19 The Influence of Leadership Paradigms and Styles on Pharmaceutical Innovation *Aubyn Howard*

19.1 Introduction

The purpose of this chapter is to set the topic of Innovation firmly within the context of leadership and show how both collective leadership paradigms and individual leadership styles influence innovation within the pharmaceutical industry. We will show how the challenges facing this industry are contextualized within a wider process of transformation and evolution within organizations and society today. Finally, we want to help the reader become more aware of how their own leadership paradigm and style impacts their capacity for enabling innovation.

It is hardly news that human factors have a considerable impact on innovation performance (e.g., Thamhain, 2003). The human dimension of innovation is arguably the key differentiating factor in any complex and competitive business environment today, and the pharmaceutical industry is no exception. Eventually scientific, technological, or business factors even out, the argument goes, and the human dimension proves decisive, which ultimately comes down to the quality, style, and effectiveness of leadership. Discussions about the importance of leadership, particularly in driving R&D innovation, have been widespread and frequent (e.g., Shaywitz, 2013) since industry innovation productivity started to level off and then dip more than 10 years ago. Moreover, most of the major industry players have backed this up with serious investment in leadership development, training, and coaching, often at multiple levels throughout their organizations. It is with good reason the pharmaceutical industry is the clear favorite for management consultants, leadership trainers, and executive coaches to work within. What is surprising therefore is how far away most organizations still seem to be in terms of getting on top of how leadership can make a real difference to innovation. This is a reflection of the apparent disparity between the enormous progress mankind has made in objective scientific knowledge over the last couple of centuries and our limited progress in understanding the more subjective mysteries of the human psyche and behavior. We appear to have mastered much of our immediate external physical universe, and yet comparatively, when it comes to understanding ourselves, we still seem to be fumbling about in the dark. The management consulting and leadership training business partly does so well because

Value Creation in the Pharmaceutical Industry: The Critical Path to Innovation, First Edition. Edited by Alexander Schuhmacher. Published 2016 by Wiley-VCH Verlag GmbH & Co. KGaA.

there are so many different answers and approaches to the leadership challenge. Alongside that, there is the more prosaic approach of the investment world (city, investors, shareholders, boards, etc.) for whom leadership is equated with "leader," and the answer to any leadership problem is to change the person. Hunches are taken based primarily on charisma and personality style, within the prevailing achievement-oriented paradigm which will be described in the following text.

In this chapter, I will attempt to show the reader that there is some light at the end of the tunnel and that there is actually a growing body of psychological knowledge that could be applied to the leadership of innovation issues in the industry. However, there are (at least) two not inconsiderable barriers to this psychological understanding of the leadership domain being brought to bear in practice. First, the modern tendency toward oversimplification of complex issues by business leaders, politicians, commentators, media, and other influencers. The biases of the prevailing achievement-oriented leadership paradigm in particular mitigate against a more complex and multidimensional perspective of leadership becoming widespread. Secondly, the circular problem that senior leaders may themselves be the problem and unless they are willing to seriously look at themselves and take action to upgrade their own "operating model" (or even replace themselves if they are not fit for purpose), they may continue to be a block upon progress.

Leadership and the way that it impacts and influences the human dimension of innovation (or any business challenge for that matter) is a complex issue and cannot usefully be reduced to a few simple formulas or solutions. We need to at least provide the reader with an overview of the complexities, dimensionalities, and dynamics of this topic before applying it to the specific challenges of innovation within the pharma industry today.

Some of the questions we explore include:

- What is your concept or model of good leadership?
- Whatareleadershipparadigmsandstylesandhowdotheyrelatetoeachother?
- How are leadership paradigms expressed through different organizational or operating models?
- How does leadership style influence innovation within the context of organizational cultures?
- How suitable are different leadership styles to different challenges within pharma R&D?
- Where is the future for pharma in terms of leadership paradigms and styles? What are the possible answers to the current innovation deficit?
- What should leaders be thinking about, both in terms of their own development and more broadly, their organization's?

We will start by exploring what is meant by leadership, and then specifically by leadership paradigms and styles.

Value Creation in the Pharmaceutical Industry: The Critical Path to Innovation, First Edition. Edited by Alexander Schuhmacher.

Executive Summary

Leadership style drives innovation by nurturing organizational cultures within which creativity can take place. Leadership styles are external expressions of internally held leadership paradigms, which are themselves both reflections of broader shifts of consciousness within society, as well as the process of individual human development. Complexity theory shows us that innovation is optimized at the "edge of chaos," where the optimum balance between structure and freedom is found. Early stage research requires a high level of freedom to experiment and explore opportunities through collaborative engagement with both internal and external networks. The challenge for many large pharmaceutical companies is to reproduce the kind of creative culture that exists in small biotech; however, many leaders do not understand how to do this. Others switch to in-licensing or buy-in strategies that also require an entrepreneurial outlook to be successful and that tends to be lacking in risk-averse pharma. Altogether, there is growing evidence of the limits of the prevailing leadership paradigm (achievement–pluralistic) in addressing the innovation deficit. The answers point toward nurturing the evolutionary leadership paradigm and building an "evolutionary bridge" of critical capabilities which make it possible to more fully embrace open innovation business strategies and models.

19.2 What Is Your Concept or Model of Good Leadership?

There are many different ways to approach the topic of leadership and describe the different styles or ways in which leader behave and operate. Current thinking has moved on from the "great man" approach, in which the characteristics and qualities of examples of successful or well-known leaders are generalized into some kind of idealized model of leadership for others to try and emulate. However, it can be useful to have a concept or general model of what we mean by good leadership as a starting point, and examples of these are provided in the works of Collins (2001), Kouzes and Posner (2002), and Greenleaf (1977). Situational leadership (Hersey, 1985) offers a more dynamic concept of leadership, in that it shows leaders how to adapt their style to get the best results in different situations according to people's needs.

Other writers have focused on the distinction between leadership and management, for example, John Kotter (e.g., in Kotter, 2001) who emphasizes the leader's role in leading change. There is the simple descriptive model of leadership (e.g., Heron, 1999) as a continuum of options between the hierarchical/directive style and the democratic/facilitative style, which sometimes includes laisser-faire/ empowering as a third locus on the scale. The classic Tannenbaum and Schmidt continuum (Tannenbaum and Schmidt, 1973) maps seven different combinations of authority or control and freedom or delegation as leadership behavior or style

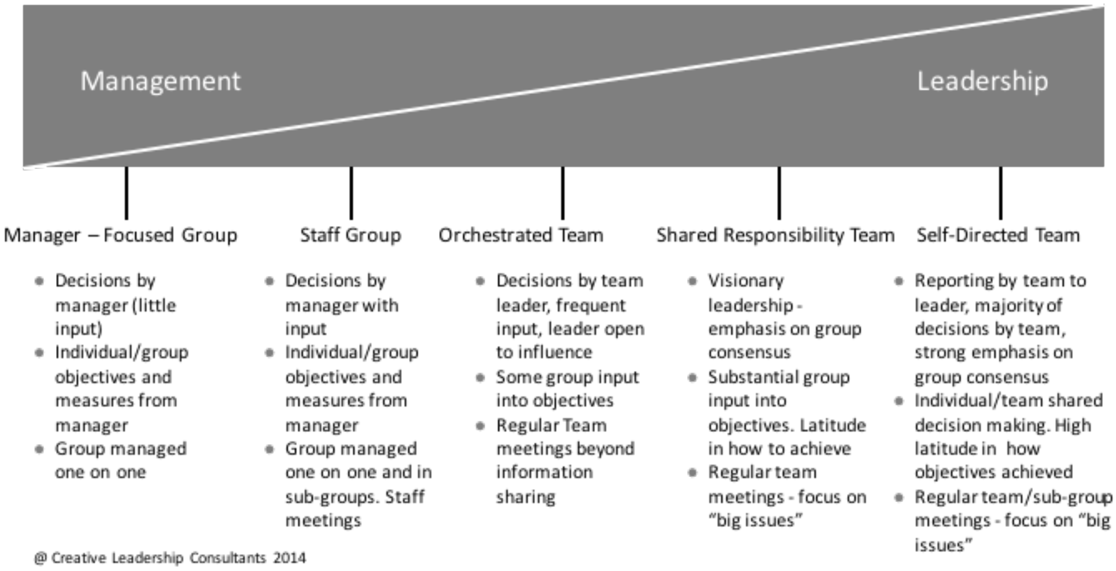

Figure 19.1 Spectrum of leadership team options.

options. We can take this a step further to map a continuum of leadership style options giving rise to different types of team, as in the example in Figure 19.1 above (Creative Leadership Consultants, 2015).

The concept of distributed leadership (e.g., Spillane, 2006) is also useful in that it broadens the scope and relevance of leadership from the one to the many and from the responsibility of the person at the top to something that everyone might be involved in. All of these concepts or notions of leadership are useful in orienting us to what we mean by leadership and to the basic dichotomous style options.

19.3 Approaches to Leadership Modeling and Profiling

More sophisticated approaches today describe leaders using psychological or behavioral models and systems which set out the full spectrum of possible types, preferences, styles, or modes of operating. Psychometric tools are used to assess or profile individual leaders against the model, and these are widely used within all types of organization to provide a diagnostic starting point for leadership development, support team building, or profile potential candidates for a vacant leadership position. There are many such models and tools and different HR departments or consultants will have their preferred tools. There is surprisingly little good literature that compares and contrasts the relative strengths and merits or different approaches, so I will offer a brief overview here.

We can broadly group approaches into personality type, behavioral preference, and developmental stage models (and there are probably proponents of approaches that might argue that their particular tool fits either none or all of these three categories).

19.3.1

Personality Types

Personality type models include those based on the 16 personality types, the big five personality traits, and Jungian personality theory, such as Myers–Briggs (MBTI), DISC, and Insights. Other approaches in this category include HBDI (Hermann Brain Dominance Indicator), based upon brain hemisphere research, and stress drivers, which comes from Transactional Analysis. Many of these tools are used for a variety of purposes in society and organizations, including in a personal development context.

19.3.2

Behavioral Preferences

Behavioral preference models are mostly derived from observation or analysis of the way that people work, behave, and relate to each other. These include Belbin Team Roles, Thomas – Kilmann Conflict Mode Instrument, Firo-B, OCI, and Learning Styles. Some have emerged from the growing field of positive psychology and strengths-based literature, such as StrengthsFinder. These behavioral approaches are usually descriptive of observable and measurable external behaviors and relational preferences, whereas the personality type models are attempting to describe the inner subjective workings of our minds and personalities that drive the behavior, although there is some overlap in many models.

19.3.3

Developmental Stages

Developmental stage models and associated tools have arisen from the field of developmental psychology, which is broadly concerned with how human beings grow and develop over time and along different dimensions. Early pioneers included Piaget and Erikson, and significant theories and models have been developed by the likes of Graves (1970), Loevinger (1998), Kohlberg (1984), Kegan and Lahey (2009), Wade (1996), and others. Howard Gardener's work on multiple intelligences (1983) can be included in this field, which links to specific works concerning emotional intelligence (Goleman, 1996), spiritual intelligence (e.g., Zohar and Marshall, 2000), and social intelligence (Goleman, 2007 and others). Developmental approaches are seeking to reveal the deeper psychological structures that underlie our personal styles and behavioral preferences and show how these evolve over time or adapt to different situations.

19.3.4

Competency Frameworks

At this stage it is also important to mention competency-based approaches and models (e.g., see Leslie and Palmisano, 2014). Alongside a leader's personality and preferences, their worldview and work style, as with anyone working within organizations, we can also consider and assess their skills, abilities, and competencies, as well as experience and knowledge, which for simplicity I will group together under competencies. Although important to include the competency dimension when working with leadership development (what I refer to as the horizontal aspect or dimension, e.g., see Torbert, 2014), this is not within the scope of exploration for this chapter. Most pharmaceutical companies already have very sophisticated and well-developed approaches to competency modeling and development for all their people. However, it is important to note that when working on individual leader development, both personal and professional aspects, horizontal and vertical development dimensions, leadership styles and competencies, come together in forming the individual leader development agenda. At the same time it is important to be aware of these distinctions, for example, when a leader is facing issues of working on their style, but mistakes this for a need to develop skills. We will return to this later.

19.4 The Developmental Approach to Leadership Paradigms and Styles

Having provided this overview of the broad approaches, I am going to focus on the developmental stage model approaches and more generally draw from the field of developmental psychology in order to tackle the relationship between leadership and innovation in more depth. Apart from personal preference, the reason is that these approaches are more dynamic in several ways than the personality and behavioral approaches. Specifically, they:

1) Show the connection between inner subjective perspectives (described as paradigms, worldviews, or value systems) and outer behavioral and relational preferences and recognizable leadership styles

2) Provide a dynamic view of how individuals develop over time and identity common patterns, recognizable stages, and transitions

3) Offer a framework for moving between the dimension of individual leadership styles and collective organizational cultures

4) Address the situational context of leadership style and show how it relates to different types of organization, stages of organizational development, and different situational challenges

We will explore these dynamics in more detail before bringing the whole discussion more toward the specific challenges of innovation in pharma and R&D in particular. To keep things simple, I will follow the model of leadership paradigms described by Frederic Laloux in his recently published work "Reinventing Organizations" (2014, see Chapter 1.1 for a fuller treatment of this whole topic), which is based primarily upon Ken Wilber's (e.g., see Wilber, 1999) and Jenny Wade's (e.g., see Wade, 1996) meta-analyses of the various models that focus on different aspects of human development (e.g., ego identity, cognitive, moral, value systems, etc.) at individual and collective levels and are founded on validated scientific research. The research work by Clare Graves on the emergence of value systems (probing people's conception of adult full maturity) and that of Jane Loevinger on stages of development of ego identity have provided the foundations for later adaptation to the organizational domain – Spiral Dynamics builds upon Graves' work to describe value systems in organizational terms, and The Leadership Development Framework uses a language specific to the stages of leader development and associated crises of transition. Although their delineations of actual stages are slightly different, it is relatively easy to see how both these and other systems, derived from unrelated original research, are all describing the same essential unfolding pattern of human development and evolution but from slightly different perspectives.

Laloux describes seven organizational paradigms that broadly follow the emergence of human consciousness and societal worldviews over thousands of years of human history, but also mirror the developmental stages that individuals follow as they grow up and mature in adulthood (at least in potentiality). These are **Reactive**, **Magic**, **Impulsive**, **Conformist**, **Achievement**, **Pluralistic**, and **Evolutionary**. It may help to think of these as ways of thinking and operating in the world, which are more or less activated within an individual, group, organizational, or society depending upon history, circumstance, and situational factors.

Over the course of human history, we can trace the initial emergence of each new manifestation of consciousness and how the prevailing paradigm has then shifted from one to the other, but even in today's global society, there are widely different mixes and expressions of these paradigms in different societies, organizations, and people. Although an individual (organization or society) will generally have their center of gravity within one or other value system, they are always expressing a unique mix of more than one, as influenced by their story and personality. In addition, everyone has the capacity for all the value systems to emerge, although the way in which this happens over time will always broadly follow the primary sequence (e.g., you can't fully activate at Pluralistic until you have in some way activated at Achievement, and so on). Graves made a particular point that the emergence of value systems are responses to situational challenges to which the previous way of thinking or operating are no longer providing valid or useful solutions (akin to Einstein's quote about problems not being solved by the same level of thinking that gave rise to them in the first place). The transition from one paradigm to the next is often characterized by an inner or outer crisis of some kind, for example, a crisis of meaning for an individual for whom the Achievement paradigm no longer works or the crisis of survival for an organization which needs to outgrow a rigid hierarchical model if it is to compete successfully with new market entrants (as in the dynamic between big pharma and biotech in the case of the pharmaceutical industry). Turbulence, upheaval, or changing circumstances has driven human progress in the past (see the work of Diamond, 2007), and in the same way it is the challenges (e.g., from market forces and the R&D innovation deficit) facing today's pharmaceutical organizations that will give rise

Value Creation in the Pharmaceutical Industry: The Critical Path to Innovation, First Edition. Edited by Alexander Schuhmacher.

to the new evolutionary paradigm emerging through new styles of leadership, cultural orientations, and organizational models. At the same time, there is never a guarantee that this will happen, at least within today's organizations, and often progress follows the birth of new organizations that are more agile or adapted to present-day challenges, alongside the death of the old. Ken Wilber paraphrases Max Planck when he says "the knowledge quest proceeds funeral by funeral." The history of evolution in nature is littered with long forgotten extinct species and human evolution with disappeared civilizations (and organizations) that failed to adapt and evolve in response to a crisis.

19.5 Inner and Outer Leadership

Let us now explore the dynamic between inner and outer aspects of leadership. This approach holds that leaders' inner orientation, which is made up of constellations of beliefs, assumptions, motivations, mindsets, and ways of thinking which we refer to as paradigms or worldviews, will broadly determine or give rise to their outer expression of leadership style, although the way in which this happens on an individual basis will be influenced by the leader's unique personality, preferences, skills, experience, and so on. If we were to ask a broad mix of people working in organizations what "leadership style" means to them, they will probably refer to styles in terms that describe their outer impact and way of operating, for example, controlling, egotistic, top-down, consensual, democratic, charismatic, motivating, encouraging, empowering, paternalistic, hierarchical, and so on.

The developmental system we will outline provides a way to see the pattern behind these different outer styles and realize that there is a progression from less sophisticated styles to more sophisticated and from styles suited to simple organizational systems and challenges to those needed to deal with the complexities of today. According to the Gravesian model, alongside this progression to greater complexity, there is also a cycling between individualistic value systems and collectivistic value systems, in other words, from those that emphasize individual values to those that place greater value on teams, the whole organization, and even the wider knowledge community. At each turn of the cycle, the collective orientation is always enlarging, that is, from tribe or group, to organization or nation, to society or human kind.

Table 19.1 provides a quick summary of the characteristics of each paradigm and how they translate into corresponding leadership styles. Again, we are skimming the surface here, and for a fuller treatment, I recommend reading the first part of Frederic Laloux's book or dipping into Ken Wilber's comparative analysis (e.g., Wilber, 2000).

Within each stage, there can be healthy and less than healthy expressions of leadership style, both depending upon the individual's level of psychological health and personal development, as well as the suitability of the leadership style to the

Table 19.1 Leadership paradigms and styles summary (Howard, 2015)

Leadership paradigm (inner orientation) + Graves thinking mode	**Leadership style (outer impact) and other expressions**	**Individual or collective orientation and locus of attention + motivation**	**Primary motivations responding to each leadership style**
Magic + *Animistic*	Benevolent *Paternalistic* *Maternalistic*	Collective – tribe or family group	+ Belonging
Impulsive + *Egocentric*	Autocratic *Egotistic* *Dominating*	Individual – own needs	+ Rewards
Conformist + Absolutist	Hierarchical *Controlling* Processing	Collective – roles and rules within structures	+ Responsibility
Achievement + Multiplistic	Enterprising *Rational* Driving	Individual – individual performance in the team	+ Material Success
Pluralistic + Relativistic	Social *Democratic* Relational	Collective – team culture	+ Participation
Evolutionary + Systemic	Evolutionary *Integrative* Holistic	Individual/collective – professional communities	+ Learning/ Transforming

organizational situation and challenges. It has been successfully argued (e.g., Kets de Vries, 2006, p. 24) that in today's modern organizational environments (centered in the Achievement paradigm but with elements of Impulsive, Conformist, and Pluralistic, according to historical, market, and situational influences) that the people who rise to the top of hierarchical and competitive organizations are more likely to have some kind of personality pathology, certainly to be more self-oriented, egotistic, or narcissistic, than the average person. Business folklore is littered with stories of charismatic, powerful business people who, at least on the surface, have been highly successful, but around whom there has been much collateral damage in human terms. Only as the Pluralistic paradigm starts to become stronger is it more likely that genuinely empathetic, other-oriented, well-balanced, personality types are likely to become successful managers and leaders (Table 19.2).

19.6

Dynamics of How Leadership Paradigms Evolve

In our previous description, we have left out the first worldview or paradigm, which Laloux labels *Reactive*, because it is rarely found overtly in today's

Table 19.2 Leadership style descriptions (Howard, 2015).

Benevolent – they lead as the guardian of a community. They tell stories, maintain traditions, and seek to preserve the wisdom of the past
Autocratic – they lead decisively and from the front, they are in charge. They control power and reward loyalty. Their way is the right way
Hierarchical – they lead by passing judgment according to a system of well-defined roles and responsibilities. They follow the established right way to do things
Enterprising – they lead by example and by creating opportunities for the team to succeed. They are driven to achieve goals. They constantly look for better ways to do things
Social – they lead by building consensus and providing opportunities for people to grow and develop. They know there is no universally right ways to do things
Evolutionary–integrative – they lead by responding to situations in whatever style is needed, seeking to create synergy within the wider system. The right way is the way that works
Evolutionary–holistic – they lead by guiding others to be leaders and by creating the context for growth within a healthy system. They are constantly evolving a new way or path

organizations, although echoes of humankind's evolution as small bands surviving as foragers or hunter-gatherers between 100 000 and 20 000 years ago are still present in our deeper psyche and collective unconscious – for example, within our instincts for fight or flight in response to perceived danger. In the same way all human being are deeply impacted and imprinted by the corresponding early experiences of dependent infancy, even though these first few months of life are beyond our conscious memory.

19.6.1 Magic – Animistic

The Magic–Animistic leadership paradigm which is expressed through a Benevolent leadership style is more obviously present in some form within organizations. The paradigm emerged in human history as part of the move toward tribal society some 20 000 years ago, and is often expressed and embedded through tribal or family like metaphors or rituals within organizations or teams, and may become reactivated at times of threat to survival of the group. The organizational model and culture associated with this paradigm does not provide fertile ground for innovation or in fact progress of any kind at all, as the underlying though form is one of the maintaining cycle, as in the cycle of the seasons and the performing of traditions passed on from generation to generation. The Magic–Animistic paradigm is most usefully found today in traditional family businesses which have remained untouched by the influence of technological progress. However, this doesn't mean that distorted expressions of associated leadership styles (e.g., patriarchal, paternalistic, materialistic) are not present in all types of organization, usually as a consequence of psychological dysfunction of individuals who unconsciously meet unresolved psychological needs by taking up permanent parental roles beyond what is healthy in nurturing, mentoring, or protecting those in their charge. I can think of at least one leader in an R&D organization who became seen as benevolent father figure in this way. This may have helped stabilize the organization at a time of turbulence but did not engender the conditions for increased innovation once this was over.

19.6.2

Impulsive – Egocentric

In historical terms the Impulsive–Egocentric paradigm started to emerge with chiefdoms and eventually empires between 10000 and 5000years ago, and in psychological terms it represents the fully formed ego differentiating itself from parental symbiosis, and in this sense is the first truly individualistic (although very egocentric) worldview. The first Impulsive organizations appeared as small conquering armies, and this still represents a powerful organizational archetype today. Although street gangs and criminal organizations today can still be quite close to this model, variations can also be found in small businesses and start-ups that are driven by the energy and ego of the founder and where "their glue is continuous exercising of power in interpersonal relationship" (Laloux, p. 18). More commonly we find both healthy and dysfunctional expressions of power-oriented autocratic styles of leadership present in all types of relationship, often masquerading as more sophisticated styles (e.g., Achievement orientation – for good examples watch the Apprentice reality TV program in the United Kingdom).

From professional observation, a generous dose of autocratic leadership style (founded on a degree of ego-narcissism or at least an inflated sense of self-worth) is very common in a typical start-up organization and can be seen to be part of the mix in many successful biotech organizations. The reason might partly be that entrepreneurs need a degree of inflated self-belief to break through initial barriers and keep their business or project going against the odds. This can also be associated with very creative times for a business, but usually in support of the original business idea, innovation, or purpose. Typically, such organizations arrive at a creative or innovative impasse at some point in their growth, unless the power-oriented leader is able to adapt his or her style or has the wisdom to allow a succession of leadership to take place. This is the first crisis of organizational growth (see The Five Phases of Growth, Larry Greiner, HBR May–June 1998 for a different perspective on this). Often this takes place by default at the point when the biotech business founders sell to large pharma or seek some kind of institutional investment, and whether willingly or not, the style of leadership changes and the organizational structure formalizes and develops to distribute responsibility away from the power leaders and toward smaller units. Sometimes this transition process to a more formal organizational model either inadvertently kills off the original creative culture (with people leaving) or leads to conflict between the start-up founders and the new parent leadership. From big pharma's point of view, this may or may not matter depending upon whether they think they are buying the golden goose (the innovative biotech culture and creative

Value Creation in the Pharmaceutical Industry: The Critical Path to Innovation, First Edition. Edited by Alexander Schuhmacher.

spark) or just the eggs it has already laid (discovery or research projects at various stages within the pipeline that can be adopted and transitioned within their existing organization). This later path is becoming a more explicit strategy for some pharma, but it is still not without its risks.

19.6.3

Conformist – Absolutist

Here we are describing the organizational transition from Impulsive–Egocentric to Conformist–Absolutist. The historical emergence of Conformist started about 4000years ago, with the transition from chiefdoms to nation states and stable civilizations and subsequent founding of the world's great religious traditions. This has been the prevailing organizational model ever since until the last century or two and is still the backbone for much of what we would consider to be the establishment today – church, armed forces, government, and universities, for example. The Conformist–Absolutist organizational model is a significant progression from what comes before in that "organizations can now plan for the medium and long term and they can create structures that are stable and can scale" (Laloux, p. 20). In order to grow, many organizations draw upon the Conformist–Absolutist paradigm by establishing clear roles, responsibilities, and processes than enable this scaling. Many large pharma organizations will have significant elements of this leadership paradigm within their cultural mix, and it has been part of their growth DNA. Pharma also has a strong connection with the academic world where the conformist paradigm is often still prevalent. However, the buildup of bureaucracy, inertia, and conformity that characterizes this model as organizations become larger and larger (sometimes not through organic growth but compounded by acquisition) has certainly been part of the innovation deficit problem. Again, this paradigm contains within it the seeds of its own destruction or at least the death or organizations that fail to evolve beyond it in response to environmental change.

The accompanying change in leadership style is startling in its reversals away from autocratic self-orientation and opportunism – toward duty, responsibility, and professional dedication. The Leadership Development Framework developed by Fisher, Rooke, and Torbert (2000) and Rooke and Torbert (2005) delineates two distinct leadership styles associated with this paradigm – the dutiful Diplomat, who conforms to and enforces the expected norm and the professional Expert, who is dedicated to excellence within their discipline and leads as a role model for those starting out in their profession. This style of leadership is common within the scientific professions that are core to the pharma industry (Biology, Chemistry, Medicine, Data science, etc.), and it is all too common to find senior leaders that are still centered in the Expert style promoted to a senior leadership position for their scientific excellence rather their leadership suitability. Best practice these days is to provide clear parallel career paths within pharma (e.g., scientific, leadership, and business) so that good scientists don't feel they need to aspire

Value Creation in the Pharmaceutical Industry: The Critical Path to Innovation, First Edition. Edited by Alexander Schuhmacher.

to leadership positions for reward or progression. However, there is an underlying cultural drag in the industry that biases toward the best qualified scientist for senior leadership positions and also the Achievement–Materialistic paradigm that give rise to the scientific mindset.

19.6.4

Achievement – Multiplistic

We have already indicated that the prevailing organizational and leadership paradigm in Western society and certainly in business organizations is Achievement–Multiplistic. In historical terms, this emerged in the shape of the western enlightenment something over 200 years ago and has driven not just the explosion of scientific and technological discovery, the industrial revolution, and economic growth, but also the growth and dominance of prosperous modern democratic societies. Three big breakthroughs accompany the emergence of this paradigm which inform the Enterprising style of leadership – innovation, accountability, and meritocracy (Laloux, p. 26). In terms that we understand today, innovation really gets going with this paradigm and leadership style. Leaders operating from this paradigm can "live in the world of possibilities, of what is not yet but could be one day." There is no longer just one right way to do things but a multiplicity of possibilities. They challenge the status quo, always looking for better ways to do something, and they are open to change, uncertainly, and opportunity. Thus they challenged the morbidity and hierarchical inflexibility of Conformist–Absolutist organizations and invented departments that did not previously exist, including R&D, marketing, and product development, as well as the project-driven way of working that has superseded the purely process-driven operating model of Conformist organizations. This paradigm and the leaders who have embodied it are probably responsible for most of the achievements of the pharmaceutical industry over the last 50 years – driving projects that take early discoveries through the pipeline to an end result of effective and marketable drugs. Most of what is consider to be good leadership today is an expression of this paradigm and way of thinking – the Achiever leader encourages and enables teamwork, rewards and recognizes performance, and leads by example.

The growth of the pharmaceutical industry has been a magnificent demonstration of innovation in practice, and looking back has been one of the Achievement–Multiplistic's paradigms great successes! However, here's the rub – it has reached the limits of its effectiveness as the driver of innovation and as we all know diminishing returns have set in (hence the reason for this book), particularly where innovation has been kept broadly within the boundaries of the formal organization. The competitive mindset within the achievement paradigm mitigates against opening up innovation to outside parties who are instinctively seen as a threat. When big pharma has tries to develop open innovation business models (see Schuhmacher and Betz, 2016), there are aspects of the Achievement–Enterprising leadership style that tend to hinder success (e.g., treating partners as suppliers, overelaborating contractual negotiations, not-invented-here attitudes). Even so, the achievement leadership paradigm, driving a vertically integrated closed innovation model, worked very well for a period of time, systematically working through the low-hanging fruit in terms of identifying chemical compounds or biologic processes that meet medical needs and driving through projects to establish their safety and efficacy and take them to market.

Analysis elsewhere in this book points to the specific reasons, but within Pharma's own terms industry decline set in and there is now a growing innovation deficit, which just doing more of the same within the confines of the old model (more targets! more projects! more performance!) will not solve. But there's another rub – the Achievement paradigm is itself now acting as a barrier to the emergence of the next leadership paradigm which we will discuss in the following. As I said in the introduction, the prevailing achievement-oriented leadership paradigm mitigates against a more multidimensional perspective of leadership becoming widespread (it doesn't see the point, because it is confident in its own superiority as a way of looking at the world). So the Achievement worldview and style of leadership have become part of the problem: by over-obsessing on the need for success in the short term (which feeds and is driven by the investment world); by focusing on success and winning rather than purpose; by overemphasizing the rational or cognitive in relationship to the emotional, social, spiritual, and ethical dimensions of human beings; and by maintaining the underlying limitations of the hierarchical system (as the hangover from the previous Conformist paradigm) and over-focusing on management – adding more and more layers of management as the answer to most problems, rather than stripping them away to release the creativity of those who are managed. There are interesting echoes here of the fault lines in our wider modern market capitalist society, which have become increasingly apparent since the start of the global economic crisis in 2008. The innovation deficit in pharma is mirrored by crises throughout business and society as a whole, from how to deliver better health services to how to respond to climate change, and increasingly people are beginning to realize that the answers to these crises may not come from the Achievement paradigm type of thinking.

If you are following this narrative, you might now be asking if there is a leadership paradigm representing a new shift in societal consciousness that addresses these issues of the prevailing Achievement paradigm. Yes there is, but before this arrives, there has been something of a diversion (albeit an essential and valuable one) – with the rapid emergence of the Pluralistic paradigm.

19.6.5

Pluralistic – Relativistic

The emergence of new paradigms is seemingly speeding up as part of the evolution of human consciousness, society, and culture. In the last 50 years or so, the Pluralistic worldview has developed at an astonishing pace and now pervades many spheres of society (e.g., the arts, academia, not-for-profit organizations, left-wing politics, etc.). This is the emergence of postmodernism, partly in reaction to materialistic modernism, of championing the people principle as a counterbalance to the profit principle and of the human perspective as antidote to the mechanistic clunk-and-grind economic progress of the Achievement paradigm. The Pluralistic–Relativistic paradigm brought three significant breakthroughs within organizations (Laloux, p. 32): empowerment and collaboration, values-driven culture, and the stakeholder perspective. These developments are now embedded in every modern large pharma organization, alongside Achievement–Multiplistic's principles of innovation, accountability, and meritocracy. The Pluralistic paradigm brought an openness to collaborative partnerships and a relationship orientation which made it possible for the open innovation paradigm to pick up and flourish within pharma, at least in the more traditional forms such as outsourcing, licensing, joint ventures, and research collaborations (see Schuhmacher and Betz, 2016).

The paradigm is expressed through a more collaborative, democratic, social, relational, and humanistic style of leadership. People are increasingly nurtured, developed, and consulted by leaders. This has certainly made organizations more human places to work and improved the experience of work for many people. There is one problem – although there are examples of value-driven businesses delivering improved shareholder value, there are also examples where it hasn't and even some cases where the Pluralistic paradigm and associated leadership style has become too dominant and performance has got worse, threatening the survival of the organization (e.g., Prudential in the early 2000s). This has contributed to distrust between Achievement–Multiplistic and Pluralistic–Relativistic leaders and to a clash of value systems between Profit and People orientations, waging away beneath the surface. The deeper problem is that despite the human tone that Pluralistic leadership style brings (listening, empowerment, engagement, 360 feedback, etc.), people still do not trust their organizations and will not bring their whole selves to their work (and therefore their full creativity and innovative edge). The fact that they need to be empowered by leaders, engaged by the organization, and enrolled in its purpose means by definition that at some point they have become disempowered (through the concentration of power at the top of organizations), disengaged, and alienated from a purpose that they were not involved in coming up with it in the first place.

Part of the problem is yet again, that the adherents of the Pluralistic paradigm and style of leadership do not see the whole picture, and set themselves against the excesses of the previous materialistic worldview. On one level they maintain that no one's viewpoint is more valid than anyone else's, and on another they also secretly believe that theirs is the right one. Importantly, however, despite its inherent contradictions, by bringing the human being back into the picture, the relativistic perspective lays the ground for the emergence of a truly transformative worldview, and evidence that this is finding its way into organizational and leadership expression has started to emerge.

19.6.6

Evolutionary – Systemic

Management writers, gurus, and consultants have been proclaiming the next great leadership paradigm for some time (e.g., Barrett, 2011) and largely been missing the target, typically by oversimplifying and conflating the old paradigms and by over-idealizing or over-identifying with the new one. What makes Laloux's work (2014) groundbreaking is that he has carried out detailed research of a dozen large organizations where the new worldview has taken shape and describes the Evolutionary paradigm and associated leadership styles based upon evidence of what he found in common. Importantly, he properly draws out the sequence of previous paradigms, and shows how each new way of thinking and operating is both built on the gains of the previous one and is also an emergent response to its inherent limitations. He shows how evolutionary organizations can work radically differently (at once they are more effective, innovative, ecological, and human to work in) to the great majority that we know and experience today. Drawing from evidence, he identities three common characteristics or principles of evolutionary organizations – self-management, wholeness, and evolutionary purpose. He plays with the metaphor or organizations as living systems or organisms with a purpose of their own, in contrast to the clunky and alienating machine metaphor's that identify the Achievement paradigm or the social and family metaphors that signal Pluralistic.

Laloux explores how the structures, practices, leadership styles, and cultures within evolutionary organizations reflect the principles of self-management, wholeness, and evolutionary purpose. He identifies the two necessary conditions for the emergence of Evolutionary organizations – a sufficient level of psychological development of the top leadership (e.g., CEO or founders) – and "enlightened" owners who are willing to embrace and trust the Evolutionary worldview of thee leaders.

The shift to an Evolutionary worldview is of a magnitude greater than any of the previous paradigm shifts we have described. It is variously called *second tier*, *higher order*, or *meta* something for this reason. From this perspective, the leader can work with the whole system of all the previous paradigms or worldviews and see the part they play in the evolutionary process. It is not just another worldview or paradigm, but one that can work with the health of the whole system of paradigms. More importantly for this topic, research has shown (e.g., by Bill Torbert, 2005) that Evolutionary leaders are by far the most successful at implementing large-scale corporate transformation programs. Clare Graves (1970) describes similar findings concerning creativity in finding creative solutions; when comparing groups of people operating from different paradigms and given complex tasks to perform, he found the Evolutionary group would find "unbelievably more solutions than all the other groups put together" and of "an amazingly better quality." Laloux's research comes to very similar conclusions – organizations with Evolutionary leaders are far more effective and innovative than similar organizations working under Achievement or Pluralistic leaders.

In the pharmaceutical industry the Evolutionary paradigm has started to emerge in the form of some of the newer concepts of open innovation, such as discovery alliances, innovation incubators, virtual R&D, crowdsourcing, and Open Source Innovation (see Schuhmacher and Betz, 2016). However, the Evolutionary paradigm is far from taking hold in the pharma industry, and these new ways of working may be hampered by senior leadership decision making that is still grounded in Achievement–Enterprising. None of the pharma companies I have worked with as a consultant nor any that I have knowledge about second hand could be said to have Evolutionary leadership at the most senior level nor in the leadership culture as a whole; they are mostly examples of more or less healthy expressions of a mix of Achievement and Pluralistic leadership, sometimes with unhealthy remnants of Conformist leadership. I have come across Evolutionary leaders working in isolated pockets, mostly a department, project, or lab team, but this is not the same thing, as we will explore in the following. It is more likely that there are examples of successful small biotech companies led by evolutionary leaders, but their challenge is to maintain such cultures as they grow or if they sell to big pharma.

19.7 Leadership at Different Levels within Pharma

So far we have been discussing leadership and innovation within quite abstract terms but with references to the innovation challenges within pharma. We can start to become more situational by first making the distinction between three levels of leadership:

- *Top leadership*: the CEO and possibly the C-suite team leading the organization
- *R&D leadership*: the Head of the Research and Development organization
- *Team or project leadership*: the next three or four levels reporting to the Head of R&D, as well as matrix organization leadership of projects and subprojects

According to Rooke and Torbert's research (2005), only about 5% of Leaders are centered in the Evolutionary leadership paradigm (equivalent to Strategist at 4% and Alchemist at 1% in the LDF system). My own findings from profiling leaders back this up. This means that effectively only 1 in 20 of leaders and managers are even ready to work from this leadership style and many may hold back from doing so because the conditions would not be favorable.

Only at the top level can any influence be directed toward transforming the entire organization through an expression of evolutionary leadership. However, this would appear to be a bit of a fantasy for large pharma, where senior appointments are mostly made within a very Achievement-oriented paradigm (with the possible exception being some private ownership) but might be quite possible within small- and medium-sized biotech, either at the point of start-up or at a key stage in their growth path.

R&D leadership is a more interesting opportunity – there is often a high degree of freedom for a leader in how he or she might run their organization, with relationships across the organization, (e.g., with commercial and manufacturing operations, etc.) working more in the style of collaborative partnerships between business partners than close-knit organizations. The degree of semi-autonomy afforded to some R&D organizations can be high (at least in the good times – when money is tight this can rapidly disappear as I have witnesses in at least one Wall Street-oriented large pharma).

I worked with the Head of Discovery over a number of years within in a medium- large pharma, and within the wider context of aspects of an evolutionary leadership style provided by the Head of R&D, I witnessed a gradual transformation from a less than fully healthy and increasingly unproductive Achievement culture (with limiting influences from a deferential hierarchical legacy culture that was resting upon previous laurels) to a more vital, dynamic, and productive Achievement culture and style of operation. The Head of Discovery's leadership style was centered in Achievement (performance oriented, team-based accountability, open questioning, challenging, debating in team meetings, etc.), but he was sufficiently activated at Pluralistic (supportive of collaborative working, empathy and concern for his people, encouragement of professional development, etc.) and Evolutionary (passionate about meeting medical needs, excited about external collaborations and networking, etc.) to eventually bring the whole group toward greater alignment and innovation within a drug hunting culture. For example, target identification became something everyone in Discovery was involved in, project reviews were more frequent and invited wider input, and everyone became more commercial in their perspective. The Discovery business moved some way in its culture toward the entrepreneurial biotech business. However, the bumpy journey toward this also illustrated how important differences in national or regional cultures and expectations of leadership style can be (see more on this in the following text).

The Head of R&D during this period also introduced a flexible and dynamic project-oriented way of working across the whole of R&D, within which the key leadership role became the project leader rather than the line manager, and nurtured a culture which might be characterized as a mix of Achievement–Pluralistic–Evolutionary in style. The implementation of the new project-led model was hindered by resistance from traditional subcultures (Conformist) and old power bases (Impulsive) protecting their special interests, as well as by the usual communication and relationship issues that tend to accompany Achievement cultures in complex large pharma organizations. Bushe (2010) describes how "interpersonal mush" arises as the natural consequence of not checking out our fantasies and projections with each other as we build evidence for our different realities about what is going on, and shows how leaders need to engage their self-awareness and emotional intelligence, as well as encourage one-to-one practices (mainly Pluralistic) such as "learning conversations." Lencioni (2002) describes how good leaders take this a step further by supporting their teams to build trust, engage in open dialog, make commitments, hold each other accountable, and focus on results. Many of the project leaders and their teams (and subproject teams) during this period within this nameless organization went some way toward enacting these principles and consequently innovating the way that drug development projects could work. Speeding up decision making, running parallel development tracks, killing off cul-de-sac projects early, optimally mixing internal, outsourced, and other partner resources, and continuously involving stakeholders from both upstream and downstream all became part of the new way of working (demonstrating an optimized Achievement–Pluralistic operating model). At the same time, trust with top leadership was always on shaky ground (e.g., much needed investment was never forthcoming), and in the end this proved to be with good reason as the business was sold for a considerable profit to a larger pharma company. And despite the track record of successful progression of drug development projects, the project leadership teams were dispersed and absorbed within a new parent company whose culture and leadership style was a dysfunctional version of Conformist–Achievement (many layers of management, high levels of control, low transparency, rampant politics). As in most cases when a less evolved organization takes over a more evolved one, many of the best people left. The primary drivers behind the changes that eventually undid much of what had been created were of course short-term financial, rather than medium-term value creation (as often espoused from the Achievement perspective) or even long-term medical purpose. The point here is that this conflict of motivations is now endemic in an industry which is increasingly eating itself in frantic efforts to reverse the diminishing returns that have set in from an under-examined operating model and set of assumptions about what works.

Finally, at the micro or local leadership level, a degree of autonomy or freedom can sometimes exist. A colleague and I interviewed a cross section of 50 R&D leaders and managers for a large US and European-based pharma in 2013 and found in many cases that although senior leadership had become increasingly autocratic, controlling, and reactive to short-term financial pressures over a period of about 10years, there had initially been a period of 2–3years when R&D management enabled enough freedom for some project leaders to establish a creative culture within their project team, which had given rise to exceptional innovation performance and rapid project progress. The overriding theme across nearly all the interviews, however, was how the style of senior leaders had increasingly become a barrier to the natural passion and creativity of the majority of a large body of dedicated scientists and project managers, most of whom had come from a legacy organization.

There is a complex interdependency of relationships between (i) collective leadership paradigms, (ii) the style of individual leaders, (iii) the prevailing organizational culture within their sphere of influence, as well as with (iv) the business strategies and models that leaders develop and implement (which are the focus of Chapter 15). Leadership drives innovation in a number of ways, most significantly by introducing dynamic organizational and business models and nurturing healthy cultures within which creativity can take place. Table 19.3 summarizes how different leadership styles give rise to different organizational models and

Table 19.3 Leadership style and organizational culture, innovation, and situationality.

Leadership paradigm (inner orientation) ***+ style*** *(outer expression)*	**Cultural orientation** ***+ Organisational model***	**Structure/discipline versus freedom/ experimentation**	**Innovation edge**	**Situational suitability**
Magic + *Benevolent*	Family + *Circle*	Low structure Low freedom	Resistance to change, protective of what is best from the past	Stable family like groups or not-for-profit communities
Impulsive + *Autocratic*	Power + *Autocracy*	Medium structure Low freedom	Supports owner or founder centred innovation	Start-ups, owner managed businesses & autonomous units
Conformist + *Hierarchical*	Role + *Hierarchy*	High structure Low freedom	Slow systematised or periodic innovation – e.g. quality and process improvement	Stable bureaucracies and large process operations
Achievement + *Enterprising*	Achievement + *Adapted hierarchy*	Medium structure Medium freedom	Incremental or step innovation in competitive environments – mostly in-house innovation	Performance oriented and business-like organisations
Pluralistic + *Social*	Relationship + *Flatter hierarchy*	Medium structure Medium freedom	Step innovation through collaborating – e.g. conventional forms of open innovation	Human oriented organisations, communities of practice
Evolutionary + *Systemic/Holistic*	Evolutionary + *Self-management*	Low structure High freedom	Step or transformative innovation through collaborating – e.g. new forms of open innovation	Self-managing teams, virtual projects, communities of practice

cultural orientations, for example, autocratic (power orientation), hierarchical (role), enterprising (achievement), social (pluralistic), integrative (knowledge), and holistic (evolutionary), and what innovation looks like within these orientations.

The leadership style best suited to engendering R&D innovation will depend upon many situational factors. Organizations exhibit a mix of developmental stages (and this can vary between different parts of the organization, as we have seen previously), and leaders need to be sensitive to bringing about the optimum culture for their set of circumstances. An important characteristic of evolutionary leaders working in sub-evolutionary organizations is their ability to be flexible, adapt their style, and work within the prevailing leadership and cultural paradigm when necessary. This chameleon-like nature is a frequently observed facet of evolutionary leaders. They consider not just their own natural preferences or the prevailing organization-wide culture but the specific cultural mix and health of their part of the organization. This implies the need for a culture change or development strategy to bring about the optimum conditions for innovation to take place. The evolutionary framework we have introduced in this chapter can be used as the primary diagnostic and design tool for developing this, but with global teams and operations, it can sometimes be useful to think more deeply about the ingrained and unconscious aspects of national cultures.

A different approach to understanding organizational and national culture was developed by Geert Hofstede in the 1980s, (Hofstede, 1991), then at IBM and now Professor of Organizational Anthropology at the University of Limburg, Holland. He has identified five cultural dimensions in his research into cultural difference of 50 countries: Power Distance, Individualism/Collectivism, Masculine/Feminine, Uncertainty Avoidance, Long-term orientation. This framework has been used to profile national cultures and can be used to profile your organizational culture, as well as individual leaders (so that they can compare themselves to national and organizational cultures). In the example of the Discovery organization I cited previously, we were working within an interesting mix of US, European (primarily German), and Indian cultures. Challenges emerged from the contrasts between US individualism (speaking up comes naturally) and German collectivism (works councils and water coolers), between the Indian need for high Power Distance (you expect to be told what to do) and the German expectation of being consulted first, and between high Uncertainty Avoidance in Germany (a plan, process, and structure for everything) and more tolerance of flexible ad-hocracy in India. Of course the important thing is to generate awareness and dialog about these preferences so that a truly international, transcultural team can form, which it did over time.

19.8 Optimizing Innovation in Different Organizational Models and Cultures

The critical challenge in relation to culture and innovation is in finding the right balance between structure (or discipline) and freedom (experimentation).

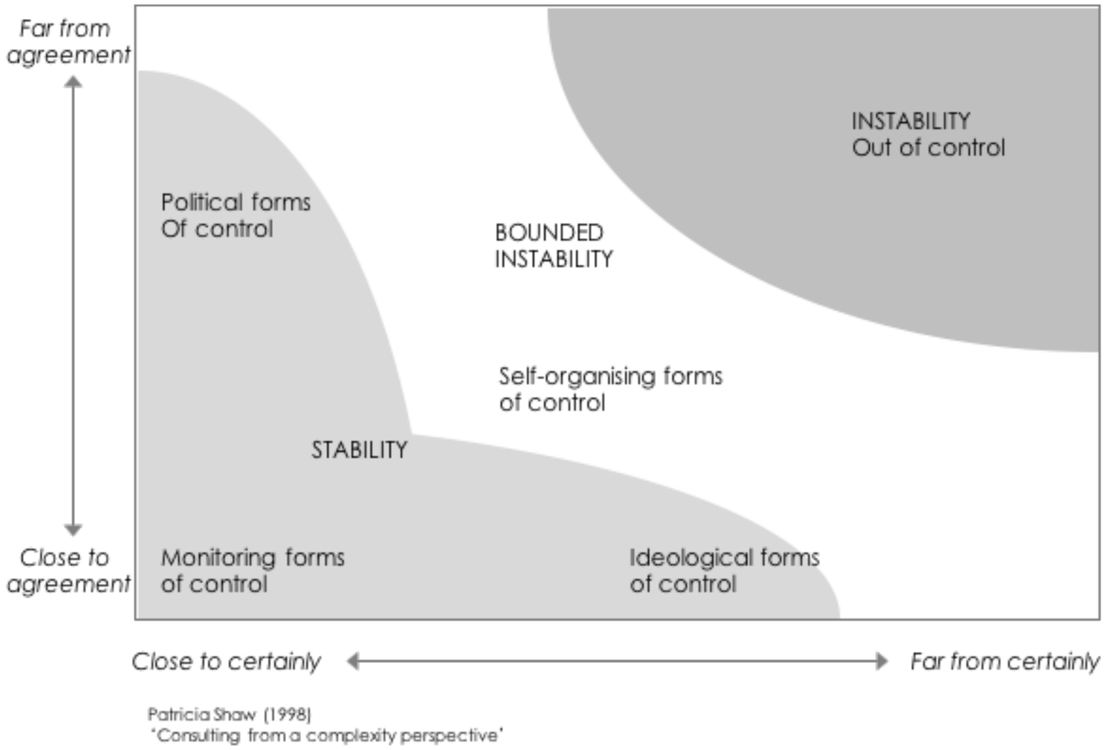

Figure 19.2 Innovation at the edge of chaos.

Complexity theory shows us that innovation is optimized at the "edge of chaos," where there both is enough structure and enough freedom to allow emergence to take place (Shaw, 1997).

One of the most significant theoretical influences on organizational development thinking over recent years has been the embryonic field of chaos and complexity theory. This mirrors the emergence in practice of the Evolutionary leadership paradigm and organizational model and provides a theoretical body of knowledge that can be drawn upon to understand how self-organizing or complex adaptive systems work in the human organizational world.

Complexity theory shows us that innovation is optimized at the "edge of chaos," or what is called *bounded instability*. Another metaphor would be the "Goldilocks principle," where the leader needs to provide enough structure to get things going in the right direction but not too much so that it gets in the way of the creativity of passionate individuals and self-organizing teams (Figure 19.2).

Early stage research requires an enterprising and empowering leadership style that encourages freedom to experiment and the exploration of opportunities through collaborative engagement with both internal and external networks. The challenge for some large pharmaceutical companies is to reproduce the kind of creative culture that exists in small biotech, and many Achievement-style leaders do not understand how to do this. Others switch to an in-licensing or buy-in strategy that also requires an experimental and collaborative outlook that tends to be lacking in risk-averse pharma.

Later stage development requires more discipline and less freedom as well as a project-oriented culture that can drive performance in an adaptive way. The challenge here is to reduce the levels of organizational bureaucracy and over-complexity that often accumulate in large pharmaceutical companies, particularly as a legacy of multiple mergers and acquisitions.

19.9 How Do We Support the Development of Evolutionary Leaders?

Laloux's work in "Reinventing Organizations" is more about the organizational model arising out of the Evolutionary paradigm than the style of leadership that supports it. He describes the leaders involved in his researched organizations as people and sketches out some commonalities in thinking, behaviors, and styles, but doesn't take this very far in terms of generalizing a leadership model. He illustrates how challenging it is for leadership working from this paradigm, showing how it is mostly about connecting with purpose, establishing (and continuously reestablishing) context, setting up the minimum key principles and processes for an Evolutionary paradigm to work, and then letting people get on with it, with buckets of trust, transparency, openness, and authenticity. Trust is critical – in many Pluralistic Pharma organizations, I have seen employees allowed to work on a pet project of their interest 1 day a month. In some Evolutionary organizations this is increased to 1 day a week. And in others this has been successfully extent to full time.

The challenge is for evolutionary leaders to let go of power, to no longer be the decision-making bottleneck, by letting decision be made at the level at which they are relevant (but always following the principle of decision making involving those impacted by the decision and those with relevant expertise). The top-level leaders in these researched organizations tend to spend their time doing whatever they are good at, getting involved in strategic research or developmental projects, being a role model for working in a different way, and offering a reference point when things go wrong. Their authority emanates from their moral leadership rather than their formal role, and people listen to them because they are respected for who they are and what they bring (and if they sense they are no longer relevant, they move onto something else). One instructive example is how the leader of a healthcare organization of some 7000 neighborhood nurses leads primarily by writing a weekly blog, which on average is voluntarily read by some 5000 of the nurses within a day of posting.

Laloux relates the life stories of these evolutionary leaders but doesn't discuss how to actively develop leaders toward an Evolutionary perspective or style. He doesn't believe in the possibility of influencing the vertical development of leaders (i.e., supporting a shift from one leadership paradigm to another), describing this process of what we call vertical development as a complex and mysterious process that happens from within and cannot be imposed on someone from the outside (p. 238). This is where I depart from Laloux in that I have witnesses many examples of leaders being supported by others to make some kind of transition of leadership paradigm. Not that I am suggesting that Managers, HR/OD practitioners, or coaches should drive the vertical development agenda for someone, but they can sense and support their emergent self and desire to grow, and they may be drawn toward people for whom the will for inner growth is strong. Admittedly this perspective will be a waste of time with many leaders for whom the best developmental path is still a horizontal one (e.g., becoming a better, more congruent, and healthy Achievement-style leader; developing core skills such as interpersonal awareness; change management; and team building).

So how might we develop leaders that show some readiness and capacity to be able to engage with and respond to this emerging evolutionary paradigm?

Much leadership development activity (coaching, education, training, development programs, etc.) is already about helping leaders increase their options for how they work with people, recognize and develop or strengthen alternative styles, and adapt their style to the needs of the situation (as touched upon previously in this chapter). Some leaders are more able to adapt their style to the needs of their situation, others are unlikely to change their style much over time and can only realistically be helped to modify or improve their style. Working in this dimension is the starting point for recognizing a leaders' capacity for vertical development, and their willingness and capacity for being situationally flexible. Of course it will also help to profile a leader to assess their mix of leadership paradigms and styles (alongside more conventional personality and behavioral assessments). However, it is more likely through a coaching or mentoring dialog that one will help draw out the leaders valency for this kind of development path.

19.10 What Does It Mean to Operate from the Evolutionary Paradigm?

Evolutionary leaders are concerned with the development of their organization in relationship to uncertain and changing external environments and in pursuit of long-term relevance, viability, and sustainability. Evolutionary leadership involves developing an extra dimension, a kind of higher awareness or transcendent capacity for being concerned with the long view and the bigger picture (but not at the neglect of the immediate and the shorter term).

An evolutionary leader is grounded in the evolutionary worldview or paradigm. What does this mean? An evolutionary worldview is forward looking, dynamic, challenging, and emergent. The central tenet of this worldview (see Phipps, 2012) is that *we are moving* (or progressing) and that this movement is motivated by evolutionary purpose. Despite the occasional illusion of continuity or stability, everything in our modern world is moving and changing at an accelerating rate. Such a worldview not only embraces this but also seeks to consciously participate in and influence the direction of the evolutionary process. An evolutionary leader

Value Creation in the Pharmaceutical Industry: The Critical Path to Innovation, First Edition. Edited by Alexander Schuhmacher. Published 2016 by Wiley-VCH Verlag GmbH & Co. KGaA.

embraces this worldview in relationship to whatever they are leading – a group, an organization, community, society, network, and so on. This means that they are not just leading in their organization in the present but in dynamic relationship to an emergent future and their purpose for it. They are looking beyond their organization toward its place within a changing and evolving complex environment.

Evolutionary leaders are concerned with seeing the bigger picture and taking the long view. They are able to detect underlying patterns (meta-trends), they nurture a generalist capacity for weaving together different disciplines or approaches (integral thinking) and they are positive, proactive, and optimistic about engaging with the future (emergent awareness). These meta-skills allow them to respond appropriately and dynamically to an ever unfolding future that at the same time they are attempting to help create or influence.

19.11 Leadership and Personal Mastery

At the core of any approach to developing evolutionary leadership is personal mastery – and the individual's journey of self-development. Without a commitment to self-development, attempting to lead others can be a hit-and-miss affair. Further, personal mastery isn't something you get done and move on from, but part of the healthy ongoing development of effective leaders throughout their career. This is about the personal alongside the professional, and by personal we include the psychological, emotional, moral, cultural, social, and spiritual parts of ourselves. Developing personal mastery involves several different aspects, which include awareness, understanding, capacities, and skills. Building awareness, capacities, and skills comes from a mix of experience and personal development that is tailored to the individual and will most likely involve coaching, mentoring, group work, training, and development programs. Developing knowledge or understanding can also involve more conventional and self-directed learning.

Our description of evolutionary leadership may sound like a tall order for someone to embody to aspire toward. Can these capacities be learned and developed? Only if an individual has the desire and inclination, the passion for inner as well as outer learning and growth, and is willing to ask for help. The self-developing leader who in serious about progressing their development might start by assessing themselves (perhaps with the help of a coach or facilitator) against the following dimensions of leadership (see Evans, 2015 for a fuller exposition of the model I have drawn from) and related meta-skills:

1) *Self-**reflection** and self-awareness*:

– Ability to **self-reflect** and build self-awareness

– Building healthy sense of **self and identity**

2) *Awareness of difference in people and your **impact** on others*:

– Awareness of your **impact on others and** being **authentic** in relationship with others

– **Psychological mindedness** and **developmental awareness**

3) ***Systemic*** *and meta-awareness*:
   - Recognizing and holding **multiple perspectives**
   - Able to **move between different levels**, for example, personal and practical, business, and psychological

4) *Activating your* ***will*** *to make things happen*:
   - **Standing up** in the face of resistance, inertia, or the existing agreement
   - Using yourself as an **instrument of change**

5) *Openness to* ***help or support*** *from others*:
   - **Asking** for help and support
   - **Receptiveness** and responsiveness to feedback and input

6) *Connection with* ***purpose***, ***meaning***, ***and values***:
   - Distinguishing between ego needs and your **purpose** or vision
   - Creating context for **shared purpose**

This framework will look a little different to the usual leadership competency or style model used within modern Achievement-oriented pharma. Behavioral competency and skills approaches are still useful in developing leaders to a certain level (e.g., communication, interpersonal skills, team leading, motivating others, customer focus, change management, creative process management, etc.) but will not necessarily take you beyond the prevailing leadership paradigm. Dynamic approaches that include more of the whole human being (e.g., Dotlich *et al*., 2006) provide an inspiring context but tend to reduce personal development to conventional skills improvement at the practical level. Working on skills is necessary and so is working on meta-skills, which involves exploring both deeper and higher aspects of the unconscious self. As I have suggested earlier, not everyone is ready for this work and you will know when you are. The usual signal that you are starting to make a transition from (being centered in) one leadership paradigm to another is the occurrence of some kind of personal or professional crisis. Personal crisis can take many shapes and forms, such as an inner crisis of meaning and values (what used to get you up in the morning doesn't any more) or can be triggered by an external breakdown of circumstances (e.g., losing your job, key relationships, or health). The important first step when you realize you are in a personal crisis is to find someone to talk to about it. The second is to realize that there may be opportunities for growth and learning inherent in your changing situation. The third is to make some commitment to your personal development as described previously.

19.12 Building an Evolutionary Bridge to Release Innovation

In this last part, I also want to offer the reader a different and perhaps more pragmatic perspective on the evolutionary paradigm and the challenge of sourcing, enabling, and activating new strategies for more open innovation. How might leaders of large and complex pharma organizations establish the conditions to release a new and sustainable wave of open innovation, without completely deconstructing their existing organizational model? Is there an evolutionary bridge or platform that can be established to create the conditions for innovative pockets of enhanced innovativeness to emerge and experiments with new models to be successful? In other words, if your organization doesn't yet have the conditions (e.g., top leaders psychological development centered in Evolutionary thinking, enlightened owners supporting long-term purpose over profit, etc.) to give rise to the Evolutionary leadership paradigm in its full manifestation (self-organization, wholeness, evolutionary purpose, transparency, trust across the whole organization, etc.), what should be done in the meantime to release the latent innovative potential of the organization? What is the next best option? Another way to look at this is to ask, what can leadership do in terms of developing the organization to support both the emergence and chances of success of new business strategies, such as open innovation and business models based around open principles?

This approach explores the underlying conditions for achieving greater innovation within large organizations in terms of critical capabilities that emerge within a recognizable pattern under Achievement–Multiplistic and Pluralistic–Relativistic leadership. In short, innovation can be seen as one of six critical interdependent organizational capabilities. These are learning, change, innovation, collaboration, agility, and engagement. Top leadership may need to focus on developing one or more of the other capabilities in order to establish the ***evolutionary bridge*** or foundations for an innovative culture to more fully emerge, and in the pharma industry, this means supporting experimentation with new forms of open innovation.

Organizations evolve in dynamic relationship with their external environment (e.g., markets, customers, technologies, competitors, partners, and other stakeholders). Establishing an *evolutionary bridge* means having the capability to adapt or change with the times, to be sustainable, resilient, and enduring. It also gives expression to the proactive desire to influence the direction of change and to co-create the emergent future. The test of sustainability is whether the organization can navigate successive periods of disruptive or turbulent environmental change, as well as succeed and prosper in the good times. Such an organization needs elements of evolutionary leadership, even if it continues to be anchored in the Achievement paradigm, and a culture that continues to attract or give rise to evolutionary purpose.

What are the critical and essential capabilities that leaders need to develop and nurture within their organizations to achieve evolutionary sustainability and to establish such an *evolutionary bridge*? Four years ago myself and three colleagues embarked upon exactly this inquiry and the outcome can be summarized as the "big six" critical organizational capabilities: **Learning**, **Change**, **Innovation**, **Collaboration**, **Agility**, and **Engagement**. The content of this list should not in itself be surprising – these are the most prominent themes that have come to the fore in organizational thinking and practice over the last 25 years, in roughly the order in which we have listed them. We would argue that other themes or topics have come and gone or can be fitted within one of these six, but that these six remain as the most important and essential capabilities an organization needs today. What is more surprising is how the emergence of these themes per se tells a story of organizational evolution as a response to increasing complexity and uncertainty over the years.

Learning is the lifeblood, the way that an organization benefits and builds from experience. **Change** is both about having resilience and responsiveness to events and an ability to move forward and adapt to a changing environment. **Innovation** is about moving onto the front foot and translating learning and change into growing value for the organization. **Collaboration** enables greater innovation (by easing the path from closed to open models of innovation) and builds sustainability in an increasingly complex world where you cannot survive alone. **Agility** is the ability to pull all these together in adaptive and responsive open or virtual business models that can stay ahead of the external pace of change. **Engagement** is the human piece, the need to be authentic, emotional, and relational.

These capabilities are separate but interconnected: for example, the ability to learn gives rise to the need to manage change, change is insufficient for sustainability without innovation, successful open innovation is dependent upon collaboration, collaboration opens the path to greater agility and experimenting with more open business models, but agility and virtuality without engagement lack the human connection needed to stay in relationship with today's employees, partners, and customers.

Many large pharma organizations today are currently focused on the latter two of these – Agility and Engagement. Agility (e.g., see Kotter, 2012) is mostly about creating virtual and flexible operational models that seamlessly optimize the involvement of external and internal resources according to changing needs, driven by strategies and projects, for example, crowdsourcing within communities of practice for complex problem solving and outsourcing to CROs and CMOs for different parts of the pharma value chain. Engagement (or reengagement of the people and their purpose) is trickier for reasons we have already discussed, and especially given the disruption that seemingly continuous mergers, reorganizations, and restructurings have upon a pharmaceutical company's workforce. The current trend seems to be to restructure toward smaller organizational units that people can identify with more easily.

If any of the previous capabilities have not been adequately established (or have waned or been neglected), then these need to be addressed as well. In fact, it is likely that a process of continuous renewal is needed in relationship to all six. The key point here is to see their interdependence – and that innovation should not be addressed in isolation from an evolutionary leadership perspective. Building an *evolutionary bridge* can start with an appraisal of your relative strengths and developmental challenges for each of these "big six," followed by an exploration of how they need to come together for your organization to achieve innovative growth.

Our working definition of each of the six critical organizational capabilities is shown in Table 19.4.

Table 19.4 Definitions of the six critical organizational capabilities.

Learning
Learning and development as a continuous process at individual, team, and organizational levels
Change
Leading and managing change in response to external or unplanned events as well as proactively to transform or develop the organization
Innovation
Ability to continuously reinvent the organization and channel innovation in pursuit of sustainable value creation
Collaboration
Working collaboratively and partnering effectively both inside and outside the organizational boundary
Agility
Capacity to efficiently adapt and evolve in response to external opportunities and threats without needing to initiate disruptive change
Engagement
An organization's ability to engage authentically, emotionally, and ethically with its people, customers, and other stakeholders

19.13

Conclusions

In this chapter we have taken a multi-perspectival view of leadership and its impact on innovation in the pharmaceutical industry. This is a complex topic for which answers are clearly difficult to find, or it wouldn't attract such interest and frustration in equal measure. Rather than restricting our answers to the latest examples of best practices from the field (a very Achievement-style approach), we have sought to equip the reader with an appreciation of leadership as a whole and the developmental perspective in particular. We have described the basic developmental spiral following Frederic Laloux's recent work on organizational models and shown how leadership styles are external expressions of internally held leadership paradigms, which are themselves both reflections of broader shifts of consciousness within society, as well as the process of individual human development. At the same time, leadership style is always individualized and unique, so it helps to be aware of how personality and other factors influence the way that leaders operate.

We have applied all this within the situational context of the pharmaceutical industry's innovation deficit. Leadership style must adapt to situational need and cultural context. There is evidence of the limited ability of the Achievement–Enterprising leadership paradigm style to reinvigorate innovation, particularly through the vertically integrated closed innovation model. The rapid rise of the Pluralistic–Social paradigm over the last 20years has brought more collaborative styles of leadership which enabled the emergence of conventional forms of open innovation, but this too may have peaked in terms of its impact on innovation productivity. The answers to the innovation deficit appear to point toward the Evolutionary leadership paradigm, either in terms of leaders evolving completely new ways for pharma organizations to work or by building an evolutionary bridge that supports new open innovation strategies and business models (that can work within existing big pharma organizations).

I have challenged the reader to reflect upon their own leadership development and how they might activate the evolutionary perspective for themselves. Coaches and HR professionals might think about how they support leaders to develop in this way. For organizations that are likely to remain sub-evolutionary in their organizational model, I have outlined how to build an evolutionary bridge based upon six interdependent capabilities to support the emergence of new forms of open innovation. For senior leaders who recognize the evolutionary paradigm within themselves, I wish you good luck with growing the next generation of biotech and pharma organizations.

References

Barrett, R. (2011) *The New Leadership Paradigm*, Lulu.

Beck, D. and Cowan, C. (1996) *Spiral Dynamics*, Blackwell Publishing.

Buckingham, M. and Clifton, D. (2005) *Now Discover Your Strengths*, (StrengthsFinder). Free Press.

Bushe, G. (2010) *Clear Leadership: Sustaining Real Collaboration and Partnership at Work* (revised edn), Davis-Black, Boston, MA.

Collins, J. (2001) *Good to Great Leadership*. Creative Learning Consultants Limited (2015). Random House.

Creative Leadership Consultants Limited (2015). Building Tomorrow's Leadership Mindset, http://www.clc.co.uk (accessed 11 August 2015).

Diamond, J. (1997) *Guns, Germs and Steel: The Fates of Human Societies*, W.W. Norton & Company.

Dotlich, D., Cairo, P., and Rhinesmith, S. (2006) *Head, Heart and Guts*, Mercer Management Journal.

Evans, R. (2015) *5DL: Five Dimensions of Leadership*, Creative Leadership Consultants.

Fisher, D., Rooke, D., and Torbert, W.R. (2001) *Personal and Organisational Transformations through Action Inquiry*, Edge/Work Press, Boston, MA.

Gardner, H. (1983) *Frames of Mind: The Theory of Multiple Intelligences*, Basic Books.

Goleman, D. (1996) *Emotional Intelligence*, Bloomsbury.

Goleman, D. (2007) *Social Intelligence*, Arrow Books.

Graves, C. (1970) Levels of existence, an open system theory of values, *J. Humanist. Psychol*. 1970. **10** 2, 131-155

Greenleaf, R.K. (1977) *Servant Leadership*, Paulist Press.

Heron, J. (1999) *The Complete Facilitators Handbook*, Kogan Page Limited.

Hersey, P. (1985) *The Situational Leader*, Center for Leadership Studies.

Hofstede, G. (1991) *Cultures and Organisations; Software of the Mind*, McGraw-Hill.

Howard, A. (2015) Background to the Leadership Styles Profile, http://www.psychosynthesiscoaching.co.uk/resources-coaches/

Jaworski, J. (1996) *Synchronicity: The Inner Path of Leadership*, Berrett-Koehler.

Kegan, R. and Lahey, L. (2009) *Immunity to Change*, Harvard Business School Press.

Kets de Vries, M. (2006) *The Leader on the Couch*, Jossey Bass, Chichester.

Kohlberg, L. (1984) *The Psychology of Moral Development: The Nature and Validity of Moral Stages*, Harper & Row.

Kotter, J.P. (2001) What leaders really do. *Harv. Bus. Rev.*, **79**, 85–96.

Kotter, J.P. (2012) Accelerate!. *Harv. Bus. Rev.*, **90** (11), 45–58.

Kouzes, J. and Posner, B. (2002) *The Leader- ship Challenge*, 3rd edn, Jossey-Bass.

Laloux, F. (2014) *Reinventing Organisations*, Nelson Parker.

Lencioni, P. (2002) *The Five Dysfunctions of a Team: A Leadership Fable*, Jossey-Bass.

Leslie, J.B. and Palmisano, K. (2014) *The Leadership Challenge in the Pharmaceutical Sector*, Center for Creative Leadership.

Loevinger, J. (1998) *Technical Foundations for Measuring Ego Development*. Lawrence Erlbaum Associates.

Phipps, C. (2012) *Evolutionaries: Unlocking the Spiritual and Cultural Potential of Science's Greatest Idea*, Harper.

Rooke, D. and Torbert, W.R. (2005) Seven transformations of leadership. *Harv. Bus. Rev.*, **83** (4), 66–76, 133.

Schuhmacher, A. and Betz, U.A.K. (2016) The pharmaceutical industry is opening its R&D boundaries, in *Value Creation in the Pharmaceutical Industry*, Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.

Senge, P. *et al*. (2005) *Presence: Exploring Profound Change in People, Organizations and Society*, Nicholas Brealey Publishing.

Shaw, P. (1997) Intervening in the shadow systems of organizations: consulting with a complexity perspective. *J. Organ. Change Manage.*, **10** (3), 235–250.

Shaywitz, D. (2013) Does Pharma's Innovation Difficulties Reflect Bad Leaders or Tough Circumstances? Forbes (Mar. 7).

Spillane, J. (2006) *Distributed Leadership*, Jossey-Bass, San Francisco, CA.

Tannenbaum, R. and Schmidt, W. (1973) How to chose a leadership pattern, *Harv. Bus. Rev.*, **51**, 162–180.

Thamhain, H. (2003) Managing innovative R&D teams. *R&D Manage.*, **33** (3), 297 – 312.

Torbert, W.R. (2014) "Vertical" vs. "Horizontal" Leadership Development, http://www.williamrtorbert.com/vertical-vs- horizontal-leadership-development/ (accessed 11 August 2015).

Wade, J. (1996) *Changes of Mind*, SUNY Press.

Wilber, K. (1999) *Integral Psychology*, Shambhala Publications.

Wilber, K. (2000) *A Theory of Everything*, Shambhala Publications, Inc.

Zohar, D. and Marshall, I. (2000) *SQ – Spiritual Intelligence, the Ultimate Intelligence*, Bloomsbury.

Abstract

Leadership style drives innovation by nurturing organizational cultures within which creativity can take place. Leadership styles are external expressions of internally held leadership paradigms, which are themselves both reflections of broader shifts of consciousness within society, as well as the process of individual human development. Complexity theory shows us that innovation is optimized at the "edge of chaos," where the optimum balance between structure and freedom is found. Early stage research requires a high level of freedom to experiment and explore opportunities through collaborative engagement with both internal and external networks. The challenge for many large pharmaceutical companies is to reproduce the kind of creative culture that exists in small biotech; however, many leaders do not understand how to do this. Others switch to in-licensing or buy-in strategies that also requires an entrepreneurial outlook to be successful and that tends to be lacking in risk-averse pharma. Altogether, there is growing evidence of the limits of the prevailing leadership paradigm (achievement–pluralistic) in addressing the innovation deficit. The answers point toward nurturing the evolutionary leadership paradigm and building an "evolutionary bridge" of critical capabilities which make it possible to more fully embrace open innovation business strategies and models.

Keywords

leadership; styles; paradigms; evolutionary; organizational; culture

Affiliation for the Author: Aubyn Howard Château Chavagnac, 07610 Lemps, Ardèche, France

N.B. This is a .pdf of a pre-publication draft of this chapter and there are small differences, for example in formatting, with the published book.