



**ASSOCIATION OF
UNIVERSITY RADIOLOGISTS**

2023 Academic Faculty Development Program

April 28, 2023

2023 AUR ACADEMIC FACULTY DEVELOPMENT PROGRAM

AUR 71st Annual Meeting

JW Marriott

Austin, Texas

Room 203-204

Friday, April 28, 7:15 am – 4:30 pm

7:15 am - 7:30 am	Welcome <i>Program Chair: Richard B. Gunderman, MD, PhD, FAUR</i>
7:30 am - 8:00 am	Education in Radiology: 7 Habits for Excellence <i>Brandon P. Brown, MD</i>
8:00 am - 8:30 am	Exceling at Research <i>Richard B. Gunderman, MD, PhD, FAUR</i>
8:30 am - 9:30 am	Chair Roundtable: How a Chair Can Help Your Career <i>Moderator: N. Reed Dunnick, MD</i> <i>Panelists: Jennifer Harvey, MD; Thomas Grist, MD; Susan John, MD</i>
9:30 am – 10:00 am	Habits of Highly Effective Mentees <i>Monica Sheth, MD</i>
10:00 am – 10:45 am	Break-out Session #1
10:45 am – 11:30 am	Break-out Session #2
11:45 am - 1:15 pm	Lunch and Keynote: We Come to Life with Those We Serve <i>Richard B. Gunderman, MD, PhD, FAUR</i> <i>Room 201-202</i>
1:15 pm - 1:45 pm	Technology Development in Radiology <i>Srini Tridandapani, MD, PhD, FAUR</i>
1:45 pm - 2:15 pm	Cross Generational Learning <i>Sherry S. Wang, MBBS</i>
2:15 pm - 2:30 pm	Break
2:30 pm - 3:30 pm	Mid-Career Roundtable: How to Attain and Maintain Academic Productivity <i>Moderator: Richard B. Gunderman, MD, PhD, FAUR</i> <i>Panelist: Jessica B. Robbins, MD</i>
3:30 pm – 4:30 pm	Putting It All Together: The Pursuit of Excellence <i>Richard B. Gunderman, MD, PhD, FAUR</i>

**2023 AUR Academic Faculty Development Program
Small Group Break-out Sessions**

Session:

Moving Up the Ladder
Room 203-204

Growing as a Leader
Room 207

Women in Academic Radiology
Room 208

Research in Academic Radiology
Room 209

How to Get Promoted as an Educator
Room 213

Moderator:

Brandon P. Brown, MD, MA

Richard B. Gunderman, MD, PhD, FAUR

Sherry S. Wang, MBBS

Srini Tridandapani, MD, PhD, FAUR

Felix S. Chew, MD, MBA

Breakout Session #1 (10:00 - 10:45 AM)

Moving Up the Ladder – Moderator: Brandon P. Brown, MD, MA	Growing as a Leader – Moderator: Richard B. Gunderman, MD, PhD	Women in Academic Radiology – Moderators: Sherry S. Wang, MBBS	Research in Academic Radiology – Moderator: Srin Tridandapani, MD, PhD	How to Get Promoted as an Educator – Moderator: Felix S. Chew, MD, MBA
Dr. Aswani	Dr. Chan	Dr. Ambinder	Dr. Aquino	Dr. Cheng
Dr. Barkovich	Dr. DeSimone	Dr. Barton	Dr. Bass	Dr. Kafer
Dr. Buckley	Dr. Lamparello	Dr. Bulman	Dr. Bulut	Dr. Nahab
Dr. Elman	Dr. Li	Dr. Lowell	Dr. French	Dr. Negrete
Dr. Franquet Elia	Dr. McLaren	Dr. Marchak	Dr. Kozak	Dr. Trenbeath
Dr. Kuoy	Dr. Mian	Dr. Pasternak Wise	Dr. Pirasteh	Dr. White
Dr. Sakthivel	Dr. Vickery	Dr. Taylor	Dr. Pluguez-Turull	Dr. Zhu

Breakout Session #2 (10:45 - 11:30 AM)

Moving Up the Ladder – Moderator: Brandon P. Brown, MD, MA	Growing as a Leader – Moderator: Richard B. Gunderman, MD, PhD	Women in Academic Radiology – Moderators: Sherry S. Wang, MBBS	Research in Academic Radiology – Moderator: Srin Tridandapani, MD, PhD	How to Get Promoted as an Educator – Moderator: Felix S. Chew, MD, MBA
Dr. Bulut	Dr. Elman	Dr. Chan	Dr. Taylor	Dr. Kozak
Dr. Barton	Dr. Barkovich	Dr. Buckley	Dr. Cheng	Dr. Kuoy
Dr. White	Dr. Sakthivel	Dr. Li	Dr. Pasternak Wise	Dr. Lowell
Dr. French	Dr. Pirasteh	Dr. Lamparello	Dr. Bulman	Dr. Marchak
Dr. DeSimone	Dr. Franquet Elia	Dr. Kafer	Dr. Ambinder	Dr. McLaren
Dr. Zhu	Dr. Trenbeath	Dr. Negrete	Dr. Nahab	Dr. Pluguez-Turull
Dr. Aquino	Dr. Aswani	Dr. Bass	Dr. Mian	Dr. Vickery

2023 AUR Faculty Development Participant Roster

Emily Ambinder, MD, MS
Johns Hopkins
Radiology

Anthony Aquino, MD
The Ohio State University Wexner Medical
Center
Department of Radiology

Yashant Aswani, MBBS, MD, DNB
University of Iowa Hospitals and Clinics
Radiology

Matthew J. Barkovich, MD
University of California, San Francisco
Radiology and Biomedical Imaging

Katherine E. Barton, MD
Oregon Health & Science University (OHSU)
Diagnostic Radiology

Rachel Z. Bass, MD
University of Alabama at Birmingham
Radiology

Ariana Buckley, MD
Washington University in St. Louis
Breast Imaging

Julie C. Bulman, MD
Beth Israel Deaconess Medical Center
Radiology

Ozden Bulut, MD
Tufts Medical Center
Radiology

Tiffany L. Chan, MD
UCLA
Radiology

Katherine A Cheng, MD
Duke University Hospital
Cardiothoracic Imaging

Ariadne K. DeSimone, MD, MPH
Brigham and Women's Hospital/Harvard
Medical School
Radiology

Shana Elman, MD
University of New Mexico
Radiology

Elisa Franquet Elia, MD
UMass Memorial Medical Center
Radiology

Robert J. French, MD
Duke University
Radiology

Ilana Kafer, MD
University of Colorado
Radiology

Benjamin Kozak, MD
Massachusetts General Hospital
Neuroradiology

Edward Kuoy, MD
University of California, Irvine
Radiology

Nicole A. Lamparello, MD
Weill Cornell Medical Center
Radiology

Qiubai Li, MD
University Hospitals Cleveland Medical Center
Case Western Reserve University School of
Medicine
Radiology

Dorothy A. Lowell, MD
Duke University School of Medicine
Diagnostic Radiology - Breast Imaging

Katherine S. Marchak, MD
University of Colorado
Interventional Radiology

Thomas A. McLaren, MD
Vanderbilt University Medical Center
Radiology and Radiological Sciences

Ali Y. Mian, MD
Washington University School of Medicine
Mallinckrodt Institute of Radiology
Neuroradiology

Bashar Nahab, MD, MS
University of Cincinnati
Radiology

Lindsey M. Negrete, MD
Stanford University
Radiology

Olga Pasternak Wise, MD, MS
University of Chicago
Neuroradiology

Ali Pirasteh, MD
University of Wisconsin-Madison
Radiology

Cedric W. Pluguez-Turull, MD
University of Miami
Radiology

Muthu Kumar Sakthivel, MD
University of North Carolina at Chapel Hill
Radiology

Nucharin Supakul, MD
Indiana University School of Medicine
Radiology and Imaging Science

Charlotte S. Taylor, MD
University of Mississippi Medical Center
Radiology

Zachary T. Trenbreath, MD
Children's Hospital Colorado
Pediatric Radiology

Matthew R. Vickery, MD
The Medical College of Wisconsin
Radiology

Carissa M. White, MD
Penn State Hershey
Radiology

Grace G. Zhu, MD
University of Utah Health
Radiology, Abdominal Imaging

2023 AUR Faculty Development Program Faculty Roster

Brandon P. Brown, MD
Dept of Radiology & Imaging Sciences
Indiana University School of Medicine

Felix S. Chew, MD
Dept of Radiology
University of Washington

N. Reed Dunnick, MD, FAUR
Dept of Radiology
Michigan Medicine

Richard B. Gunderman, MD, PhD, FAUR
Dept of Radiology
Riley Hospital for Children

Thomas M. Grist, MD
University of Wisconsin
School of Medicine & Public Health

Jennifer A. Harvey, MD
Dept of Radiology
University of Imaging Sciences

Jessica B. Robbins, MD, FAUR
Dept of Radiology
University of Wisconsin

Monica M. Sheth, MD
NYU – Langone Health

Srini Tridandapani, MD, PhD, MBA, FAUR
The University of Alabama at Birmingham

Sherry S. Wang, MBBS
University of Utah

BIOSKETCH – Brandon P. Brown, MD, MA

Brandon Brown completed his MD and MA as part of a joint degree program in philosophy and medicine at Indiana University. He is Vice-Chair for Faculty Affairs, Professional Development, and Wellness for the Department of Radiology and Imaging Sciences at Indiana University School of Medicine. He also serves as Chief of Fetal and Perinatal Imaging for Indiana University Health. His research is focused on fetal and placental imaging, and he is one of the directors of the Fetal Center at Riley Children's Health in Indianapolis, IN

Dr. Brown has served as chair of the RSNA Professionalism Committee and chair of the Professionalism Committee for the Society for Pediatric Radiology, and he was the 2018/2019 ARRS Berlin Scholar in Medical Professionalism. He is on the Board of Directors for the Society for Pediatric Radiology and the Association of University Radiologists.

BIOSKETCH – Felix S. Chew, MD, MBA, FACR

Felix S. Chew received his AB from Princeton University, Princeton NJ, and his MD from the University of Florida School of Medicine, Gainesville FL. After completing his first year of diagnostic radiology residency at the University of Florida, Dr. Chew served on active duty as a general medical officer in the US Army Medical Corps. Returning to civilian life, he completed his diagnostic radiology residency in 1987 at SUNY Upstate Medical University, Syracuse NY, and served as Chief Resident. He became interested in medical editing during his service as the first ARRS Figley Fellow, and earned an EdM at the Harvard University while serving as the first ARRS Scholar. The MBA at Duke University was completed later. After faculty appointments at Upstate, Massachusetts General Hospital and Harvard Medical School, and Wake Forest University School of Medicine, Dr. Chew accepted his current position as Professor of Musculoskeletal Radiology at the University of Washington School of Medicine in 2004. His textbooks for residents include *Broken Bones: The Radiologic Atlas of Fractures and Dislocations*, and *Musculoskeletal Imaging: The Essentials*. He serves as editor-in-chief of *Contemporary Diagnostic Radiology* and of *Radiology Case Reports*. Dr. Chew is a past president and gold medalist of the Association of University Radiologists.

BIOSKETCH – N. Reed Dunnick, MD

After completing a residency in Diagnostic Radiology at Stanford University, Dr. Dunnick moved to the NIH as a staff radiologist, where he developed an interest in genitourinary tract radiology. He spent 11 years on the faculty at Duke University before moving to Ann Arbor in 1992 to become the Fred Jenner Hodges Professor and Chair of the Department of Radiology at the University of Michigan. After 26 years, he stepped down as Chair and remains an active faculty focusing on professional development and imaging research.

Dr. Dunnick has written 359 scientific papers, 62 book chapters, and 11 books on various aspects of radiology, especially diagnostic oncology, Uroradiology, and more recently, administration. He has served as Visiting Professor to 85 medical centers, as a guest faculty for 501 continuing medical education courses and delivered 30 named lectures. He has served on the editorial boards of 13 peer review journals, and is currently the Editor-in-Chief for Academic Radiology.

Throughout his career, Dr. Dunnick has been an active participant in professional radiology organizations. He has served as President of his two subspecialty societies, the Society of Uroradiology and the Society of Computed Body Tomography/Magnetic Resonance. He is a past President of the American Roentgen Ray Society, the Michigan Radiological Society, the American Board of Radiology, the Association of University Radiologists, the Radiology Research Alliance, the Society of Chairs of Academic Radiology Departments (SCARD) and the Radiological Society of North America (RSNA). He recently completed his term as Chair of the Board of Trustees of the RSNA Research and Education Foundation.

A strong advocate for research, Dr. Dunnick is a Past President of the Academy for Radiology Research. He had the privilege of testifying before Congress on the need to establish a new institute, which was signed into law as the National Institute of Biomedical Imaging and Bioengineering by President Clinton on December 29, 2000.

BIOSKETCH – Thomas M. Grist, MD, FACR

I am currently the John H. Juhl Professor of Radiology, Medical Physics and Bioengineering and Chair of the Department of Radiology at the University of Wisconsin-Madison. I am a Cardiovascular Imaging Radiologist with more than 30 years of experience in using novel imaging technologies to improve human health in patients with cardiovascular disorders. I have worked to develop many novel imaging techniques, especially in cardiovascular MRI, to improve our ability to diagnose and treat these disorders. More recently, as Department Chair and Principal Investigator on our UW/GE partnership, I have worked to bring state-of-the-art technology in CT, PET/CT, MRI, Ultrasound, X-ray and MRI PET to the University of Wisconsin Imaging Sciences Center within the Wisconsin Institute for Medical Research. I recruit, develop, and retain talented faculty and staff to leverage these resources and use advanced imaging techniques they develop to improve human health.

BIOSKETCH – Richard B. Gunderman, MD, PhD, FAUR

Richard Gunderman is Chancellor's Professor of Radiology, Pediatrics, Medical Education, Philosophy, Liberal Arts, Philanthropy, and Medical Humanities and Health Studies at Indiana University, where he also serves as Bicentennial Professor and John A. Campbell Professor of Radiology. He received his AB Summa Cum Laude from Wabash College, MD and PhD (Committee on Social Thought) with honors from the University of Chicago, and MPH from Indiana University. He was a Chancellor Scholar of the Federal Republic of Germany and received honorary doctoral degrees from Garrett Theological Seminary at Northwestern University and Wabash College. He is a ten-time recipient of the Indiana University Trustees Teaching Award, and in 2015 received the Indiana University School of Medicine's inaugural Inspirational Educator Award. He was named the 2008 Outstanding Educator by the Radiological Society of North America, the 2011 American Roentgen Ray Society Berlin Scholar in Professionalism, and the 2012 Distinguished Educator of the American Roentgen Ray Society. In 2012, he received the Alpha Omega Alpha Robert J. Glaser Award for Teaching Excellence, the top teaching award from the Association of American Medical Colleges. In 2013, he was the Spinoza Professor at the University of Amsterdam. He is the author of 900 articles and has published 15 books, including *We Make a Life by What We Give* (2008), *X-ray Vision* (2013), *Essential Radiology* (3rd edition), *Pediatric Imaging* (2nd Edition), *Tesla* (2019), *Marie Curie* (2020), and *Contagion* (2021). His book, *Man Descending: Eugenics in the Heartland* will be published in 2022.

BIOSKETCH – Jennifer Harvey, MD

Dr. Jennifer Harvey is the Dr. Stanley M. Rogoff & Dr. Raymond Gramiak Professor and Chair of Imaging Sciences at the University of Rochester. At URMIC, she serves as Chair of the URMFG Finance Committee, and is a member of the URMFG Executive Committee and Medical Center Board. She previously served as Professor of Radiology at the University of Virginia Health System where she led the division of Breast Imaging and the Breast Care Program, as well as Vice-Chair for Education and Faculty Development. She has held numerous leadership positions with the ABR, RSNA, and SBI. Her research interest is the association of mammographic density and breast cancer risk as well as predication of breast cancer risk through modeling. She has more than 85 peer reviewed publications and has given national and international invited lectures at more than 100 meetings. She is also the breast section head at the AIRP and the founding editor-in-chief of the *Journal of Breast Imaging*. Her book, "Making the Diagnosis: A Practical Approach to Breast Imaging" has sold more than 1500 copies and has been translated into 4 different languages.

BIOSKETCH – Susan D. John, MD

Susan D. John, MD, is Professor with Tenure of Radiology and Pediatrics and Chair of the Department of Diagnostic and Interventional Imaging at the University of Texas McGovern Medical School at Houston. She is Chief of Adult and Pediatric Imaging Services at Memorial Hermann Hospital TMC, Children's Memorial Hermann Hospital and Lyndon B. Johnson General Hospital in Houston, Texas. She holds the John S. Dunn Distinguished Chair in Radiology at UT McGovern Medical School Houston since 2004.

Dr. John is a renowned educator in the subspecialty of Pediatric Radiology. She authored and co-authored more than 100 journal articles, books, and book chapters and is a popular speaker on pediatric imaging at professional society meetings and educational courses. Dr. John's scholarly contributions primarily involve emergency pediatric imaging, and she is a passionate advocate for personalized care in Radiology.

BIOSKETCH – Jessica B. Robbins, MD, FAUR

Dr. Robbins is a Professor in the abdominal imaging section and the Vice Chair of Faculty Development and Enrichment in the Department of Radiology at the University of Wisconsin School of Medicine and Public Health. Her professional interests include advocacy for diversity and inclusion efforts in radiology, gender equity, and leadership development and her research interests focus on benign and oncologic gynecologic imaging.

BIOSKETCH – Monica M. Sheth, MD

Dr. Monica Sheth, M.D. is Associate Professor of Radiology at NYU Langone Health Long Island Hospital where she also serves as Section Co-leader of Breast Imaging for the Long Island Division. She is a board-certified and fellowship trained breast imaging radiologist and national leader in radiology education with expertise in innovations in education and curriculum design. Her educational contributions have been recognized with the RSNA Honored Educator Award and AUR Whitley Award for best manuscript in radiology education. She holds several local and national leadership appointments including Breast Imaging Section Editor of RadExam (national radiology question database), Breast Imaging Deputy Editor for Academic Radiology, and Medical Advisor for Radiologyinfo.org.

Dr. Sheth is a graduate of the Emory School of Medicine and completed diagnostic radiology residency at Yale New Haven Hospital, where she served as chief resident. She completed a fellowship in breast and body imaging at Weill-Cornell New York Presbyterian Hospital. Outside of work, she enjoys photography, peloton runs, and spending time with her husband and three kids.

BIOSKETCH – Srini Tridandapani, MD, PhD, MBA, FAUR

Srini Tridandapani is a Professor and Vice Chair for Imaging Informatics at University of Alabama, Birmingham, and an Adjunct Professor in the School of Electrical and Computer Engineering at Georgia Institute of Technology. He earned his MSEE and PHD degrees in Electrical Engineering from the University of Washington and then served as a tenure-track faculty member in Electrical Engineering at Iowa State University. Not satisfied with his engineering training, he then took the bold plunge into medical school and earned his MD and residency training in Radiology at the University of Michigan. He then completed fellowships in cardiothoracic imaging and abdominal imaging at Emory University, where he served as a faculty member for over a decade. While serving as a faculty member, he earned his MSCR (Clinical and Translational Research) and MBA degrees from Emory University. Dr. Tridandapani was funded by KL2 and K23 grants in addition to the American Roentgen Ray Scholarship. Most recently his work through his start-up company, Camerad Technologies, has been funded by both the NIH and NSF through SBIR grants. His research interests are in the development of 1) novel gating strategies for coronary CTA, and 2) technologies for improving quality and safety in radiology.

BIOSKETCH – Sherry S. Wang, MBBS

I am a Senior Associate Consultant at Mayo Clinic, Rochester. I trained in Australia for my radiology residency and then subsequently completed my fellowship at the University of Washington, Seattle in body imaging. I am passionate about diversity, equity, inclusion, and belonging, as well as radiology education. In my "spare" time, I like spending it with my toddler who is my burnout-buster. My favorite quote currently is - "Fear is a reaction and courage is a choice" from Sir Winston Churchill.

Careerism in Radiology

Richard B. Gunderman, MD, PhD, Frank J. Lexa, MD, MBA

“In order to move up, you must move laterally.” This piece of advice was first shared with us early in our careers and often since. Taken at face value, it means that if you want to get promoted quickly and move up the echelons of the organization chart of a radiology department, hospital, medical school, or health system, you must be prepared to move from organization to organization, negotiating for promotions at each transition.

This attitude, common in the corporate world, has infected a large part of the radiology community, particularly its more ambitious denizens. We know of people who, after moving from one institution to another, often wait only a year or two before they start circulating their curricula vitae in hopes of moving on to an even greener pasture. If you listen to them when they are being candid about their careers, they view each organization as a stepping-stone to a yet higher station.

Unfortunately, this kind of self-interested careerism takes a toll not only on the organizations at which these individuals spend a few years before moving onward and upward, but also on the careerists themselves, many of whom are unable to find any real satisfaction in the roles they play at any particular time. They are so busy planning their next move that,

except for burnishing their curricula vitae, they pay relatively little attention to the culture they are working in and the people who inhabit it.

The first problem with this careerist attitude is the implicit assumption that you can gauge the quality or importance of the work someone does by the title they hold. On this assumption, a dean is more important than a department chair, a department chair is more important than a full professor, a full professor is more important than an associate professor, and so on. In fact, however, titles provide little insight into the quality or importance of the work people do.

It is infrequent that the most important work in an organization is being done by the chief administrators, and this is especially true of the organizations in which particularly deep, complicated, and innovative work is being done. Administrators spend a great deal of their time administrating, which leaves relatively little time for truly creative work. It is important that good people serve in these roles, but this is largely because it minimizes the harm that bad administration would do.

The same can be said of academic rank. Often the most important work in a department is done not by the most senior faculty members, but by those at

more junior stages of their careers. They often see things with the freshest eyes and, because of a combination of promotion and tenure policies and a desire to make their mark, they often feel the strongest urge to produce something of note in a short period of time.

Another problem with the careerist perspective is the damage it can inflict on the organizations through which careerists pass. Because careerists have no real interest or loyalty toward the people or culture they work with at any particular time—they are prepared to leave the moment a better opportunity comes along—they tend to devote the bulk of their attention to things they can easily detach from, the sorts of things that are often taught in schools of management.

For example, careerists have often pursued advanced management training such as a master's of business administration (MBA) degree relatively early in their career, thinking that by learning accounting, finance, and strategic planning, they will rapidly be able to add value to any organization they join. They think that management is a “science” that they can learn just like chemistry and that its principles apply invariably across the board in every organization. This is a simplistic approach to adding real value.

In fact, however, every institution is different from every other. Each organization has its own traditions, aspirations, and people. An organization is not just a machine composed of interchangeable parts. It is also an organism, with its own heart and soul. To serve the organization effectively, it is necessary not only to take charge of it but to know it. To suppose that every radiology department, hospital, or medical school is fundamentally the same is to fail to know what they really are.

Such careerists, particularly those with advanced training in management, will often speak in very analytic terms, waxing eloquent about the need for “metrics,” developing more robust “measures,” and holding people accountable for “meeting their numbers.” They love to talk about the “bottom line.” Partly by birth and partly by training, they come to see the world itself and the organizations and people who make it up as primarily quantitative phenomena.

The problem, of course, is that many features of an organization resist quantification—most prominently, the people who make up the organization. Because the careerist is so keen to make numbers and improve the bottom line, an organization led by a careerist tends to become increasingly focused on metrics and increasingly blind to people. The organization begins putting other things before people, and when this happens, it begins to use rather than care about its most precious resource.

A similar shift takes place with respect to temporal outlook. Because the careerist does not intend to be around for long—and

in fact, remaining on site for more than 3 to 5 years would seem a sign of failure—the organization begins to think on a time horizon of a few years or even months. The emphasis is on getting results now. When this happens, the organization begins chewing up the people who make it up, in effect consuming its seed corn.

The antidote to careerism is simple in theory but difficult to implement in practice. The first step in turning things around is to recognize the importance of deep knowledge about an organization, its people, and its relationships with other organizations. No one can learn in a year or 18 months what it takes to serve an organization effectively as a leader. The key qualification is not an academic degree but substantial real-world experience within the organization.

This is one of the most important problems with MBA programs. The presumption is that they can teach a skill set that can be transferred easily from sector to sector, culture to culture, and organization to organization. In fact, however, many graduates of the nation’s top MBA programs do not go on to serve any particular organization for a long period of time. Instead, they go into consulting, moving from organization to organization every few months or years and never attaining deep knowledge.

They are immersed in a kind of stranger leadership, one premised on the misguided notion that everything important to know about an organization can be gleaned from extensive data acquisition and analysis. Yet people and relationships cannot be adequately described, let alone understood, in

purely analytic terms. To know people, relationships, and organizations deeply, there is no substitute for the experience born only of dedication.

Many MBA-toting careerists have been brought up on a steady diet of cases. They think that because they have read two dozen pages describing a real-world business situation, they know what real-world business is like. In fact, however, most case studies are written by business school professors who have an ax to grind. Moreover, such case studies almost never provide a rich description of what it is like to work in the organization and what the organization really stands for.

For example, business school case studies tend to portray reality in economic terms, when in fact economics is only a small part of the life of any organization, including a business. People come to work to make money, but many other reasons are also in play, such as the desire to build collegial relationships, do challenging work, grow as a professional and a person, and make a difference in the community. A narrow focus on economics naturally augments careerism.

Careerists can be difficult to spot, but there is one sure sign. Even though they know they should not, they will soon begin describing the organization’s situation as a crisis and outlining their own solutions in revolutionary terms. The implicit assumption? The organization is crashing and needs someone to rescue it from disaster. Only when people believe the organization is doing fundamentally good work will the opportunities for careerism remain sufficiently circumscribed.

To fix the problem, we need to thoroughly examine the benefits, risks, and costs of itinerant leadership, and in particular the toll taken by leaders who have no enduring commitment to either the organization or its people. Being a physician and successfully contributing to organizations and communities requires a level and length of commitment that is inconsistent with the careerist's short game. We need more people who operate with a wider, deeper, and longer-term commitment.

Richard B. Gunderman, MD, PhD, is from the Department of Radiology, Indiana University, Indianapolis, Indiana. Frank J. Lexa, MD, MBA, is from the Wharton School of Business, University of Pennsylvania, Philadelphia, Pennsylvania.

The authors have no conflicts of interest related to the material discussed in this article.

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Failing Up: Charles Dotter, the Father of Interventional Medicine

Clayton P. Taylor, BS, Richard B. Gunderman, MD, PhD

Few figures in the history of US radiology understood the strategy of “failing up” better than Charles Dotter, MD. A chain smoker, Dotter was an adventurer who climbed all 67 US peaks higher than 14,000 feet. Treated twice for Hodgkin lymphoma, he celebrated his first remission by climbing the Matterhorn without a guide at the age of 50 years. And despite many years of difficulty garnering the support of his US colleagues for his innovations, Dotter persevered and eventually became recognized as the “father of interventional medicine.”

Some of the resistance Dotter encountered was self-generated. One of his junior associates and a key angiographic innovator in his own right, Melvin Judkins, acknowledged that Dotter was frequently referred to as “Crazy Charlie.” Dotter himself admitted as much, saying that in the early days, “I had to accept a lot of unpleasant backbiting, such as ‘He’s a nut, you can’t trust his uncontrolled, poorly documented case experience,’ and worse.” Yet Dotter persevered, later saying, “I’m glad I was thick skinned enough to stick with it” [1].

Born in Boston in 1920, Dotter was raised on Long Island [2]. His father was a stock trader and his mother an aspiring actress, a pedigree reflected in his own career: he made himself independently wealthy speculating in gold and silver as a young man, and he retained a flair

for the dramatic his entire life. He attended Duke University as an undergraduate, earned his medical degree at Cornell, completed an internship at a New York naval hospital, and then joined Cornell’s faculty in 1950. In just two years, he left to become chair of radiology at Oregon at the age of 32, a post he would hold for 33 years.

By the time Dotter had been at Oregon for a decade, he had authored well over 100 articles focusing on imaging of the cardiovascular system. At the 1963 annual meeting of the RSNA in Chicago, Bill Cook, the founder of medical device manufacturer Cook, Inc, was demonstrating his wares—a blowtorch, wire guides, catheters, and needles—to a group of radiologists. He noticed a short, wiry man at the back, whose darting eyes made him stand out. That man, of course, was Dotter.

At the end of Cook’s presentation, Dotter approached him and, after introductions, asked if he could borrow some of Cook’s equipment for the night. At the time, Cook wondered whether he would ever see his wares again, but Dotter returned first thing the next morning bearing not only Cook’s equipment but also 10 perfectly formed catheters that Cook went on to sell at the meeting for \$10 each, almost enough to cover his exhibit fee for the meeting. Dotter suggested that Cook visit his laboratory in Portland, and when Cook

regretfully admitted that he couldn’t afford the trip, Dotter paid his expenses.

That same year Dotter had been investigating the possibility of opening stenosed arteries through endovascular dilation [3]. Dotter shared the work he was doing with Cook, who developed and marketed the first Dotter dilation set. The innovation would soon bear fruit. Early in 1964, Dotter was asked to perform a diagnostic angiogram on an 82-year-old woman with claudication at rest and foot ulcers who was resisting her physicians’ recommendations for amputation. When Dotter found just a short-segment-proximal femoral stenosis, he dilated it.

According to Dotter, within minutes of the procedure, the patient’s foot became warm and pink, her rest pain resolved, and her ulcers soon healed. This was the first transluminal angioplasty ever performed in a human patient and perhaps the first procedure in interventional medicine. Despite Dotter’s success, however, local surgeons still referred him patients with instructions to “visualize but do not try to fix” their lesions. In the words of one of his Oregon colleagues, Michael Baird, “Dotter was something of a radical when it came to doing things and being willing to try things. I think it made a lot of people nervous, but it also led to an enormous amount of progress” [1].

Dotter knew how to draw attention to his work. In August 1964, he was featured in a three-page spread in *Life* magazine, then the nation's most popular newsweekly. Titled "Clearing an Artery," it showcased photographs of Dotter as he opened up a 75-year-old patient's femoral artery occlusion [4]. Says the article, "Unless the vessel could be opened, amputation was inevitable." The accompanying images show Dotter at work, bearing an almost maniacal expression. Soon he had another of his angioplasty patients photographed as the two ascended Mount Hood.

Sometimes Dotter's gunslinging approach seemed to invite criticisms. In the early 1960s, he was presenting at medical grand rounds at Oregon. According to a colleague,

He was talking about what you could realize if you could get a catheter in the heart and what the graphs would look like. Well, he brought in a rather large—standing about six feet tall—cathode oscillograph, which is, you know, like a TV screen with these graphs on it. And he said, "I've been standing here and talking to you for about twenty minutes, and all this time I have had a

catheter in my heart," whereupon he rolled up his sleeve, and there was the end of the catheter. And he said, "Now I'll show you what a normal heart reading looks like." So he went and he plugged himself into the machine, and we were all kind of gasping, you know. There's a man standing there with a catheter in his heart—and he moved it among the chambers of the heart as he stood there, and he explained what the graphs represented. It was an absolutely horrifying example, but it was the kind of thing he did, to say it is perfectly safe, it can be done, it isn't dangerous. [1]

In 1965 Dotter was contacted by a radiology colleague in New York about a patient facing amputation because no local physician was able and willing to perform an angioplasty. Dotter flew to New York to perform the procedure. When the procedure was completed, the patient's husband inquired about his fee. Dotter indicated that there would be none but hinted that a donation might be acceptable. A few weeks later, he received a check from the

family of the grateful patient, Stella Guttmann, for \$500,000 to fund his research [5].

Dotter suffered many personal setbacks along the way: two bouts of Hodgkin disease, emergency surgery for a perforated duodenal ulcer, and two quadruple bypass procedures. Yet it was not until shortly before his death at age 64 that he finally slowed down. He cared deeply about his work and had silenced many naysayers. Where others saw little of interest, Dotter saw exciting possibilities; when contemporaries would have given up, he showed remarkable resilience; and where failures would have grounded others, Dotter saw opportunities to soar. There is a message in his remarkable life story for today's radiologists: Fail up!

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How Radiologists Who Volunteer in Their Communities Enrich Lives

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Key Words: Volunteering; voluntary service; communities; radiology; radiologists.

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Unless someone like you Cares a whole awful lot,
Nothing is going to get better. It's not.

Dr. Seuss

A nationally renowned radiologist who had served as president and received the gold medals of each of our large radiology societies was asked, “What is the most fulfilling thing you have done in your career?” She answered, “Working with members of my department — technologists, residents, faculty, etc. — on a Habitat for Humanity construction project.” It is remarkable that someone who had served in high leadership positions, achieved great professional recognition, and made a lot of money found voluntary community service the most meaningful aspect of her professional career.

As this prominent radiologist talked about what her service experience meant to her, several benefits became clear. She had achieved a greater sense of community with the members of her department through volunteering than by any other means, despite having worked there for decades. In a group of volunteers, it did not matter how prestigious job titles were, what degrees people had, or their level of annual compensation. Just put tape measures, saws, spirit levels, and hammers into their hands, and suddenly everyone is clearly on the same level and working side-by-side toward the same end.

People who had never worked together were placed elbow to elbow, getting to know one another as persons for the first time. Even those who had labored with one another for years combined in a way that produced a new level of camaraderie. As most people worked, they talked, and as they talked, they found out things about one another's life stories, families, and past volunteer experiences. They discovered common interests and new reasons to take an interest in one

another's lives. People who had been mere coworkers developed a higher level of collegiality.

Of course, volunteering has other more general benefits. An especially notable one, particularly in the aftermath of COVID-19, is a reduction in loneliness. It is possible to be surrounded at work by patients, technologists, radiologists, and a host of others all day, every day, and yet upon returning home after each shift to feel isolated. Work itself can help to satisfy our need for affiliation, but most people are away from work more than they are at it. Volunteering can both relieve loneliness outside of work and foster the development of new relationships.

Volunteering also reminds us that there are things in life that are worth doing even though they do not generate income. It might be tempting for some radiologists to suppose that they should seek maximal return for every hour of time they invest. They might think that the best way to use their time is to work extra shifts and devote their vacations to locum tenens opportunities, aiming to generate as much income as they possibly can. But such attitudes can quickly eventuate in burnout, especially if we forget that there are many other ways to make a difference in life.

Examples are legion. Suppose a radiologist reads a story to a child, takes a casserole to an ailing neighbor, teaches a Sunday school class, serves as a leader in scouting, tutors a student, mentors disadvantaged youth, visits a lonely person, assists with voter registration, or organizes a book club. Such activities generate no income, but they provide a break from routine work activities, get radiologists active out of the reading room and hospital, and enable us to build relationships and make a different kind of difference in the lives of others.

Volunteering improves mental health, promotes happiness, and increases longevity, and not just among those served but also those doing the serving. For example, undergraduate students who volunteer are less likely to feel depressed (1). Among adults 65 and older, those who volunteer experience improved physical and mental health and reduced rates of mortality (2). It is not difficult to see why this might be the case. People who wake up with a clear sense of purpose and the conviction that they are needed are likelier than those who do not to savor each day and take better care of themselves.

The US government has initiated many volunteer programs. The Corporation for National and Community Service,

Acad Radiol 2022; 29:1909–1910

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<https://doi.org/10.1016/j.acra.2022.09.008>

formed in 1993, is now the nation's largest grant maker for service and volunteering. Its programs include AmeriCorps, which provides opportunities for more than 75,000 Americans to serve their communities each year, Senior Corps, which does the same thing for over 270,000 Americans aged 55 and over, and the Social Innovation Fund, which seeks to combine public and private resources to promote community-based solutions for low-income communities.

Many Americans answer the call to volunteer. Population surveys show that about 30 percent of Americans, or 78 million people, volunteer for an organization each year, contributing approximately 5.8 billion hours of service with an economic value of at least \$147 billion. Volunteers are more likely to be female than male, well educated, and high earners. Many organizations we might take for granted, such as youth sports, scouts, faith communities, homeless shelters, soup kitchens, and a host of associations, could not exist and thrive without volunteers. Such activities play a key role in civic health (3).

Civic health benefits from volunteering in multiple respects. There are positive correlations between social capital and educational outcomes, social relationships and mortality, and neighborhood collective efficacy and crime rates. When disasters such as hurricanes, droughts, mass shootings, and pandemics strike, civic ties play a crucial role in promoting community resilience. The explanation is straightforward: people who volunteer often encounter people they would otherwise not meet, fostering mutual understanding and cohesion (3).

In sum, volunteering promotes community, in part by reminding us that each of us is not alone. We are not islands,

cut off from one another and connected only to central authorities in places such as Washington, DC. Instead, we are parts of communities made up of neighborhoods, associations, and organizations, composed of people we can meet, build relationships with, rely upon, and work with to build better lives. It is not enough to have a membership card or pay dues to national professional organizations. It is important to connect with people by working together on projects of mutual significance.

By volunteering, radiologists can contribute to communities and society in ways that extend far beyond the boundaries of medical practice. We can not only promote the health and well-being of individuals but also help to build relationships that enrich social and cultural life. We can leave a legacy that enhances the lives of future generations. Volunteering presents radiologists with opportunities to live more significantly, making each day and each hour count for more in the lives of others. We may make a living by what we get, but we make a life by what we give.

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