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Linking Theory & Practice

# Comments by George Roth and Jennifer Hartwell on “Off the rails: understanding the derailment of a lean manufacturing initiative” by Turesky and Connell

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It is a pleasure to read Turesky and Connell’s study of a lean implementation and be offered the opportunity to comment upon it. We commend Turesky and Connell for their efforts, particularly their review and application of the organization change literature to the challenges of lean change. Their paper spans a wide territory, from reporting a failed lean change case to their development of a 4-phase, 10-step change model for successful lean change.

In reviewing their case, we felt that an important cause of Environs’ lean change failure was the large leap demanded by the change process. As managers and organizations are more capable of tepid steps than large change leaps, it is not unexpected that Environs’ lean change efforts failed in this situation. Failures in change efforts are common, as is supported by many studies, some of which have been referenced by Turesky and Connell in their paper. In contrast to the Environs case, we had the good fortune of studying a successful lean change effort at Ariens Company. This situation provides us with an interesting opportunity to examine how our case – change efforts at Ariens Company – may exhibit similar or different characteristics when Turesky and Connell’s 4-phase, 10-step change model is applied. Our second area of comments will focus on methodological and epistemological issues that arise from selecting and using case studies to study change. We hope that these comments will spur engagement and response from Turesky and Connell, and other *OMJ* readers.

## **Evidence for the 4-phase, 10-step change model in the Ariens case**

We analyzed our Ariens case to examine possible evidence that may support Turesky and Connell’s proposed factors and key issues in lean change efforts (Turesky and Connell’s Table 4); Table 1 below presents Turesky and Connell’s factors (column 1), evidence we

**Table 1** Ariens company lean change processes based on Turesky and Connell's model

<i>Turesky and Connell's factors affecting success</i>	<i>Evidence found for this step at Ariens Co.</i>	<i>Proposed principle for step of successful lean change provided by Ariens Co.</i>
<i>Foundation stage:</i>		
Top management support and Communication	Dan Ariens, the leader of the Ariens Company, became an "absolute believer" in lean and made sure he continuously "preached" the importance of lean to employees at all levels in all functional areas. Ariens was able to persevere in its lean efforts by not only holding fast to a clear and credible vision but also by building a "thinking, learning, and problem solving" culture that encouraged inquiry and two-way communication flow (bottom-up and top-bottom).	Leadership communication must be sincere by a leader who is completely committed to lean and received by all levels, and in all functional areas of the organization. To achieve successful lean sustainability, the need for top leadership support, in terms of resources, and communication is ongoing not for months but for years, and arguably forever. A learning culture inherently supports the ambition to reach any vision.
Communication	At differing times, all levels of Ariens' employees (from the executive team members to the fork-lift operators) participated in daily and weekly lean event meetings where it was customary for all employees to share observations and suggestions regarding lean efforts. Inter-level dialogue was encouraged and practiced. Employees also talked to one another about what changes they have been through, taking insights that are powerful from their training at work into the personal and volunteering aspects of their lives. One worker talked about how, after her success with lean at Ariens, she couldn't stop seeing waste and wanted to make improvements in her home.	It is important to be sure the direction of communication flow between levels includes bottom-up and that two-way communication is encouraged through inquiry at all levels. Communicating the results of these efforts should not be confined to business outcomes but also to personal results for employees.
Training and Development	Ariens invested heavily in employee training through its lean internship program, a 6-month full-time program that helped people become front-line leaders of lean efforts. Ariens also taught lean to its suppliers, dealers and end-users, helping them to become more efficient, and profitable, in their service and retail operations. Suppliers could attend a 7-week course at Ariens Lean University and end-users were able to participate in lean events at Ariens in Brillion. Twice a year, Ariens' field agents visited dealers and end-users on-site and ran kaizen events with them. In addition to formal training, people were mentored on improvements by supervisors and managers.	Differing levels of lean expertise helps to move a change forward. All employees should receive some lean training and some employees should receive extensive training. Mentoring by supervisors and managers is also important. Lean training should also extend to other organizations in the value stream, that is, suppliers, dealers, and end-users. For sustainability, these companies would ultimately need to lead their own lean transformations.
<i>Preparation stage:</i>		
Project selection	Value stream mapping helped to target improvement opportunities, which provided better results in overall operations. Ariens started with lean events in areas with the most receptive managers and where "easy victories" were likely. In 2003, Ariens reorganized into nine major value streams reporting to two operations vice presidents. Moving to value streams as a central organizing principle, helped focus improvement efforts to product and customer needs. Value stream managers were in a position to observe the product	At first, projects should be selected based on their likelihood of succeeding. Later, more rigorous methods of project selection should be employed by managers who have a total value stream perspective and hold value stream goals.



**Table 1** *Continued*

<i>Turesky and Connell's factors affecting success</i>	<i>Evidence found for this step at Ariens Co.</i>	<i>Proposed principle for step of successful lean change provided by Ariens Co.</i>
Employee engagement	<p>from its conception to its delivery to the customer, giving the value stream manager an excellent perspective for project selection. Once Ariens had internal experience, subsequent lean efforts focused on working with suppliers and customers and using lean approaches in product design and development. With a more discriminating focus, the number of lean events decreased, but results improved.</p>	<p>Make the need for change visible to all employees in all ways. Top managers need to treat employees fairly and with respect – take the time to explain the changes needed even if it requires meeting with each and every employee to be sure the importance of the change is understood. Show employees that change is required of everyone, including top management.</p>
Desire to improve service	<p>During the first 5 years of lean implementation, managers and workers re-organized the factories so that approximately 10–15 product lines made up of 30–40 cells replaced four long assembly lines. It took over 600 employee-driven improvement projects to achieve this. These changes contributed to a series of multifaceted business outcomes and personal results that further reinforced progress. These outcomes reinforced workers’ sense that things really were different at Ariens and built on their desire to continue to make additional significant contributions.</p>	<p>Involve employees at all levels in decision making on project selection and the implementation of the change. Give employees responsibility over the changes in their own work areas.</p>
Managing resistance	<p>Employees’ fear to accept the changes subsided as leaders spent more time describing why they were making changes and reinforced their commitment to no layoffs because of lean improvements. Employees learned to speak up and managers learned to listen and support them. There were quarterly company meetings where Dan Ariens provided updates on overall performance. He and the top managers all actively worked to explain lean to the workforce. Lean supervisors talked to people about their ideas for changes and employees were encouraged to ask questions. During daily lean event briefing meetings managers, and one senior executive who attended, asked questions, made suggestions, and inquired into what help the team needed. Positive results from lean events convinced the more skeptical employees to give lean a try. People needed to be told the importance of making the change to lean, retold and told again as they were coached through problems.</p>	<p>Explaining the change thoroughly and offering opportunities for employees to voice concerns, ask questions, and receive help is important in managing resistance. In particular, identify the leaders of resistance and respond to these outspoken people’s concerns. Successes from initial lean efforts should be used as examples in approaching other areas and spreading lean. When employees are unable and unwilling to make a requested change, employees need to be told and retold the importance of making the change to lean as they are coached through making improvements.</p>



Table 1 Continued

<i>Turesky and Connell's factors affecting success</i>	<i>Evidence found for this step at Ariens Co.</i>	<i>Proposed principle for step of successful lean change provided by Ariens Co.</i>
<i>Implementation stage:</i>		
Project team selection	Project teams at Ariens included employees at all levels of the organization. Managers with expertise in lean were included in events and outside trainers provided ongoing support to teams.	Project team selection should not be confined to lower and middle levels in the organization. At some point, all employees should be given the opportunity to be on a project team. Managers with lean experience should be included, and expert outside trainers with lean knowledge should support project teams.
Completing the Project	There were several lean teams working on different projects each week. At the start and end of each day, there was a short briefing meeting where team leaders presented plans or accomplishments to middle and top managers who had the authority to allocate funds to projects. This daily/weekly structure allowed for managers to hear project details and to share from their experience possible suggestions. During these meetings, funding for these improvement projects was readily committed. Managers with lean experience were hired and expert outside trainers with lean Knowledge provided support during events to increase the likelihood of project completion and success.	Managers who have the authority to fund projects should be integrated into the project from the planning to the execution stages. Those employees who will be responsible for carrying out and completing the project should have direct contact with those with authority to allocate funds. To assure project completion, provide project teams with support from managers and consultants with lean expertise
<i>Sustainability stage:</i> Accountability/ ownership/ Follow-up	The short daily and weekly briefing meetings where production workers presented their plans and accomplishments with managers, including those from the executive team, held project teams accountable. These regular briefings provided data on whether outcomes were achieved or not. Results of the lean efforts were not confined to business outcomes. Personal outcomes for employees were also recognized and communicated. For instance, employees had to learn, grow and become more competent to make the lean improvements. The employees experienced job enrichment, particularly for those who became lean interns.	It is important to put in place structures that hold employees accountable for their lean achievements. For instance, daily and weekly briefings could be held through all phases of a project including planning, implementation, and completion. This keeps managers engaged in all phases of the project. Actual project outcomes and accomplishments should be briefed. Results of lean efforts must be communicated and again, not confined to business outcomes but also include personal results for employees.

found in our case (column 2), and principles we propose (column 3) for each step of a successful and sustainable lean change.

Turesky and Connell explain that each of the variables in each phase of the above model interact with one another and that lean sustainability depends on the interplay of these variables. We were able to find evidence in the Ariens case for each of the factors affecting lean sustainability. Therefore, given the Ariens case is a “success story,”

the Ariens case provides confirmation for Turesky and Connell’s model. However, it is important to note that as we tried to use the model, we found evidence that some factors may simultaneously influence a change situation. This illustrates the complexity of a change process; it is possible to define theoretically distinct steps affecting change success, but, in reality, the change process is continuous and ongoing, not comprised of separate and distinct steps.



### **Methodological and epistemological considerations for case studies in change**

The reason we sought out and chose to study Ariens Company stemmed from our interest in successful lean enterprise change. We polled consultants and managers who identified Ariens Company as a potential case study based on it having made lean changes and its continued success. The difference in criteria for selecting case studies makes it difficult to compare Ariens and Environs. Yet, as scholars studying lean change using case studies to inform management practice and teaching, we share similar objectives with Turesky and Connell. We all seek to learn from our observations and data collection, to write descriptive case studies, and from our case study, to develop, test, and propose approaches that effectively guide organizational change. The important question is, "What can we draw from any one case study to guide other organizational changes?"

A case study is inherently limited in creating broad insights because of the problems created in generalizing beyond the specific context and factors in one setting to other settings. Case study scholars address this limitation by seeking a depth of understanding into the phenomena they study. This depth comes from a thick and rich description of what happened, often based on explanations from people and managers in the organization, the use of quantitative data, as well as commentary from the scholars observing and studying these changes. A case study gains validity in the eyes of its readers based on the writers' depth of description and insight into specific conditions, and the writers' credibility in providing plausible explanations for outcomes. The authors' attention to rich, thick description helps readers identify fundamental human behaviors and organization conditions. The insights revealed in any single case are applicable to other settings through identifying those basic human behaviors and then by proposing, because they have been shown to be so fundamental, that they extend to other settings.

Case studies are often used in developing new theory. Building from their depths of insight into fundamental behaviors, authors use their case study examples to develop and make the propositions that comprise a theory. By presenting what has happened, authors propose factors that influenced, or even caused, those outcomes. The complexity of the real world and multiple factors that can influence any outcome, however, limits claims for of causation. Instead, in developing

theory, what is proposed is based on other plausible explanations being ruled out by providing appropriate evidence, or, when quantitative information is available, ruling out rival hypotheses.

This epistemological view limits what can be learnt from any case study. The selection of a case study and its outcomes does, however, determine the claims that can be made for what was learnt. Case studies are often chosen, however, before outcomes are known. An important question to be considered is whether a successful change case study can be used to explain change failures, or if a failed change case study can upon which to base a model for successful change?

In our study of Ariens and other successful change cases, we are limited in the evidence that lets us explain how to avoid common failures. However, as we have shown, we can use the Ariens case to test and further develop Turesky and Connell's successful lean change model. We encourage Turesky and Connell to continue to write about Environs, and to particularly focus on how Environs deviated from their successful change model. They will have evidence to describe how the practices they observed, in each change model step, led to outcomes that fell short of managers' expectations. They might develop a model to help organizations and their leaders avoid the common failures for which they have evidence, or a model that has them wait to undertake lean change until they have created conditions that will avoid those failure factors.

### **Closing comments**

Given that more change efforts fail than succeed (Turesky and Connell's reference of Hoyte and Greenwood, 2007), it is a surprise that so few articles appear in our literature about failed change. Three decades ago, Phil Mirvis and David Berg, as Ph.D. students, asked why this was so and sought to produce a book on change failures. In compiling contributions, they recognized that sharing failures was a difficult personal and professional undertaking. Mirvis and Berg, who intended their edited book to be "an intervention in our field," noted that "we are nearly alone in this endeavor," and hoped "to be a part of a growing movement in this direction" (Mirvis and Berg, 1977: viii). Although logically we accept the idea that learning from failure as well as success are each desirable, in reality it is difficult to reflect on what went wrong and write about failure. Turesky and Connell have faced these difficulties in



writing about failure, and should be encouraged to continue to write about it, particularly at the moment when change seemed to be going well to when they realized that improvements could not be sustained.

As the rate of change in today's global business environment continues to increase, the questions "Why do our change efforts so frequently fail?" and "How do we anchor and sustain the changes we

accomplish?" has continued urgency. Not only do we need to be better at making changes, but we also need to develop the capacity to continue to change. Lean methods provide an approach to change, and continuing change. Turesky and Connell's change model proposes an approach to sustaining lean changes, and together the Ariens and Environs cases provide evidence for this model and suggest answers to these critical questions.

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