A Reality Lab Retrospective

From Planet Kullen to O-Wad-Chu-Sett

Nachhaltige Entwicklung ist eine komplexe Aufgabe, die es zu lernen gilt. Herkömmliche Lehrformen die auf ein bestimmtes Lernziel ausgerichtet sind, greifen hier oft zu kurz. In realen, ressourcen-basierten Simulationen kann Nachhaltigkeit in seinen verschiedenen Facetten gelernt werden.

Von Ralph Meima

Sustainability as a public policy and managerial concept goes back to the 1970s, and gained a kind of world-wide official status through the well-known Brundtland Report two decades ago (WCED 1987). Beginning in 1996 in Lund, Sweden a series of teams led by the author, and with many of the same people from year to year, attempted to experientially convey key concepts related to sustainability via the design and delivery of complex, total-immersion, resource-based simulation exercises of a particular type. From the start, the ambition has been to completely revolutionize sustainability training to the point where any training that does not employ real resources or involve a rich, full-immersion environment is regarded as incomplete. To date, a total of eleven such exercises have taken place: eight in Sweden and three in the USA.

Background of the Reality Lab

With the aim of helping participants enhance their understanding of society's and nature's systems and their relationships to sustainable development, these simulations gradually evolved from simple, discussion-based exercises to quite complicated, open-ended simulation games. Between 1996 and 2001, eight such exercises took place, six with groups of master's students at Lund University, and two with corporate groups. A combined total of around 250 people took part, representing more than 40 nationalities. The exercises were variously referred to as Planet Kullen, Planet P2 and Reality Lab. Reality lab became the general term we use to refer to this type of simulation (1).

The first reality lab to take place in the USA, called Rebuilding Ampa Nanzu, was carried out in Vermont in May 2003, with a group of master's students from the School for International Training (SIT) in Brattleboro. A second, called Return to Ampanancia, was provided to government intelligence experts in West Virginia in February 2004. This exercise was somewhat exceptional in being primarily focused on team dynamics and creativity, rather than upon sustainability. The most recent reality lab, he O-Wad-Chu-Sett, took place in western New Hampshire in April 2004, again with SIT students.

Essential Features

As their rather fanciful names might suggest, reality labs employ diverse and imaginative features and devices to achieve their results. Essential features are:

- Real resources, e.g. water, food, fuel, technology
- A wild outdoor setting
- A minimum of four to five Teams
- Geographic territories
- A cycle-based timing structure
- A market economy, for the exchange of resources and services
- Extensive communication, including news media, negotiation, etc.
- Holistic, i.e. multidimensional, performance measurement
- A duration of at least one day, and preferably two to three days
- Unpredictable outcomes
- Advance and follow-up team assignments
- Prior, ongoing, and post-exercise debriefings

For a reality lab to achieve its training mission with the greatest possible efficiency, effectiveness, and memorability, it must deliver a rich reality, necessitate decision-making under conditions of ambiguity and uncertainty, offer decision-makers some autonomy and discretion, present potential trade-offs where it is hard to rank the relative attractiveness of various outcomes, and cause participants to feel the consequences of their actions in a concrete, rapid, and reasonable, i.e. uncontrived, non-arbitrary, fashion.

Design Principles

The following design principles have therefore come to be observed as reality labs have developed:

- **Realism, choice and consequence.** The reality lab must be characterized by as much realism as possible, to enhance the total immersion experience, foster natural behavior, and distance the participant from relationships and routines in daily life. As part of the realism, participants should be free to make what they consider reasonable choices, rather than be forced into considering limited alternatives that do not ➜

seem realistic. Finally, a central aspect of the realism of a reality lab must be the vivid and fairly rapid experience of the consequences of choices and actions by participants.

- **Autodynamism.** To the greatest extent possible, participants must generate their own dynamics. For example states and changes in social relationships, resource supply and demand, prices, and other variables must be caused by the action of participants, not by the simulation managers.
- **Voluntary roles.** Within the greater artificial context of the reality lab, adoption by participants of roles must be voluntary. For example if someone plays the role of a leader, critic, follower, thief, peacemaker, trader, negotiator, antagonist, etc., it should be a role that grows naturally out of the interplay of need, social interaction, and choice, rather than a role specified in a script.
- **Opitional reality or „challenge by coice".** A participant can always elect to exit part or all of a reality lab, but, as long as he(she) is a participant, it must be real need, not imagination or fantasy, which drives participation. For example a team should be motivated to, build a bridge, make a meal, or enter into negotiations with another team due to actual resource issues, not an imaginary threat such as a fictitious approaching forest fire.
- **Non-violence.** Conflict, aggression, and sanctions will almost certainly arise in a reality lab, but such situations must be resolved in a non-violent manner, without for instance physical restraint of people like kidnapping or imprisonment, physical threats, tackling, dousing with water, etc.
- **Safety**. In view of their total-immersion character and deployment in outdoor settings, reality labs are designed and carried out with thorough attention to personal health and safety, emergency planning, and general readiness for the unexpected.
- **Appropriate intervention.** The pedagogical foundation of the reality lab is experiential learning, which involves learning by doing with reflection. To enhance the learning, it is necessary to periodically intervene and engage participants in a debriefing discussion to process the experience material generated and reflect upon it in a way in line with mission objectives. Prebriefings, debriefings, and rebriefings may occur according to a regular schedule, irregularly as needed or upon completion of the field segment of the reality lab.
- **Systemic freedom.** The final outcome of a reality lab must be a function of the choices, arrangements, and other dynamics generated by participants, not a function of simulation managers' planning and control. It must be their own creation, whether utopian, satisfactory, suboptimal, or dysfunctional, on which to base the important discussion of the question: „Did you find a sustainable path for your world?" This involves great unpredictability, especially with regard to the physical and emotional well-being of participants. Simulation managers must be prepared to intervene if necessary, if it is judged that the value of the learning experience is being jeopardized by excessive deterioration of well-being.

Plot and Team Goals

In „Rebuilding Ampa Nanzu", teams of refugees from six ethnically distinct groups returned to their traditional homelands after a period of political breakdown and war to begin the process of rebuilding their nation, Ampa Nanzu.

The peoples faced many challenges. The peoples had traditionally competed as well as cooperated, and the region's history was rife with wars, economic rivalries, and shifting alliances. The existence of the nation of Ampa Nanzu itself had been intermittent. Each people therefore had its own interest alongside the national interest. And resources were scare and infrastructure degraded, lending urgency to their tasks.

Individually and collectively, the peoples had a wide range of strategies from which to choose, some more feasible than others. Consistent with Reality Lab Design Principle No.8, systemic freedom, the outcomes of this reality lab for each people and their collective multi-ethnic nation were unpredictable. Possible end-states ranged from a successful, prosperous society to chaos and further deterioration. Much was at stake, and nothing was guaranteed.

In this stressful, open-ended experiential exercise, many important lessons about strategy, management, organization, and leadership could be identified, discussed, and reflected upon. In a fictitious reality far from daily private and organizational life, many of the conditions were nonetheless recreated in which meaningful, practical learning could take place. It was no place for play-acting, posturing, or pretense. Real critical thinking, aware group process, and leadership were needed, and the opportunities to develop them were rewarding in tangible ways.

Each people had with it certain supplies, but these would only last long enough for their work to be started. During the duration of the field segment, the peoples had to:

- secure their basic needs;
- rebuild infrastructure like water purification, food trading and production, a bridge;
- re-establish social institutions;
- create a coalition government that could act as the nation's representative in dealings with the UN and other nations;
- set Ampa Nanzu on a more socially and environmentally sustainable path.

The O-Wad-Chu-Sett Scenario

The teams' challenges in O-Wad-Chu-Sett varied depending on what kind of team they were. The returning peoples had to survive and rebuild their cultures and societies in their ancient homelands. Other civil-society and economic actors arrived with various aims and missions. The secretive Ah-Benok people had much to protect, but they were not sure they had anything to gain from the arrival of many strangers.

Three peoples have finally decided to return to their traditional lands. Culturally and ethnically related, and sharing the same Christian-influenced animist faith, these peoples never-

theless have distinct traditions and dialects. When the peoples return, it is still early in the growing season, and neither forage nor crops can be relied upon yet for much food. Game is also scarce and they are carrying only limited supplies, so the returning refugees will need outside help. They know this, but are doggedly determined to resettle their lands, and believe that outsiders can be convinced to help them until they are self-sufficient.

Another people in the far west, the Ah-Benok, are protected to some extent by their geography and avoided the wars that caused the three peoples of O-Wad-Chu-Sett to flee. The Ah-Benok possess a primitive culture and are very knowledgeable about animals' habits, the use of medicinal plants, and other skills the refugees have to a large extent lost. They claim much of O-Wad-Chu-Sett, and feel threatened by the return of its other inhabitants.

A variety of charitable societies, religious societies, governments, and individuals around the world have expressed concern about the welfare of the returning peoples. In addition to the humanitarian dimension, the region is also home to many endangered species and unusual habitats, and there is fear that the increase in population will lead to ecological catastrophe.

The Assembly of Nations (AON) is monitoring the evolving situation closely. Limited relief supplies were delivered to the migrating peoples as they approached the frontier of O-Wad-Chu-Sett. The AONHCR (High Commissioner for Refugees) is prepared to visit the region if events call for it, to determine whether additional AON relief is needed.

Two international charitable societies have become engaged in the matter of the returning peoples, and want to help them secure food and clean water, resolve remaining disputes, and start the process of rebuilding self-sustaining communities in their traditional lands. They are concerned about preventing environmental destruction, and about getting the resettlement of these lands off to a sustainable start. Both can deliver short-term humanitarian relief in addition to advice in their specialty areas.

Also monitoring events in O-Wad-Chu-Sett are a variety of international corporations, as O-Wad-Chu-Sett possesses extensive natural resources and has been inaccessible for a long time. These corporations comprise a global energy and natural resource exploration and production concern, with interests in hydroelectric power utilities, oil and gas fields, and electric transmission networks as well as a medium-sized, research-intensive pharmaceuticals company, specializing in natural medicines obtained sustainably and fairly from forests, agricultural sources, and the seas.

What Actually Happens?

As the above examples convey, reality lab participants co-create from a scripted point of departure complex, interesting, and sometimes upsetting experiences in which they are immersed intellectually, emotionally, socially, physically, and spiritually for up to several days. After a short period of adjustment seldom lasting more than a morning, they find themselves easily slipping into roles as traders, explorers, negotiators, homemakers, team leaders, scouts, builders, storytellers, and more. The identity they quickly acquire as members of their team, some fictitious nation or imaginary organization, is remarkable to watch. Within hours after starting, participants can be seen laughing, crying, worrying, striving, problem-solving, resolving ethical dilemmas, and displaying a myriad of other behaviors as a world emerges and evolves in directions no one could have predicted, much less controlled.

To be sure, the logistics and scenery of a reality lab do not achieve perfect verisimilitude, and certain aspects, for example the injection of resources into the system; the generation of data about team performance and the state of the simulated economy, occur or are depicted in a less seamless fashion than can be achieved with computer-based simulations. Nonetheless, the reality lab becomes a laboratory in which the relationship between the actions of individuals and small groups and the sustainability of the larger human system can be effectively experienced, modeled, and experimented with, and form the basis of rich, insightful conversations after the fact.

What We have Learned

The author and numerous others who have taken part in the development of reality labs have learned a number of important lessons through the eleven exercise to date (2). Some are inherent in the concept itself; others pertain to practical aspects of how the reality labs were carried out. Here is a brief summary.

- Like many role-playing games, reality labs appear to provide a memorable and rich format for the shared exploration of many social phenomena and dilemmas. Beyond this, the natural setting and real resources used in reality labs appear to even further enhance their memorability and richness.
- The dense interlinkages of issues manifested by the question of sustainability would seem to defy attempts at simple, linear modeling and simulation for training. The presence of many dilemmas and the emotional dimensions are two particular aspects of sustainability that make it especially challenging to simplistic approaches, and suggest that complex, unpredictable, whole-person experiences come closer to providing a pedagogical environment in which sustainability can be effectively engaged.
- The importance of adequate staff capacity for emotional and practical interventions during the reality lab, when needed, and afterwards for processing like debriefing and discussion cannot be overemphasized. The participants must own the choices they make and the world they create, and learn from the consequences of their actions, but thresholds of mental and physical discomfort vary substantially among individuals, and the staff must be highly sensitive to and resourceful in situations in which for example physical fatigue or intra-team conflict threaten to detract from the quality of the experience. ➔

- More generally, to successfully carry out a reality lab, a core staff of four to five trained persons deeply familiar with the unpredictable dynamics and special feel of a reality lab must be part of the exercise. The importance of this aspect was overlooked when the author brought the reality lab to the USA. By 2003, the design had evolved into a rather complicated form, with long Operator's and Participant's Manuals and intricate details and mechanisms. Experienced staff were not available. In contrast, in Sweden a cadre of about a dozen volunteer staff members was cultivated over a six-year period, beginning when the design was primitive. They instinctively understood what they needed to do as their reality lab unfolded. However, in the US, it was very challenging to manage the reality lab without experienced staff, and quality suffered.

Future Directions

It is unclear what the future will hold for reality labs. The author is now at an institution that offers good prospects for their further development. And the topic of sustainability is now rising to the top of public awareness and political debate as never before, especially in conju nction with climate change and energy scarcity, like earlier periods that have seen waves of environmental activism. However, it is the author's experience that the primary target audiences for reality labs, graduate students and corporate employees, include growing proportions of individuals who either demand a high degree of predictability and cognitive consistency or are very uncomfortable in outdoor, somewhat rugged settings. The former question the credibility of a pedagogical tool that does not provide them with simple, absolutely conclusive answers, and the latter necessitate increasingly elaborate physical and logistical accommodations, and have occasionally criticized the reality lab concept as failing to provide accessibility to all levels of physical fitness, outdoor comfort, and outdoor skills.

With the above lessons in mind, plans are being cautiously made for new reality lab exercises in 2007, in the conviction that they most fundamentally offer a way forward in education and training that brings both the practice and the cultural grasp of sustainability closer to our everyday world, where they are most assuredly needed.

References

World Commission on Environment and Development (WCED): Our Common Future. New York 1987.

Notes

(1) Reality Lab is a registered trademark.
(2) In particular, Magnus Nilsson of Mölle, Sweden, who has been a partner in reality lab design since its inception.

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