

Dana Meadows Award Presentation Ceremony 2013

Announcement Text by John DW Morecroft
Member of the Dana Meadows Award Committee

The Dana Meadows Award is given for the best paper, *by a student*, presented at the Annual Conference. The Award was first presented at the Atlanta Conference in 2001, to honor the life and work of Dana Meadows. Dana pursued a long and brilliant career in education and research focussed on a systems approach to social and environmental issues. From her contributions to *Limits to Growth* to her later writings in *The Global Citizen*, Dana was an inspiration to generations of students and researchers in System Dynamics.

The Award is instituted by the Society to bring recognition to the very best student work and thereby, to inspire students to contribute to the growing body of theory and applications of System Dynamics - inspiration that Dana demonstrated throughout her career.

The Dana Meadows Award is funded through an endowment established by the Society, initially by a generous donation from Jane and Allen Boorstein to launch the Award in 2001, and by many subsequent donors whose support the Society gratefully acknowledges. Currently, the winner receives a cash prize of \$750 as well as conference registration plus travel expenses (up to a combined maximum of \$750).

The members of the selection committee this year were Erich Zahn, John Sterman, Krystyna Stave, John Morecroft, Tom Fiddaman and Richard Dudley. The work of the selection committee is co-ordinated by Joel Rahn who also normally conducts the Award Ceremony. However, Joel is unable to attend the conference this year, so I am taking his place.

Before announcing the winners let me offer some general comments for the benefit of the many students gathered here this evening. First I encourage all of you to continue submitting good work. The

Committee members read and discuss your manuscripts carefully. In doing so we enjoy a unique and valuable ‘window’ on current student research, the best of which is very good indeed. And one piece of often-repeated advice: when you submit a paper, make sure you first read the Award guidelines very carefully - and stick to the rules as you write your manuscript! Papers that ignore the guidelines will be deemed ineligible and screened-out of the short listing process.

For my final comment I’d like to reflect on the manuscripts we receive and the range of research topics and styles they cover. In its 50+ year history system dynamics has repeatedly pioneered and evolved. There is a tradition of bold and consequential real-world applications based on meticulous field-work and modeling projects in-and-for business and society. Long may that tradition continue. There are scholarly studies that advance the methodology and application of system dynamics and report the results to the academic community in top-ranked journals. Such work is a vital part of an academic career and contributes to the credibility of our community. New threads of research have evolved in group model building, behavioural decision making, misperceptions of feedback and stock-flow dynamics – all of which are amenable to careful lab-like experimental methods. Bridge-building has been important too. Outreach to fellow ‘computational advocates’ has been achieved in discrete-event simulation and agent-based modeling. And outreach to related academic disciplines has been achieved in areas such as strategy, economics, operations and management science. The list goes on.

The DMA Committee receives manuscripts from across this spectrum and seeks to recognise a representative sample of award-worthy papers (that also meet the criterion of excellence). The mix of shortlisted topics inevitably varies from year-to-year and a balanced view of award-worthy work can best be seen in the history of winners, rather than in a snapshot of a single-year. Last year, at the St. Gallen conference, we selected two joint winners: one student presented a high quality diffusion model (with scholarly outreach to marketing academics); and the other student presented a bold and potentially

consequential real-world public policy application. This year our shortlist was whittled-down, after much deliberation, to two experimental studies. As you will now hear the purpose and experimental methods in each case were carefully conceived, yet quite different from one another. I will start with an Honorable mention and then announce the Winner.

The Honorable mention in the Dana Meadows Award competition for 2013 goes to Rodney James Scott from the University of Queensland for a paper entitled “Evaluating the long-term impact of qualitative system dynamics workshops on participant mental models” (co-authored with Bob Cavana and Donald Cameron). Among the evaluating comments of the DMA Committee were the following:

This paper reports a study of how participants in a Group Model Building workshop thought about the problem focus of the Group Model Building exercise before, immediately after, and one year after the session. This is an interesting and important line of research -- something the Group Model Building community has been asking for a long time, and helps add to the evidence supporting the value of Group Model Building.

The final follow-up study was conducted a long time (1 year) after the initial GMB intervention, in the wake of a merger and restructuring in the client government department. The intervening year without implementation of the original strategy was astutely woven into the experimental design and is a plus for the analysis. To have a really "clean" test of whether a Group Model Building intervention changes the way participants think about a strategy situation you have to eliminate any other possible intervention that could subsequently have made them think differently about the original situation. This isolation is very difficult to achieve even experimentally, and is especially difficult in a real world case. The researcher seized a rare opportunity to test long-term mental model effects of a GMB exercise.

The Winner of the Dana Meadows Award competition for 2013 goes to Sebastian Villa Betancur from the University of Lugano for a paper entitled “Exploring Retailer’s Ordering Decisions under Delays” (co-authored with Paulo Goncalves and Santiago Arango). Among the evaluating comments of the DMA Committee were the following:

The paper reports an experimental study of the phantom ordering phenomenon in a supply chain with horizontal competition. This is an important setting and problem in supply chain theory and operations management. The paper builds on prior theory and experimental work in the system dynamics literature.

Generally speaking this is a carefully done experiment conforming to the principles of experimental economics, including payment scheme, information and incentives. The analysis of the model behavior, derivation of optimal response for each of the treatment conditions, and econometric estimation of the results is generally well done. Good attention is paid to checking assumptions of the econometrics such as checks for homoscedasticity and normality of errors, and use of two different estimation methods.