

**THE 8<sup>TH</sup> EUROPEAN SYSTEM  
DYNAMICS WORKSHOP (EUSDW-VIII):  
MODELLING SUSTAINABILITY PATHWAYS:  
BRIDGING SCIENCE, POLICY AND SOCIETY  
(31<sup>ST</sup> MAY – 2<sup>ND</sup> JUNE 2017, LISBON).  
AN ADMITTEDLY PERSONAL ACCOUNT FROM AN  
OUTSIDER’S PERSPECTIVE**

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System dynamics (hereafter: SD) can be considered a special field in several senses. Proponents of this research area do not necessarily share a common disciplinary background, but they do have a common methodological commitment. First, this school of thought stresses that systems should be understood from the inside; that is, it focuses on the internal structures and operation of systems and not on external forces or shocks. Secondly, it maintains a comprehensive outlook about situations or problems. This means that instead of attempting to analyse individual causal mechanisms, it strives to lay out and model the complexity of the web of causes of a given situation. Apart from these features, there is also a strong emphasis on visual representation – that is, on the delineation of causal relations in a clear and understandable manner. This commitment towards ‘graphic elicitation’ and understanding, alongside the presupposition that models can be built through utilising several sources of and forms of knowledge, also makes SD’s approach a suitable match for participatory research projects.

In relation to these characteristics, one of the fundamental presuppositions of SD is that structure drives behaviour, so it is very important to reveal and understand the structure that lies behind certain events. This workshop’s structure was set up in a way that fostered professional development by maximising the amount of feedback authors could get from colleagues. There were three intensive sessions during the two days: one about participatory SD,

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one about sustainable decision-making processes, and one about earth SD. Two or three 30-minute-long papers were presented at each of these sessions. The conference papers had been sent to discussants<sup>2</sup> before the event, so the latter also prepared with a short presentation in which they raised questions about the papers and pointed to the possible weaknesses of the text with a view to their further development. After the discussant's comments, the members of the audience also addressed questions to the presenter and/or to the discussant. This set up created a lively but at the same time friendly atmosphere during the workshop. Although several critical remarks were made, they were given in a constructive and friendly manner. Moreover, due to the diverse disciplinary backgrounds of the participants, new and fresh insights were offered in relation to the papers.

The three sessions also highlighted three possible ways of utilising SD. First, it can be utilised to construct models as boundary objects which can i) instigate discussion, ii) help with identifying the underlying causes of common problems, and iii) contribute to building consensus about a specific course of action in a given community. Kyrstyna Stave's paper delineated the different ways that the added value of participatory SD processes can be studied scientifically. Presenting cases where different types of participatory processes had been used, Stave was able to point out the possible benefits (and drawbacks) of using SD tools in participatory processes. Bent Erik Bakken presented a complex participatory SD process involving several stakeholder groups as a way to bridge diverging worldviews about energy futures. The complexity of this multi-stakeholder process raised interesting methodological dilemmas about how one can manage the involvement of different parties with different vested interests (and time zones). Király (the author of this short piece) reviewed the empirical literature on participatory SD approaches and their characteristics.

Second, other papers utilised SD as a way to support and/or model sustainable decision-making. Birgit Kopainsky presented an experiment in which Zambian farmers had to choose between short- and long-term land-use strategies in a simulated environment based on an SD model. While the paper managed to demonstrate individual decision-making strategies under conditions of scarcity, it also provided learning opportunities for the farmers involved by highlighting the mutual interdependences in market relations and the possible consequences of their decisions on their future. In a similar fashion, Paulo Gonçalves presented an SD model created for learning purposes which aimed to demonstrate the messiness and complexity of humanitarian emergencies. This paper raised

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2 Discussants at the event were Andreas Größler, Silvia Ulli-Beer, José Luis Casanova, Jürgen Strohhecker, Carmine Bianchi, Enzo Biavona, David Lane and Meike Tilebein.

awareness of the fact that NGOs and other actors in the field compete for scarce resources (hotel rooms, translators, helicopters, trucks, media attention, funding, etc.) which leads to several negative effects. These include lack of coordination, duplication of efforts, and concentration of resources in the most accessible areas while at the same time leaving other areas without aid. Since these negative effects cost lives during a humanitarian emergency, it is important to test different solutions in a simulated environment.

Third, other papers highlighted that SD can be utilized to gain theoretical insight and scope concerning given phenomena. Vincent de Goyceert's paper offered a model based on former empirical studies and analyses of related business acquisitions. He emphasised that while it is common knowledge that acquisitions often fail and lead to a decline in financial performance, our knowledge about the precise mechanisms behind this situation are limited. To shed light on this phenomenon he developed a parsimonious model focusing on the interrelationship of the magnitude and timing of downsizing and employee engagement. Steven Lade's presentation focused on a world-level SD model that simulated the possible effects of feedback between loss of biosphere integrity and climate change. This paper highlighted that while some research has been done about various planetary boundaries individually, we know very little about the interrelationship of these areas and how changes in one field can instigate changes in other fields. Last, David Collste and Theresa Bennich presented different theoretical narratives about sustainable transitions and proposed a way to connect future studies with SD. Their thought-experiment involving structural backcasting might inspire interesting methodological innovations for devising possible and desirable future visions by utilising an SD perspective

It is worth mentioning that, despite the tight schedule, the organisers also squeezed a short participatory exercise into the programme. The second day started with a World Café exercise with the students of the European Master's in System Dynamics as table hosts. During this exercise students presented models on green growth policies in Portugal that they had developed as school assignments, and SD practitioners gave them feedback and suggestions about how to develop and further elaborate these models. This shows both the thoughtfulness of the organisers and the approach of the whole workshop: learning was at the very heart of the event for everyone involved. The event was organised by CENSE (Centre for Environmental and Sustainability Research) at the NOVA University Lisbon.

