the re-appropriation of the green rhetoric by regional and national elites. DDBRA’s inability to enforce the law even-handedly, its inability to include locals in its decision-making, while excluding them from the remaining economic assets (cf West, 2006), and its ineptness in producing or ordering studies more sensitive to the socio-economic issues, reflect a series of unfortunate de-differentiations, between politics, science, economy, and law. None of those function systems was apparently capable of operational closure, science being

affected by political incentives, politics by economic reasoning, and so forth (Elster et al., 1998; Van Assche et al., 2010).

Once DDBRA and DDNI were in place, they could not be ignored by other organizations involved in, or aspiring to be involved in the governance of the area. Because of the close cooperation at the initial stages between DDBRA and the international community of nature organizations (see e.g. IUCN, 1992 and World Bank, 1994a), because of their essential role in its establishment, they could not distance themselves easily after later misgivings. Because of the power wielded by DDBRA once firmly entrenched, nature organizations with an enduring interest in the delta –such as WWF and its wetland restoration projects (e.g. DDBRA et al, 1997)- could afford even less to keep a distance or to criticize. Because of the interdependence between the nature organizations and their own creation, DDBRA, that creation, once autonomous, embodied probably the strongest factor in shaping the rest of the governance evolution. A path dependence made more structural because of the interdependence. Because of the Romanian and regional context marked by a set of other path dependencies that were not accurately assessed by the optimistic foreign organizations, a reinterpretation of most of their input occurred, producing the persistent exclusion of local perspectives. Contextual path dependencies and the operational closure of DDBRA both enabled and triggered this reinterpretation. All along, opacity on the internal functioning of DDBRA, and on the political/ economic situation in the villages was a condition for maintaining the autopoietic reproduction of this governance regime.

#### FLEXIBILITY IN THE DELTA

While interdependence and path dependence limit and shape the development options for the delta and the design options for its governance, there were and are factors that increased these options. One of the factors introducing flexibility, was the fact that many people ‘voted with their feet’ and moved out of the

area, or out of the country (Van Assche et al., 2008). Governing an area with a smaller and aging population leaves more options for long-term environmental planning as less and less competing interests need to be taken into account. A second factor is the reduction of ethnic diversity mentioned before (Van Assche & Teampau, 2009). Deplorable by itself, the lack of strong identities perceived as very different from Romanian, simplifies the governance situation, and creates more options for future development. Furthermore, the construction of the area as ‘nature’ should be mentioned. This would probably not have happened if the intricate pattern of resource dependency with various ethnic groups, would have been visible. The rewriting of identities can be interpreted as a legacy of communist policies, while the construction of ‘nature’ is imported and appropriated.

The flexibility that could have come with a high level of differentiation, could unfortunately not be observed. If law, politics and economy would have been further differentiated, that would have made it easier for businessmen to think as businessmen, promoting economic development. Local initiative is very unlikely to boost the economy, since the villagers are left with no assets, no ways to accumulate them, few educational opportunities, unclear rules and expectations, and very imperfect representation, making it very hard to lobby for improvements in the other factors. In other words, the history of de-differentiation makes it very hard for economic actors to emerge (Seidl & Becker, 2005; Fuchs, 2001), and very hard for them to discern opportunities, and take advantage of them, and develop it into a business (North, 2005; Greif, 2007). The path dependencies and interdependencies that mark Romanian transition in general, are magnified in this area of institutional exception, of green discourses appropriated by old networks. The quasi-monopoly of power granted DDBRA (on paper) makes it hard to challenge some of the very un-ecological practices in the delta, makes it hard for the locals to develop into real actors (Eggertsson, 2005; Fuchs, 2001), and for oth-



er actors to intervene, and push governance in a different direction (Healy, 2006; Greif, 2007; Ostrom, 2005).

#### POLICY IMPLICATIONS

What should be the future of the Romanian Danube delta? It seems obvious that green rhetoric needs to be turned into green practice, that the constitutionally sanctioned separation of powers needs to be implemented in the delta as well, that the jurisdiction of DDBRA versus local and county government needs to be more precisely delineated, that the privatization of the delta's assets needs to be reconsidered, and the livelihoods question tackled in a more participatory manner.

Does this boil down to a recipe for direct citizen participation at all levels of decision-making, allowing thus the other issues to be resolved slowly according to the taste of those citizens? Not really. Direct citizen participation is not likely to be the answer. That is, not without restructuring other institutions (Van Assche et al., 2010; Wegerich, 2009; Allina-Pisano, 2008). Bringing in 'locals' in the current situation, marked by the path dependencies and interdependencies described, would be difficult without working on the issue of local representation, without making people feel more secure -enhancing the effectiveness and autonomy of law-, without addressing the elite rule issue -and making it easier to believe that their participation would have real impact (Cleaver, 2002; O'Riordan, 2002; West, 2006; Stringer et al, 2006; White, 1996) If efforts on all these fronts can make progress, also the trust issue can be resolved, allowing for more experimentation with other forms of coordination, e.g. forms of participatory governance (Greif, 2007; 2005; Trevisani, 2007).

Even so, even after a form of participatory governance will be introduced at an appropriate time -the appropriateness of the moment not being decided by current actors- the ecological value, complexity and connectivity of the delta are such that a role for scientific experts and coordinating roles (e.g.

for planners) should be safeguarded. If those scientists and planners are allowed to reason as scientists and planners, if operational closure, and hence differentiation, can take place, it will be easier for emancipated locals to trust them, and accept their continued presence.

In terms of institution- building, we can say that a revisiting and differentiation of the concept of path- dependence in a systems- theoretical frame showed that path dependence has to be analyzed in conjunction with interdependence, and that the pattern of interdependencies and path- dependencies observed in a governance system, reflects the pathway of differentiation and mutual adaptation taken in a community. Formal and informal institutions cannot be separated in the analysis of such evolutionary process; both are the product of autopoietic systems of communication. New institutions, e.g. new forms of environmental governance, can only take hold if they can be embedded in the web of interacting social systems that make up society, if they can be grasped by all actors in the present state of the system, and if they allow function systems, legitimate organizations and accepted actors to reproduce autopoietically.

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