

## The Physicists' Leadership Role in Academic Radiology:

### *The Chair's Perspective*

Ronald Arenson, MD

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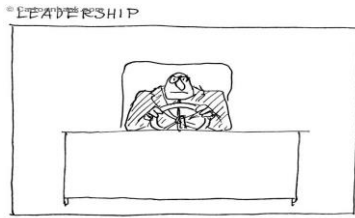
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## What Is Leadership?



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## Definition of Leader

- "The ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organizations of which they are members"
- "One who, or that which, leads or conducts; a guide; a conductor. Especially:
  - (a) One who goes first
  - (b) One having authority to direct; a chief; a commander"

Wiktionary.org

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## True Leadership

- Only exists if people follow when they have the freedom not to
- Holding a gun to someone's head will get results, but that is not leadership

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"I've called this meeting to discuss absenteeism."

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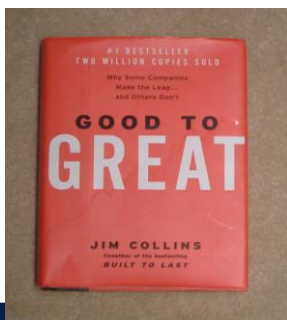
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### Premise of Book

- Handful of US companies have performed far better than others in their same industries (sustained performance)
- Analysis to determine if there are similar traits among the great companies
- A sequel dealt with the social sectors and explained the differences
- Hypothesis was that leadership was not a dominant factor

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### Five Levels of Leadership Hierarchy

- 5 - Level 5 executive
- 4 - Effective leader
- 3 - Competent Manager
- 2 - Contributing Team Member
- 1 - Highly capable individual

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### Level 5 Executive

- "Self-effacing, quiet, reserved, even shy - these leaders are a paradoxical blend of personal humility and professional will. They are more like Lincoln and Socrates than Patton or Caesar."
- Not individuals who seek headlines or full of bravado, not larger-than-life egocentrics, more plow horse than show horse
- Place the welfare of the company before personal gain
- Combination of humility and will, often insiders, credit others with success
- Leadership transitions often quiet, planned

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## Discipline and Greatness

- Disciplined people engage in disciplined thought and take disciplined action
- A culture of discipline is not a principle of business - it is a principle of greatness
- Great companies depend on self-motivated and self-disciplined individuals rather than using incentives to motivate or get results

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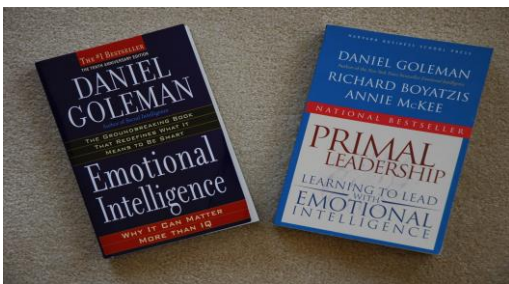
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## Emotional Intelligence

- Daniel Goleman
  - “Emotional Intelligence”
  - “Primal Leadership”
- Considered more important than technical skills or I.Q.
- Very well correlated with leadership success

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## Primal Leadership

- “Fundamental task of leaders is to prime good feelings in those they lead”
- Creates resonance, a reservoir of positivity
- Demands we bring emotional intelligence to bear
- Primal - first - both the original and the most important acts of leadership

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## Resonant Leadership

- “Synchronous vibration”
- On the same wavelength
- Discordant leader lacks harmony with others
- Emotionally intelligent leaders build resonance by tuning into others’ feelings as well as into their own

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## What Should We Look For?

- Level 5 characteristics - humility, puts organization first, focuses on right people, rigorous, not ruthless, disciplined, passionate
- Emotional Intelligence - gut sense, self- confidence, self-control, trustworthiness, flexibility, high standards, initiative, optimism, empathy, nurturing, maturity, motivation, vision
- Apply these traits to departmental leadership
  - How do physicists with these characteristics fit in Radiology leadership?

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## Roles for Physicists in Radiology

- Basic and applied research
- Physics oversight for medical center
- Capital equipment selection
- Quality and Safety
- Facilities renovation and design
- Physics Education for trainees
- Faculty mentoring
- Departmental leadership group

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## Academic Radiology Leadership

- Productive academic radiology departments foster a positive environment where radiologists and physicists work together on common goals in research, clinical care, and education
- Physicists have a leadership role in creating this productive milieu
- Successful academic departments depend on physicist leaders to guide the direction of the department

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## Relationship with Radiologists

- Partners in research and teaching
- Collaborators in research
- Leaders for research groups and shaping the direction of research
- Working rapport in clinical operation
  - Lead Image quality improvement
  - Major contributor to safety, efficacy and overall quality
- Teachers for faculty, trainees and staff
- The chief physicist needs to be in leadership position in department

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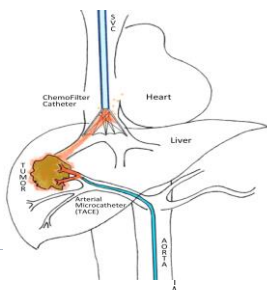
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Schematic illustrating TACE procedure with ChemoFilter catheter. From a percutaneous femoral approach, a microcatheter is guided through the aorta into the arteries feeding the liver tumor to directly inject Dox (TACE procedure). From a percutaneous jugular approach, the ChemoFilter device is guided through the SVC and deployed in the veins draining the liver.



Investigators: Hetts, Patel, Wilson, Saeed, Yang, Lilaney, Chin, Yang, Sze, Aboian

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## Robert Gould, ScD



Vice-chair for Technology and Capital Projects, Radiology and Biomedical Imaging, UCSF

Third Vice President, RSNA  
Chairman of Board, AAPM  
President, AAPM



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## At UCSF, Bob Gould's Roles

- Vice-chair for Technology and Capital Projects
- Kitchen Cabinet, Executive Committee
  - Presents at every faculty meeting and executive committee meeting
- Director of PACS
- In charge of Physics support for Medical Center and department including radiation safety
- In charge of fluoro license training for medical center
- In charge of projects, facilities and equipment
- Serves on medical center capital budget committee
- Serves on Radiation protection for campus
- Physics research and collaboration with others
- Basic physics Education for trainees



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## Physicists or other PhD Scientists at UCSF

- Co-chair with radiologists Research Interest Groups
- Run the research labs including cyclotron
- Run Master's program in Imaging – Alastair Martin and David Saloner
- Support graduate program and post-docs in Bioengineering – joint program with Berkeley
  - Major leadership positions
- On steering committee for Cancer Center (Imaging) – Sarah Nelson
- Chaired department with School of Pharmacy – Sarah Nelson
- Vice-chair for Research (also on KC and executive committee) – Sharmila Majumdar
- Lead physics and radiation training for residents, fellows, grad students, post-docs and masters' students

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## Musculoskeletal Research Interest Group



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## Leadership Summary

- Leadership is far more than IQ and technical skills
- Emotional Intelligence key to successful leadership
- Important lessons from "Good to Great"
- Much of leadership can be learned

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## Summary

- Physicists should be major leaders in Radiology department
- Cover the three missions – clinical, research, education
  - Major leadership role in each
- Expertise in equipment, facilities, radiation, measurement / statistics, design, implementation, monitoring, safety, quality
- Essential role in faculty mentoring & support
- Physicist leaders need the same leadership characteristics as radiologists or administrators

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