Academic Time and the Future of Radiology

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Some academic radiology departments are inadvertently undoing themselves and in the process pulling the field of radiology down with them. In the interests of increasing revenue and reducing costs, they are placing an ever increasing clinical workload on the shoulders of academic radiologists [1]. Some years ago, academic department chairs began to voice concerns about the amount of academic time traditionally afforded their faculty members. In economic terms, this time could be considered a fixed cost from which departments derived little or no marginal revenue. Chairs were asking themselves, “Why should I pay faculty members full-time salaries if they are clinically productive—and, by and large, financially productive—only 60% or 80% of the time?”

As a result, many academic radiology departments have migrated toward a model that more closely approximates community practice. More faculty members are being paid largely or even exclusively according to their clinical productivity. Those who seek higher levels of compensation and reward that represents the future of academic radiology and the entire field.

In a rapidly changing world in which radiology must innovate to compete effectively, academic radiology’s most precious long-term resource is not the clinical productivity of its practitioners. It is their imagination, their capacity to find both better ways of doing things and new and better things to do. A vision of merely generating more clinical revenue and reducing costs is not a truly academic vision. Any academic department devoted solely to such a vision represents a community practice that happens to be situated in an academic medical center. There is nothing ignoble about providing high-quality, cost-effective radiology services. In fact, this should be a goal of all radiology practices, academic as well as community-based. However, it is self-contradictory to extol the academic missions of education, research, and service while adopting systems of compensation and reward that focus exclusively on clinical productivity.

Such policies overlook the innovation-promoting policies and practices of many of the world’s most successful corporations. Unlike some academic radiology departments, top corporations realize that their performance is tied to investments in workers, especially those whose innovations are crucial to the organization. An academic radiologist I know is fond of likening radiologists to factory workers. In his mind, both radiologists and factory workers turn out their products a piece at a time, and such productivity is the means by which the organization generates revenue. A department’s mission, as he sees it, is to make its faculty members as clinically productive as possible, at least up to the point that perceptions of overwork begin to drive them away. In the ideal, he would like to see radiologists scheduled and compensated accordingly.

Likening the clinical operations of a radiology department to an assembly line might have seemed apt in the industrial age. But in the information age, when innovation is key to remaining strong, it distorts more than it reveals. Even the 20th-century champion of the assembly line, Henry Ford, was eventually forced to confront the limitations of his model. Once competitors had adopted his industrial techniques, Ford failed to respond to their innovations. For example, General Motors made automobiles available in colors other than black. Ford’s failure to respond nearly destroyed his company. If we allow an assembly-line model to dominate our field, radiol-
ogy’s capacity for continued innovation will diminish.

The moment we cease to innovate is the moment we begin to become obsolete. Yet we can innovate only if we have time and energy to do so. Other medical specialties are investing heavily in innovation. Residency and fellowship programs in fields such as internal medical and surgery include substantial research components. Once in academic practice, radiology faculty members were expected to devote substantial portions of their time to nonclinical activities. If this expectation fades, who will lead the way to new frontiers of medical imaging, such as cardiac magnetic resonance and computed tomography? Will it be clinically overworked academic radiologists, who lack the time and energy to conduct research in the field and develop new practice models? Or will it be other medical specialists, such as cardiologists, who are willing to invest the time to innovate?

How do great companies foster innovation by their employees? One of the 20th century’s most innovative corporations, 3M, developed a policy of permitting its scientists and engineers to devote a portion of their time to projects about which they were passionate [2]. During this time, usually 15% of their work week, they were free to do what interested them. No supervisor told them what they had to do. From a short-term perspective, such a policy seems ill advised, because it seems to take some of the most highly educated and expensive resources in the company out of the productivity loop. During that time, they seem not to be contributing to the bottom line, at least not as measured by the next quarterly profit-and-loss statement or annual report.

Yet some of the most important products in 3M’s history grew out of such discretionary time. In the 1920s, one of the company’s engineers chose to disobey a direct order to abandon a project to improve the process of painting automobiles. Carrying on with the project on his own time, he developed what came to be known as Scotch masking tape, one of the most successful products in the company’s history. From a short-term perspective, he seemed to be wasting time, but from a longer term perspective, he did far more than any of his supervisors to add value to the company and its customers. This and other examples prompted 3M’s leadership to make discretionary time an organizational policy for its research scientists. Over the years, discretionary time has produced a handsome return on investment.

Companies such as 3M not only encourage their employees to pursue their curiosity, they also work hard to ensure that the insights such projects spawn are shared throughout the organizations. It is not enough to produce great ideas. It is necessary to share them throughout an organization, so that people can learn from one another. At 3M, employees with discretionary time meet together to discuss their ideas for projects, provide updates, and monitor progress. When this happens, new sparks are ignited, and creative people fan one another’s flames. Moreover, the organization is better positioned to take advantage of new insights. If people in radiology departments meet regularly to talk with one another and work together as team members, they could devise more effective ways of carrying out their daily work, from scheduling patients, to developing and implementing new technologies, to improving the quality of education and research.

The annals of 3M furnish another notable example of the value of discretionary time. One researcher at the company was disappointed in a new adhesive he had developed, which seemed not to stick very well. Another researcher, however, was annoyed by the fact that pieces of paper he was using as bookmarks in church hymnals kept falling out, making it difficult for choir members to find their place during the service. The second researcher realized that the “defective” adhesive might be perfect for this purpose. The two researchers coated pieces of paper with the new adhesive and started using them, first at church and later around home and office. Soon, others were requesting their own supplies. Thus was born another of 3M’s most profitable products, Post-It Notes. Had the researchers confined their attention to what the company told them to do, the product would never have emerged. Because the company encouraged innovation, it did.

There are other benefits of discretionary time. First, it enhances recruiting. The most talented and capable people do not want to spend their lives working for an organization that tells them what to do every minute of the day. They expect to be creatively engaged in their work, to be solving problems, and to be developing new ways of doing things. They want the freedom to grow into the best professionals they are capable of becoming. To a prospective employee, a policy of discretionary time is an important indicator that such creativity is valued by the organization. It shows that the organization recognizes that its workers are the engines that make it run, rather than the converse. By contrast, an organization that merely offers more money may have problems that force it to pay more to attract labor.
Discretionary time also promotes both full engagement in work and organizational loyalty. Workers who think that their employers are counting on them to help shape the future of their fields are much more likely to find and seize new opportunities than workers in organizations who feel that they are treated as mere machines for grinding out production work. People who are under so much pressure to produce more work that they dare not think about anything else are unlikely to contribute creatively to the organization. And when a better offer comes along, promising either more money or more comfortable working conditions, they are likely to accept it. Because of a lack of intrinsic motivation, such people are more likely to burn out and retire sooner. It is easy to recognize when we are in the midst of such an organization, because people never get together to talk about their ideas.

Innovation takes time; specifically, time to talk and time to think. If the time to think is squeezed out of academic radiology, innovation will be squeezed out as well. If a department expects its faculty members to spend time on nonclinical pursuits and holds faculty members accountable for results over the long term, performance is likely to improve. Such an approach enables faculty members to incorporate new perspectives into their clinical work and to bring lessons from clinical work to other academic activities. Given the huge benefits of innovation, it is unsurprising to learn that Internet giant Google encourages its software engineers to devote 20% of their time to work-related projects they are passionate about and 10% of their time to anything they care to work on [3]. It is surprising, however, to learn that Google does not restrict this policy to engineers. In fact, its discretionary time policy applies not only to engineers but to all of its employees. In other words, the organization takes seriously the creative potential of every one of its workers. As expected, this makes it relatively easy for Google to attract and retain top talent. When Google interviews prospective employees, the discretionary time policy is one of the first things they ask about.

From a short-term perspective, discretionary time may seem a misallocation of resources. If the goal is merely to improve productivity and revenue in the next quarter, then increasing the proportion of time that radiologists spend on clinical work may seem the prudent policy. In fact, we can boost the bottom line even higher by simply reducing the number of radiologists. This cuts costs by dividing the same amount of work among a smaller pool of people. Longer term, however, radiologists who do nothing but sit in cubicles and interpret examinations will do little to secure radiology’s future. Moreover, how feasible is it be to recruit and retain radiologists in academics when (1) they work as hard as community practitioners and (2) they earn substantially less?

Certainly, radiologists need to be accountable for academic time. In this era of rapidly increasing clinical demands, no one is suggesting that academic departments simply issue their faculty members blank checks. Yet it would be equally foolhardy to indiscriminately reclaim as much nonclinical time as possible. Recognizing the threat posed by its erosion, astute leaders will seek out ways to enable academic radiologists to push the envelope of imaging science and technology, to enhance understanding and respect for radiology among physicians, and to develop the leadership capacities on which radiology’s future success will depend. Doing so is one of the best investments any academic department can make.

REFERENCES


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