Industrial Leadership

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Katie came back to the old neighborhood with two pieces of news: she was engaged to be married and had been promoted to section leader in her company’s engineering division. When I tried to offer my best wishes for her promotion, she pursed her lips and quipped, “Shouldn’t you give me your condolences instead?”

I turned the conversation back to the news that made her happy—her engagement. I was confident in her leadership skills and fairly certain she was proud of the recognition she’d received. But her words made me question how we train our youngest engineers and prepare them for leadership.

In becoming a supervisor, Katie is moving into the awkward role of industrial leader—a position with one foot in the sea and the other on shore. She’ll no longer be a peer of her technical colleagues but also won’t be a peer of her supervisors, who are part of senior management. Under the best circumstances, she’ll feel pulled by both sides. Under the worst, she could feel the need to play traitor, trying to win the affection of each group by revealing the weaknesses of the other.

As a young engineer, I witnessed my own boss struggle with the role of technical leader when I shadowed him for a month. I was surprised to learn that he wasn’t completely honest with his former peers or his supervisors: among his supervisors, he would blame his problems on the technical staff; with his staff, he would attribute those problems to the failings of senior management. When I asked my boss about this discrepancy, he defended himself by claiming that his approach was the only way to do his job. “In the real world,” he said, “you have to do some things you don’t like.”

Everyone, at some point in life, is asked to choose between two different, sometimes opposing, points of view. The measure of leadership is how well you navigate this dilemma, which is common in technical fields.

The modern form of technical leadership emerged at the start of the 20th century. Before then, we had engineers who were technical leaders, but they were usually owners and senior managers as well. In the early 1900s, the various corporate roles started to split: owners no longer managed the companies, and senior managers no longer understood the technical details of production.

Early pioneers of industrial leadership recognized the anomalous nature of technical management. “To set proper tasks of any kind requires a high degree of knowledge,” wrote management consultant Henry Gantt in 1915, “much higher than most capable people in any work usually possess.”

These pioneers were generally associated with the scientific management movement—they had great faith that technology and the scientific method would produce better managers and organizations. Gantt asserted that our real challenge is to create a management system that reduces all decisions to figures, which would reveal the quality of decisions and be a “financial measure of the value of leadership.”

The scientific management movement never found the perfect way to quantify managerial decisions and value leadership. Although it provided the foundation for the field we now call project management, it did nothing to improve relations between engineers and workers or engineers and managers. If anything, it might have added new tension to those relationships.

Katie is likely anxious about her new position because she’s familiar with the tensions she’ll have to address and knows she’ll no longer be able to count on the unqualified support of her former peers. She’ll have to find a strategy to make the two sides work together. Although I’m confident that she’ll find the proper balance and enjoy her new position, we need to do a better job of helping young engineers prepare for these roles.

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