Success in Academic Surgery
Series Editors: Lillian Kao · Herbert Chen

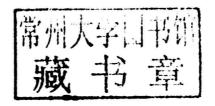
Melina R. Kibbe Herbert Chen *Editors*

Leadership in Surgery



Melina R. Kibbe • Herbert Chen Editors

Leadership in Surgery





Editors
Melina R. Kibbe
Department of Surgery
Feinberg School of Medicine
Northwestern University
Chicago, IL, USA

Herbert Chen Department of Surgery University of Wisconsin Madison, WI, USA

ISSN 2194-7481 Success in Academic Surgery ISBN 978-3-319-11106-3 DOI 10.1007/978-3-319-11107-0 ISSN 2194-749X (electronic)

ISBN 978-3-319-11107-0 (eBook)

Library of Congress Control Number: 2015936522

Springer Cham Heidelberg New York Dordrecht London © Springer International Publishing Switzerland 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

Springer International Publishing AG Switzerland is part of Springer Science+Business Media (www. springer.com)

Contributors

Daniel Albo, MD, PhD, FACS Department of Surgery, Baylor College of Medicine, Houston, TX, USA

Timothy Billiar, MD Department of Surgery, University of Pittsburgh, Pittsburgh, PA, USA

Herbert Chen, MD, FACS Division of General Surgery, Department of Surgery, University of Wisconsin, Madison, WI, USA

Justin B. Dimick, MD, MPH Division of Minimally Invasive Surgery, Department of Surgery, University of Michigan School of Medicine, Ann Arbor, MI, USA

Center for Healthcare Outcomes & Policy, Ann Arbor, MI, USA

Gerard M. Doherty, MD Boston Medical Center, Boston University, Boston, MA, USA

Diana Farmer, MD, FACS, FRCS Department of Surgery, UC Davis School of Medicine, UC Davis Children's Hospital, UC Davis Health System, Sacramento, CA, USA

Henri R. Ford Department of Surgery, Keck School of Medicine of the University of Southern California, Los Angeles, CA, USA

Division of Pediatric Surgery, Children's Hospital Los Angeles, Los Angeles, CA, USA

Julie Ann Freischlag, MD Human Health Services, UC Davis School of Medicine, UC Davis Health System, Sacramento, CA, USA

Bruce L. Gewertz, MD, FACS Department of Surgery, Interventional Services, Academic Affairs, Cedars-Sinai Medical Center, Los Angeles, CA, USA

Larry R. Kaiser, MD, FACS Temple University School of Medicine, Philadelphia, USA

viii Contributors

Office of the Dean, Temple University School of Medicine, Temple University Health System, Philadelphia, PA, USA

Gregory Kennedy, MD, PhD Section of Colon and Rectal Surgery, Department of Surgery, University of Wisconsin, Madison, WI, USA

K. Craig Kent, MD Department of Surgery, University of Wisconsin, Madison, WI, USA

Melina R. Kibbe, MD, FACS, FAHA Department of Surgery, Feinberg School of Medicine, Northwestern University, Chicago, IL, USA

Meera Kotagal, MD Department of Surgery, University of Washington, Seattle, WA, USA

Joanna C. Lim Division of Pediatric Surgery, Children's Hospital Los Angeles, Los Angeles, CA, USA

Connor Long, BS Department of Surgery, UC Davis School of Medicine, Sacramento, CA, USA

Jeffrey B. Matthews, MD, FACS Department of Surgery, The University of Chicago, Chicago, IL, USA

David W. McFadden, MD, MBA, FACS Department of Surgery, University of Connecticut, UConn Health, Farmington, CT, USA

Michael W. Mulholland, MD, PhD Department of Surgery, University of Michigan, Ann Arbor, MI, USA

Marco G. Patti, MD, FACS Department of Surgery, University of Chicago Pritzker School of Medicine, Chicago, IL, USA

Carlos A. Pellegrini, MD, FACS Department of Surgery, University of Washington, Seattle, WA, USA

Juan Carlos Puyana, MD Department of Surgery, Critical Care Medicine and Translational Medicine, University of Pittsburgh, Pittsburgh, PA, USA

Harry C. Sax, MD, FACS, FACHE Department of Surgery, Clinical Transformation Initiative, Cedars-Sinai Medical Center, Los Angeles, CA, USA

Nathaniel J. Soper, MD Department of Surgery, Northwestern Medicine, Chicago, IL, USA

Jeffrey S. Upperman Department of Surgery, Keck School of Medicine of the University of Southern California, Los Angeles, CA, USA

Division of Pediatric Surgery, Children's Hospital Los Angeles, Los Angeles, CA, USA

Contents

1	What Is Leadership? Meera Kotagal and Carlos A. Pellegrini	1
2	Leadership in Surgery Michael W. Mulholland	15
3	Are You Ready to Be a Leader? The Ontology of Leadership Juan Carlos Puyana and Timothy Billiar	29
4	Leadership Theories and Styles	49
5	Leadership Traits: Are People Born to Lead?	59
6	Understanding Emotional Intelligence and Its Role in Leadership	67
7	Common Mistakes in Leadership David W. McFadden	79
8	Practical Tips for Developing Leadership Skills Early in a Career Gregory Kennedy and Herbert Chen	91
9	Leading Teams Effectively: Motivating and Prioritizing Work Justin B. Dimick	99
10	How to Manage Difficult Team Members Nathaniel J. Soper	107
11	How to Effectively Manage Up	115

12	Conflict Resolution	123
13	Change Management: How to Effectively Lead a Cultural or Organizational Change	145
14	How Culture Influences Leadership Styles	155
15	Women as Leaders in Surgery Diana Farmer, Connor Long, and Julie Ann Freischlag	169
16	What Does It Mean to Be an Underrepresented Minority Leader in Surgery? Henri R. Ford, Jeffrey S. Upperman, and Joanna C. Lim	183
Ind	ex	195

Chapter 1 What Is Leadership?

Meera Kotagal and Carlos A. Pellegrini

1.1 Introduction

This book is dedicated to the study of leadership and its role in the success of an academic surgeon's career. This first chapter is divided into two portions. First, we discuss leadership in general, including the definition, general aspects, and its relationship to other attributes and to the individual, including what leaders do and how they do it. Second, we review the importance of leadership and the role that it plays today in medicine and surgery.

1.2 Leadership "101"

1.2.1 Defining Leadership

Leadership is an *attribute* that involves a combination of a *meaningful vision* with the ability to *influence others by non-coercive means to act* in a certain way. These two components of leadership are profoundly influenced by the context of the environment, the time at which the event under discussion occurs, and the circumstances that are present. Furthermore, the leadership we will be discussing is anchored by moral values. This moral imperative differentiates human leadership

Department of Surgery, University of Washington, 1959 NE Pacific Ave Box 356410, Seattle, WA 98195, USA

C.A. Pellegrini, MD, FACS (⋈)

Department of Surgery, University of Washington, 1959 NE Pacific Street, Box 356410, Seattle, WA 98195-6410, USA

e-mail: pellegri@uw.edu

M. Kotagal, MD

from that of other species and plays an important role in the development of the vision. The ability to convince or influence followers by non-coercive means frequently requires the use of emotional intelligence and the establishment of a bond with the followers that is based on trust. In other species, the development of trust is profound and total and follows genetic and phenotypic expressions that make most of the participants of the group natural followers of the one that expresses the 'alpha' character. For example, a flock of birds or a pack of wolves self-defines with a leader at the front. Followers are convinced that the leader is aware of the location of the food, the safe environment, and the warm weather. This trust is so profound that in instances when the leader is wrong the entire group perishes.

As we move up from the animal kingdom, leadership takes on new characteristics. Indeed, leadership can be identified in almost all human endeavors. Whether in education, healthcare, industry, commerce, or finance, a person or persons emerge that are able to articulate a vision in such a way that others have a tendency to follow. However, quite differently from the animal kingdom, each of these endeavors is complex and the complexity leads to the need for different *levels of leadership*. This is an important concept because as we explore the values associated with the practice of leadership, we will be assuming that there are infinite levels of leadership. Another important difference between human leadership and that of the animal kingdom is that, as we shall see, a good part of a leader's work is to influence, manage, and therefore "lead" those above him/her. Leadership is thus an attribute applicable as much to a president of a large corporation, a director of a unit, or a manager of a section, as it is to lower-level employees. All that is required to exercise leadership is the presence of at least two individuals and the ability of one to influence the other.

1.2.2 The Origin of Leaders

A theory espoused by T. Carlyle in 1841 "Trait Leadership" suggests that "great men born with certain personal talents, health, or physical characteristics have the capacity to affect change" and become leaders [1]. For some time it was believed therefore that leadership was God given – a part of the genetic make-up. In 1884 Herbert Spencer challenged that concept and described the "situational" theory of leadership which suggested that leaders rise to the circumstances [2]. Spencer proposed that the dominant feature in leadership is the environment, represented by challenges, and that it is those challenges that allow leaders to emerge. These two theories are not necessarily contradictory as it is possible that when the appropriate environmental challenges occur, the individuals likely to emerge are those with a genetic predisposition to do so. However, we know of individuals who throughout their lives did not manifest the traits associated with leadership, and who were more predisposed to be followers, and yet when faced with extraordinary circumstances became strong leaders. There is another theory which suggests that personal will and inspiration can give rise to the appropriate vision, which when expressed in

Table 1.1 Leadership and values

Integrity	Trust	
Humility	Confidence	
Kindness	Model	
Support	Ethical	
Fairness	Skill	
Authenticity	Moral courage	
Flexibility	Responsibility	
Discipline	Inspire	
Honesty	Purpose	
Energy		

Table 1.2 How leaders inspire people

Qualitative study of several thousand business and government executives [18] "What values do you look for and admire in your superiors?"		
Honest	88 %	
Forward looking	75 %	
Inspiring	68 %	
Competent	63 %	
Fair	49 %	
Supportive	41 %	

certain ways, inspires others to follow. Deepak Chopra in his book "The Soul of Leadership" describes how one can "look into one's self and lead from the soul's unlimited wisdom" [3]. This is the so-called "look and listen" theory in which the individual looks into his/her soul and reflects in order to create the appropriate vision. This theory suggests that most human beings with the ability to read their own feelings, to "look" into their soul, can derive a vision that expresses the moral values of the individual to a greater extent than those generated by other means or coming from circumstances outside the person. These theories, as well as others that have tried to explain leadership, strongly support our belief that leadership skills can be learned and can therefore be practiced in all environments at all levels. It also supports the theory that in the exercise of leadership a person brings her or his own set of values and style and therefore to some extent leadership is "personal." Table 1.1 shows some of the values associated with leadership. Several studies have looked at how followers grade each one of these personal values in terms of their respect and trust towards their leaders. Table 1.2 shows a representative value scale on the views of followers towards values expressed by leaders.

Kail identified six leadership characteristics that define modern leaders: courage, integrity, humility, selflessness, empathy and collaboration [4]. He believes these elements provide the platform for character and that it is character – not accomplishment – which defines a modern leader. Interestingly – especially given the military background of the author – he impresses upon us that *courage* is related to attachment to moral principles rather than to the capacity to absorb risk in dangerous

situations. He defines *integrity* as the most critical attribute that builds trust and connects leader to follower. He believes *humility* promotes traits which emphasize respect, loyalty and trust, vital elements in a modern team environment. *Selflessness* is based on serving others and developing the followers to their full capacity, and it allows the leader to focus on the mission and those who can accomplish it. Selflessness allows the leader to exercise authority on behalf of the needs and goals of the team, rather than his/her own needs. Finally, *empathy* is the ability to relate to another's needs, to understand his/her ways of thinking and feeling, and to serve by imagining ourselves in their shoes. It is an important "connector" between leaders and followers.

1.2.3 Emotional Intelligence and Leadership

Emotional intelligence has been defined as a "personal attribute that facilitates social and professional relationships" by Goleman [5]. As was the case with leadership, some have thought that emotional intelligence is something that one is born with. It is now clear that this is something that, to some extent, can be learned and practiced by everyone willing to do so, although it may come more easily to one individual than another. According to Goleman and Mayer there are five stages in the development of emotional intelligence, each representing a step higher in the process:

- Stage 1 Self-Awareness: Knowledge of self implies the development of an ability to determine how we each react emotionally to the circumstances of life, work, pleasure, etc. It is the identification of "the things that make us tick."
- **Stage 2 Self-Regulation**: Self-regulation refers to the development of the capacity to regulate the expression of emotion. In other words, once we have learned what generates an emotional response in ourselves, this second stage focuses on the ability to regulate that expression so that it is at least not evident (and can cause distress) to others.
- Stage 3 Motivation: Motivation is the capacity to regulate the generation of the emotion itself and, once we have identified what causes these emotions to occur, to be able to develop internal methods that allow us to modulate that emotion. The ideal is to reach a level when we do not have to modulate the expression but we simply feel less emotional stress.
- **Stage 4 Empathy:** Empathy relates to the ability to detect what others think and feel; once the individual is able to know him or herself and regulate both the generation and the expression of most emotions, the individual needs to be able to detect what others think or feel in order to exercise leadership. This is a key component of the bridge between the leader and the follower.
- Stage 5 Social Skill: This stage focuses on the ability to influence the feelings of others. Now that we know what others are thinking or feeling at a given time under a certain set of circumstances, our ability to influence those feelings

determines to some extent the success of the leader. Thus one can think of leadership as an activity motivating people to do something because they want to or believe in it. This is the ultimate exercise of leadership: influencing others to the extent they are convinced that a certain thing must be done or a specific action should be taken (and can exercise their own influence on peers and other followers as well).

1.2.4 What Do Leaders Do?

Leaders exercise leadership by creating a vision, articulating a purpose, generating and sustaining trust, and motivating individuals to take action.

- 1. Creating the vision The creation of a successful vision must be associated with meaning and significance; it must be anchored in the leader's values and guided by his or her moral compass. When developing the vision, leaders must use their imagination; they must question all aspects of an issue. For example, the fact that something is working well does not mean it will work well forever, and in fact even if it works well now, one may be able to improve it. In other words, leaders need to "free" their imagination to be able to create a new environment, system, device - they must be bold. For example, Colin Powell said, "You don't know what you can get away with until you try" [6]. He encourages us to follow the principle of "it is easier to get forgiveness than permission" and tells us that "good leaders don't wait for official blessing to try things out. Indeed, if one asks enough people for permission one will inevitably come up against someone who believes his or her job is to say 'no" [6]. It is also important during the development of the vision to be able to gauge and understand the needs of the followers. While vision may sometimes, by its very nature, ignore some of the immediate gratification of the followers, it is important to always look for ways to relate the benefits of the mission to the followers. The mission is then much more likely to succeed.
- 2. Articulating the purpose Once the vision has been created, the leader must be able to articulate and to "sell" the purpose to the followers. The key to that effort is the way in which the purpose is expressed coupled with the determination to achieve the goals. It is important that one offers strong points of view that focus everyone on the shared vision, delivers clear expectations to the followers, and demonstrates the need to act with determination to achieve. In the words of Colin Powell, "Perpetual optimism is a force multiplier" [7]. The ripple effect of a leader's positive words inspires an optimistic response; in the same way, cynicism and pessimism engender a parallel negative response. Leaders who whine and blame engender those same behaviors among their colleagues. In expressing the purpose a leader should do it in a fashion that conveys, "we can change things here, we can achieve awesome goals, we can be the best."

- 3. Generating and sustaining trust The best way to generate trust is to be a role-model; in other words to 'walk the walk' and to have consistency between words and actions. It is important that the followers believe the leader is as engaged as they are and that the leader follows his or her own advice and does the same as what he/she asks of the followers. Trust is generated by listening closely to the followers, communicating candidly with them, and acting with reliability and consistency. While building trust, leaders must encourage openness, disagreement, and even controversial points of view while expressing confidence in the followers in keeping with the concept of the "wisdom of crowd" [8]. The more the leader listens, the more the leader will learn about the needs and expectations of the followers and increase the chance of generating valuable ideas. The process by which trust is generated is slow, progressive and fragile. Good leaders pay intense attention to it. Sustaining trust requires constancy, transparency and role modeling, all the time and every time. By contrast, it only takes a few minutes, a single expression or one act that is perceived as not worthy of trust to destroy the trust that has been generated.
- 4. Action Leaders must translate the purpose of the vision into action. They must induce sufficient trust among the followers to inspire them to take action. There will be times when, despite having put substantial effort into the development of the vision (even when that vision was properly articulated to a group of followers that trust the leader), the resulting action falls short of expected. Good leaders recognize that "failure" is part of life and eventually become more comfortable with it. Good leaders will analyze the cause of the failure, study the hurdles that impaired the achievement of the mission in detail, and move forward. These leaders recognize that there is often more to learn from "failure" than from "success" and that openness to those lessons is crucial. Sometimes it is the complexity of the task; sometimes it is the circumstances or the environment. The only way not to fail is not to try. AsSt Marie said "the harbor is the safest place for a boat but boats were not made to stay in harbors." Leaders must remember that "you miss 100 % of the shots you do not take" as Wayne Gretzky said. As much as optimism and positivity are important in creating vision and building trust, these traits are even more important in sustaining trust and moving forward in the face of "failure." Leaders are "pragmatic dreamers" or "practical idealists". Leadership is about developing a vision, articulating it with passion, generating trust, and moving the followers to action.

1.2.5 How Do Leaders Do It

A leader is best when people barely know he or she exists. When his or her work is done or the aim fulfilled, people will say: We did it ourselves. – Lao Tzu

As was pointed out at the beginning of our chapter, leadership is an attribute. As such, it is exercised by an individual during the course of their activities. It is therefore important to review the time distribution of leadership activities and

the elements that facilitate and impair its exercise. Dee Hock, founder and former CEO of VISA, suggested that leaders should invest 50 % of their time leading themselves [9]. That time is used for reflection; it is used to search inwardly and to develop a personal vision with regard to ethics, motivation and direction. It is a time to look "into the soul" for guidance, to examine reality and to develop an environment conducive to achieving the shared goals expressed by this vision. Hock suggests that approximately 20 % of the time should be invested in leading those with authority over the leader. This is a very interesting concept because it expresses "upward" leadership, in which a considerable amount of time is invested in the process of leading and checking with those who are above the leader. It is as important for a good leader to "sell" his or her vision to those above as it is to sell it to those below. In fact, it is probably more important, and it is certainly often more difficult to communicate to those above. In those situations while the "vision" will be the same, the "articulation of that vision" has to be done in such a way as to make the boss believe that it is her/his idea, rather than the person who created it. There are very few things that require more use of emotional intelligence than creating ideas in superior's minds that eventually become so well anchored as to make believe they originated there. Hock suggests that 15 % of the time should be spent leading peers. This is the recognition that an organization's fulfillment of the goals would be improved if all the units are able to advance at the same time and that the leader him or herself will be better positioned if his/her ideas have been "bought" by peers. Hock leaves only 15 % of the leader's time to lead the subordinates. He also emphasizes the concept of service leadership saying, "If you do not understand that you work for your subordinates, then you know nothing about leadership. You only know tyranny."

This breakdown of time that Hock describes is central to a model known as meta-leadership, representing three of the five components of meta-leadership: leading down, leading up, and leading across [10]. These components are built on the foundation of self-awareness and situational awareness that we have previously described as key to leadership.

Two common errors in managing the time spent on leadership are what we call "reverse delegation" and "making other people's problems your own". Reverse delegation is always tempting for a leader and it can be described as the process by which something that needs to be done is done by the leader, rather than being delegated to a subordinate. While this may save the leader some time in the short term, by avoiding spending the time to teach, coach, and wait for a turn around by a less experienced follower, it is not a good strategy for at least two reasons. First, it condemns the leader to doing the task again next time it presents – so ultimately the time invested becomes greater, and second, the process demeans the followers. Instead, this can be turned to the leader's advantage by using the opportunity to show confidence in the followers which improves morale, enhances development and nurtures loyalty toward the leader. Furthermore, when the followers are allowed to take risks and encouraged to develop methods that achieve the tasks in a better way than the leader originally envisioned, leadership is at its best. The leader has in fact created another leader.

Making other people's problems your own is a tendency that many leaders have. As a leader, one has no business becoming involved in the troubles of subordinates, even with the best intentions. There is a delicate balance between trying to help other people with their problems and making those problems your own.

1.2.6 Relating to Followers: Styles of Leadership

When studying relationships between leaders and followers it is important to remember that the leader has to find ways of *motivating* the followers. Two different approaches have been identified in this motivational exercise: one is the *transactional* and one is the *transformational*. The *transactional approach* is directly related to strict performance and outcomes criteria. The focus is on successfully completing a task and on rewarding that behavior (promotion, pay raise, etc.). When the task is not completed there is a lack of reward or a punishment (no pay, demotion, or dismissal). The *transformational style* is "principle driven". This approach embodies dedication to the larger organizational mission. It is "mission centric" and not "task oriented". It creates meaning for the followers rather than specific rewards. It converts leaders into moral agents and is usually a more enduring style of leadership. In today's world the *transformational style* is probably more appropriate.

Within these two general approaches, there are several styles of leadership. Goleman, in his book "Primal Leadership," describes six styles: authoritative, affiliative, coaching, democratic, pace-setting, and commanding [11, 12].

- 1. The Authoritative Style: As suggested by the name, this style implies the use of authority. The authoritative leader defines standards that revolve around the vision. Of all the styles of leadership, the authoritative style is the most effective at driving every aspect of climate as the leader has identified clear objectives and demands performance. The authoritative style works well in almost any business situation but is particularly effective when a business is adrift. An authoritative leader charts a new course and sends the followers with a fresh long-term vision. This style is a lot less effective when the leader is working with a team of experts or peers who are, or believe they are, more experienced than the leader. It is, therefore, less likely to work in the medical arena.
- 2. **The Affiliative (or Facilitating) Style:** This style revolves around people. Its proponents value individuals, allowing for innovation and creativity. This style allows for risk taking and provides freedom of action to followers. It is a style that proves particularly useful when trying to build team harmony, increase morale, improve communications, or repair broken trust.
- 3. **The Democratic Style:** This style is based on a significant amount of listening by the leader who spends time soliciting other people's ideas. By its nature this style builds the trust of the followers, and provides an excellent way to drive responsibility. One of the main drawbacks is the substantial amount of time

needed for decisions and in some instances, inaction from endless meetings. This approach works best when a leader is uncertain about the best direction to take and needs ideas and guidance from followers.

- 4. **The Pacesetting Style:** In the pacesetting style, the leaders set extremely high performance standards by performing at that high standard themselves. This style is about improving and having everyone do things better and faster, including the leader. Poor performers are required to do better or be left out. This style can lead to poor morale and destruction given that most followers will feel overwhelmed by the pacesetter's demands. Work becomes not a matter of doing the best along a clear course as much second guessing what the leader wants.
- 5. The Coaching Style: Coaching leaders help followers identify their unique strengths and weaknesses and tie them to their personal and career goals. They encourage followers to establish long term development goals and help them create the plan for obtaining them. Coaching leaders excel at delegation and challenging employees to grow and develop new skills.
- 6. The Coercive Style: This style is characterized by strict and immediate enforcement of compliance. Of all the styles of leadership the coercive style is one of the least effective in most situations. In this case the leader makes top down decisions and this tends to inhibit new ideas. The followers' sense of responsibility evaporates because they are unable to act on their own initiative, lose ownership and feel little accountability toward their performance. Occasionally coercive leadership is important to exercise but should be used with caution.

The most important thing to remember is that an individual does not function with only one style of leadership. All styles are necessary from time to time. The circumstances determine the predominant style of leadership that should be exercised at any given time as each style is best suited for a given set of circumstances. Moreover, a single style is usually less likely to lead to success than the combination of two or more styles. The most effective executives use a collection of distinct leadership styles, each in the right measure at just the right time. Such flexibility can be difficult to put into action but it pays off in performance and better yet, it can be learned. For example, during an emergency with a turn of events that was unexpected and requires immediate correction, the combination of an authoritative or a coercive style may be most appropriate. In this situation the use of a democratic or coaching style may be less appropriate. However the pure use of an authoritative style during an emergency can lead to fragmentation and distrust from the rest of the team and may leave the leader all by him or herself. Therefore adding affiliative or pacesetting aspects at that time may modulate the authoritative style and lead to the best outcome.

Strong leadership styles have historically highlighted traits associated with masculinity. In fact, most literature on leadership refers to the "he" leader. It is no surprise that in a current survey of 7,000 leadership positions in America men outnumber women in senior leadership positions nearly 4 to 1 [13]. On the surface this raises a moral dilemma, given that about 50 % of the world's population is composed of women and that today in America women outnumber men as graduates of higher education.

In his presidential address to the Society of Thoracic Surgeons, Douglas Wood emphasized the need, particularly in academic surgery, to embrace leadership traits historically thought of as "feminine" [14]. He believes that "selfless leadership" – a more modern, accepted, and effective form of leadership - is more likely to be present among women. In fact, a study by Gerzema and D'Antonio that identified 125 different human behavioral traits showed that across age, gender, and cultures, people around the world felt that traits often identified as "feminine" correlated strongly with making the world a better place [15]. The authors found that the traditional "feminine" attributes and values are now more strongly related to leadership than the "macho paradigm" characterized by more "black and white" thinking and the need for control. Traits such as "displaying high integrity and honesty," "developing others," "building relationships," and "collaboration and teamwork" are also traditionally thought to be "feminine" traits. However, it is important to note that traits that are "feminine" or "masculine" can be present across genders. Indeed, one study showed that women scored higher than men in 12 out of 16 traits of leadership including such traditionally masculine traits as "taking initiative", "driving for results," or "establishing stretch goals" [15].

In his lecture, Wood noted that "the characteristics of selfless leadership emphasize trust, empathy and the capacity to listen and to relate to others [14]. More than ever before, leadership is about the expression of tolerance combined with integrity and confidence. It requires courage to be both vulnerable and connected to others and it requires humility to accept codependency and acknowledgement of one's own weaknesses and vulnerability. It is not about competition. It is not about raising oneself up above others; it is certainly not about pulling down those around you. Modern leadership is about elevating the people around you and perhaps people not even noticing that you are the reason."

1.3 Leadership in Medicine

In the latter part of 1800s and throughout the 1900s, the educational system prevailing in medicine emphasized individuality and did not take into consideration the concept of teams, and by extension the concept of leadership. For example, physicians had traditionally been taught to arrive early, review everything personally, and check on their patients with their own eyes. Traditional teaching emphasized "dependence on no one but yourself." Indeed, the quality of a physician was measured by the personal standards that were practiced without reference to the surrounding environment. In the latter part of the twentieth century it became clear that with the emergence of new drugs, tests, devices, and techniques – a cycle of innovation that was constantly increasing the complexity of the environment in which medicine was practiced – physicians and other health care providers needed to focus their expertise quite narrowly. This narrow focus combined with individuality that had been encouraged in medicine led our system to become fragmented; the care provided to patients became disorganized by its very nature.