Chapter 7
“Here Be Dragons”: Barriers to and Opportunities for Change

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The phrase “hic sunt dracones” or “here be dragons” was used by early map makers to indicate unexplored areas (Shirin 2011).

Inclusiveness in veterinary medicine will ultimately entail two distinct but closely related achievements: 1) a broad-based cultural competence across the profession, and 2) an incoming stream of new entrants to the profession whose demographics with regard to race, ethnicity, gender, gender identity, sexual orientation, ability, and religion approximate those of the general public. The journey toward inclusiveness is strewn with challenges along the way. However, these challenges are rightly framed as opportunities for improvement and progress. Clearly identifying such opportunities provides direction for the way forward.

At the outset, it is critical to recognize the complexity of the journey toward inclusiveness. In that regard, success will require a systems approach to help “find a way” because changes, improvements, or shortcomings in one phase of the system will almost invariably be dependent, and/or have an impact, on the situation in the rest of the system. In addition, dealing effectively with the complexity will require clear enumeration, recognition, and understanding of the key issues, challenges, and opportunities we face, in effect to help “make a
way.” Ultimately, it will be vital that we then consider these factors together in the systems context.

**Need for a Systems Approach**

The pathway to the veterinary medical profession involves many steps in series along the way. Each step has a plethora of factors that can impact the likelihood of arriving at that step, the probability of successfully completing the step, and even the length of time it takes to complete some of the steps. For purposes of analysis, this entire picture is best depicted as a complex, dynamic system, involving both distinct states and rates.

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**Figure 1. Systems model of the pathway to careers in veterinary medicine**

Figure 1 is a depiction of the educational system that leads to veterinarians’ careers. The system contains eight distinct states (pre-K, K-5, 6-8, 9-12, 13-14, 15-16, 17-20, 20+), mostly in series, that precede the final state, careers in veterinary medicine. Prospective veterinarians can enter or exit this system at any one of these eight states. As such, recruitment and retention are critical factors at each state.

However, requirements for successful recruitment can vary considerably from state-to-state. For example, the information, experiences, and people (influencers) that can lead to successful recruitment of prospective veterinarians into this system are obviously different for preschoolers than they are for those attending high school.
Similarly, the factors that can lead to successful recruitment clearly vary by the specific recruitment or retention target. For example, successful recruitment of prospective veterinarians from the dominant culture is almost certainly different from successful recruitment of candidates from disadvantaged backgrounds and/or minority communities, even within any of the eight specific preveterinary states presented in figure 1.

The imperative of the narrative in chapter 4 suggested that consideration of both the parallel sequencing of identity exploration and affirmation and career decision-making steps are necessary if we are going to attract youth to consider the veterinary medical professions. As the complexity of the challenges is further illuminated and superimposed on the veterinary medical career pathway model in this chapter, attention must also be given to the age-appropriate cultural acuity of the intervention.

Not surprisingly, the requirements for successful retention of prospective veterinarians in this system also vary from state-to-state and from culture-to-culture. Failure to recognize the complexity of this system and lack of attention to marked state-to-state and intercultural differences will almost certainly lead to less-than-desired success in terms of the outcome population of veterinarians. At the very least, it is clear from this perspective that changing the demographics of the veterinarian population is a complex, long-term process that begs a structured, carefully designed, disciplined approach. Success will require thorough consideration of critical determinants for recruitment and retention across cultures for each of the eight preveterinary states. And success will clearly require an organized, sustained effort over time in light of the key issues, challenges, and opportunities that exist.

Key Issues, Challenges, and Opportunities

In seeking to enhance inclusiveness in the veterinary medical profession, a number of key issues exist, presenting critical challenges and opportunities throughout the pathway to careers in veterinary medicine. Addressing these issues will be vital steps toward success in the future.

Admit There Is a Problem

In considering the key issues, challenges, and opportunities, it is important to note up front that not everyone in the veterinary medical profession agrees that the lack of diversity is a problem. If we are to engage fully in the structured, disciplined, organized, sustained effort described above, however, we must first agree that in-
Navigating Diversity and Inclusion in Veterinary Medicine

Increasing diversity and inclusiveness will lead to a stronger profession. Conversely, it is important to recognize collectively that failure to pursue advances in diversity and inclusiveness will have a detrimental impact on the future that could be attained by the veterinary medical profession.

On careful evaluation, at least four noteworthy perspectives on the potential strengthening of the veterinary medical profession through enhanced diversity and inclusion emerge. These include: US population demographics, social justice, inherent strengths of divergent thought, and the business case.

Marked demographic patterns of relevance to the veterinary medical profession have been emerging in the US for quite some time. Some of these are the result of ongoing demographic shifts, and others are likely long-standing patterns that are just now becoming known. Interesting facts to consider (US Census Bureau 2010) include: among Americans age sixty-five and older, there were an estimated 3.9 Caucasian/White people for every person of color based on the 2010 census; for Americans below age forty-five, the ratio was 1.3-to-1; among American children below age five, the ratio was 1-to-1. In addition, from the 2010 census, 75 percent of the children under age five in California were non-Caucasian/White; the US Latino population (in the 2010 census, “Hispanic or Latino” refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race) grew 43 percent in the last decade, compared to 15.4 percent for the US African American population, and 9.7 percent for the US population as a whole; the US Latino population is now 20 percent larger than the US African American population. The lesbian, gay, bisexual, and transgender (LGBT) community in the US is estimated to comprise up to 5.9 percent of the over-eighteen population (Gates 2011).

As presented in chapter 2, it is evident that the veterinary profession does not truly reflect the US population based on the core demographic dimensions of race/ethnicity, gender (based on student populations), or sexual orientation. Because these critical demographic characteristics lie at the foundation of individual identity, effective cross-cultural communication becomes a critical issue. In addition, it is unreasonable to expect that we, as a profession, could fully comprehend the culturally based nuances inherent in the demand for veterinary services if the members of our profession do not adequately reflect the multiple cultures we seek to serve. If we are to remain relevant as a profession, veterinary medicine must work diligently to include a much more diverse representation of US society.

Beyond the issues of cross-cultural communication and culturally unique demands for veterinary services, the lack of representation in the veterinary medical profession raises issues related to social justice. Although full exploration of the
The social justice dimension is certainly beyond the scope of this treatise, a brief look at some of the questions that might be raised by the relative lack of representation is warranted.

Fairness: Is it “fair” that certain demographic/cultural groups are, in effect, excluded from the veterinary medical profession? Those of us privileged to be engaged in the profession often espouse the associated career satisfaction and the inherent rewards that emanate from membership in a profession that is noted for its high level of respect, ever-present intellectual challenges, and ample opportunities to help others. Whether or not the exclusion has been intentional, the demographic data present clear evidence of its existence.

Equality: Are all demographic/cultural groups offered equal access to veterinary medical services? Recent research suggests that barriers associated with the race/ethnicity of the animal owner may well exist (Wolf et al. 2008). In the absence of data, is it reasonable to assume that similar barriers do not exist when associated with, for instance, the sexual orientation of the animal owner? What about access to membership in the veterinary medical profession? Is it equal for all, regardless of identity?

Opportunity: Questions of opportunity generally underlie those questions related to equality. Additional questions can be posed, however. Is it reasonable to expect that veterinarians of all cultural groups face the same career opportunities? For example, based on current distributions of age, gender, race/ethnicity, and sexual orientation in the veterinary medical profession, is it reasonable to expect that all demographic and cultural groups have ample opportunity to pursue advanced study, leadership roles, or practice ownership?

Human rights: Given that issues of fairness, equality, and opportunity may exist, are there demographic groups that are being deprived of basic human rights related to access to either veterinary medical services or membership in the veterinary medical profession, or both? Further, understanding that the veterinary medical profession contributes significantly to human health and well-being through avenues related to biomedical research, food safety and quality, zoonotic diseases, public health, and the human-animal bond, are there communities that are being afforded disproportionate access to basic human rights (United Nations) such as life, liberty, and the security of person; property (animal) ownership; equal access to public service; equal pay for equal work; education; and scientific advancement and its benefits?

Economics: Are the potential economic rewards associated with full access to veterinary medical services or membership in the veterinary medical profession available to all demographic/cultural groups?
Religion: To the extent that the demographic data and research indicate the existence of disproportionate access to veterinary medical services and membership in the veterinary medical profession, is the situation inconsistent with the core religious beliefs or values of current members (and leaders) of the veterinary medical profession? How might the veterinary medical profession be viewed through the lens of religion if, in fact, disproportionate access exists? How might this view limit the credibility and potential social impact of the work of veterinarians?

Politics: Because many issues of broad-based importance to the veterinary medical profession are addressed through a political process within organized veterinary medicine, does the lack of representation effectively mute the voice(s) of certain demographic/cultural groups?

Careful, thoughtful, and honest consideration of these and similar questions provide the basis for considering the issues of diversity and inclusion in veterinary medicine from the perspective of social justice. It should be clear that each of the dimensions mentioned above has the potential to substantially strengthen the contribution of the veterinary medical profession to society if we are successful in enhancing diversity and inclusion.

Issues of social justice and representation aside, ample evidence exists in the literature and in life that a diversity of thought brings with it an inherent strength for problem solving. Creativity is enhanced, the number of potential solutions generated for any given problem is invariably greater, and outcomes are improved when a broader range of perspectives is intentionally included in the idea generation stage of problem solving and decision making.

Finally, enhancing diversity and inclusion makes good business sense for veterinary medicine. As indicated, problem solving and decision making are fundamentally enhanced where greater diversity exists. In addition, veterinary medical practices can simply expect increased client visits if/when the demographic and cultural makeup of the veterinarians and staff reflect those of the animal-owning public they seek to serve. Recent research indicates that non-Caucasian/White pet owners were 8 percent to 12 percent less likely to seek the services of a veterinarian after correcting for income, education, rural vs. urban residence, rent vs. own, age, family size, marital status, region of the country, season, and year (Wolf et al. 2008). In the context of current US demographics discussed earlier, it is relatively easy to infer that the geographic and/or cultural barriers that clearly exist for pet owners of color are costing the veterinary medical profession millions, perhaps billions, every year. Considering the striking US demographic trends, the cost is likely increasing annually. Although similar data do not exist to evaluate expenditures on veterinary services by other underrepresented (in the veterinary medical
profession) demographic/cultural groups, there is no reason to believe that the cultural barriers that exist are limited to those based on race and ethnicity. In many communities, the future financial success of veterinary medical practices will almost certainly hinge on effectively eliminating cultural barriers through strategic focus on intercultural communication skills, development of inclusive environments, and ultimately achieving a diversity that more closely reflects that of the community itself.

**Paucity of Role Models**

Assuming that we fully embrace the problem, the second hurdle to effectively enhance inclusiveness in the veterinary medical profession relates to the limited number of role models. There are insufficient numbers of individuals who are representative of the underrepresented populations, specifically, and a paucity of veterinarians, in general—who step forward to simply support the career aspirations of youth and cultivate a positive understanding of the rewards of the profession. As discussed previously, demographic/cultural diversity in the veterinary medical profession falls short of reflecting the current US population. However, in the absence of a critical mass of veterinarians who are from underrepresented backgrounds, it is useful to have any role model who can help the potential recruit envision himself or herself as a successful veterinarian. In effect, this presents a chicken or egg dilemma: role models are not generally available because of the lack of diversity, and effective recruiting to attenuate the lack of diversity is difficult because of the lack of role models. As such, it is critical that all public images of veterinarians strive to highlight the existing diversity in the profession, and we must not miss the opportunity to facilitate cross-cultural mentoring.

Effective intercultural mentoring across difference requires that the mentor first understand his or her own multiple identities, area(s) of privilege, biases, and assumptions before the mentoring relationship is initiated. Similar to the training of counselors who must fulfill multicultural competencies before serving clients from diverse backgrounds (Arredondo et al. 1996), mentors should be self-aware, knowledgeable about their social impact on others, skilled in cultural and age-appropriate behaviors to stimulate youthful mentees, “willing to contrast their own beliefs and attitudes with those of their culturally different mentees in a non-judgmental fashion” (Arredondo et al. 1996, 62) and aware of the stereotypes and preconceived notions that they may hold toward others who are different from themselves.
Visibility of Career Opportunities

As discussed, the range of career pathways available to veterinarians is indeed broad. However, the plethora of opportunities is not generally well known, even in the dominant culture. This challenge has several dimensions to consider.

Prevailing stereotypes relate primarily to veterinarians in private practice, most commonly dealing with companion animals. Although companion animal practice is a very rewarding career pathway, a host of other career possibilities exists, including (but not limited to) biomedical research, public health, higher education, industry, military service, food systems veterinary medicine, equine practice, specialty practice, shelter medicine, government employment, and laboratory animal medicine.

The social relevance of veterinary medicine is not always fully understood. For example, it is not widely recognized that upwards of 75 percent of emerging infectious diseases in human populations are considered zoonotic, in that animals also serve as primary hosts, intermediary hosts, or reservoirs for the pathogens involved (Pappaioanou et al. 2004). Diseases in this group include avian influenza, toxoplasmosis, and monkeypox (Pappaioanou et al. 2004). Veterinarians play an invaluable role on the health care teams responsible for the control, monitoring, and research efforts related to these diseases, and in that regard, they provide the foundation for the concept of “one health” that encompasses both humans and animals. In particular, it will be important to consider issues related to zoonotic disease in the context of those communities and cultures that have been traditionally underrepresented in the veterinary medical profession. What special significance do these diseases have in such communities? Are there geographic, socioeconomic, and/or cultural factors that cause some of these diseases to have particular relevance in underrepresented populations? How can the work of these veterinarians be targeted to address these issues of unique importance?

Through a number of avenues, veterinarians engaged in biomedical research play a key role in the advancement of science. Such research can entail: investigation of zoonotic diseases, as previously discussed; inquiry into basic biomedical sciences, such as physiology, anatomy, or pharmacology; studies of disease-specific causative agents, risk factors, transmission, pathogenesis, or treatment; or the development of animal models for human diseases. In addition, virtually all of biomedical science relies at some point on laboratory animals. The health and well-being of these animals is always under the supervision of a veterinarian. Where, in this broad spectrum of scientific investigations, are there unanswered questions of special relevance to underrepresented populations? How can we tar-
get our science in veterinary medicine to maximize the positive impact in these communities?

From farm-to-table, veterinarians play a number of roles in helping to assure the safety of the foods we eat. In the production process, veterinarians play a critical role in both the health of the animals involved and the wholesomeness of the livestock, poultry, and dairy products that result. Veterinarians have important roles in food inspection and in monitoring and surveillance related to food quality. When foodborne illness does occur, veterinarians are very often involved in the related outbreak investigations, tracebacks, and epidemiology. And veterinarians are commonly engaged in research to advance our knowledge of food production methods, nutrition, health, and the understanding of specific food- and water-borne diseases. To be more inclusive, it will be important to ask questions such as: What food safety issues or concerns are uniquely relevant for those communities that have been traditionally underrepresented in the veterinary medical profession? How can we best target our food safety initiatives in the veterinary medical profession to maximize our impact in underrepresented communities?

Increasingly, the role of pets in our society is evolving from a traditionally utilitarian perspective, where the primary value of the animals is derived from specific functions that they perform, to a companion animal perspective, where animals are commonly valued primarily or solely for their companionship. As such, the bond between humans and animals is changing over time, and the value of veterinary services in this context is viewed through the lens of maintaining health and quality of life for our valued companions, and thereby sustaining and perhaps extending the bond that exists. To enhance our inclusiveness, we need to develop a better understanding of animals’ roles in nondominant cultures and target our veterinary services accordingly.

In seeking to enhance the visibility of careers in veterinary medicine, it will be critical to fully understand the career decision process, and especially the career-choice influencers, in underrepresented communities. The literature holds that veterinarians and students’ parents have been important influencers historically in veterinary medicine (Ilgen et al. 2003). However, historical practices have resulted in the lack of diversity we see in the veterinary medical profession today. Because veterinary medical services are less likely to be consumed by pet owners of color (Wolf et al. 2008), it is reasonable to conclude that veterinarians are less likely to influence career choice in communities of color. In this regard, it will be important for veterinarians to actively seek audiences of potential veterinary students, and their parents, within nondominant cultures, if we hope to successfully recruit in that context. And these initiatives should not solely, or even largely, be centered in
veterinary medical practices or other traditional veterinary medical venues. Other culturally appropriate community gathering points should be included, such as schools, churches, and perhaps some community-specific activity/cultural centers. Finally, we should not assume that relying solely or primarily on veterinarians and parents will yield successful recruiting in underrepresented communities. Other community thought leaders should also be included, such as ministers, teachers, and perhaps prominent civic leaders and business people.

Limited Knowledge on the Cultural Significance of Animals

Although the roles of pets, livestock, and horses in the dominant culture are widely understood in the veterinary medical profession, the same types of knowledge are not so widely held with respect to underrepresented cultures. Because successful recruitment will require this knowledge for context, it will be critical to develop a broad-based understanding of these complex—and perhaps evolving—relationships.

Without question, the institution of slavery has had widespread societal impact in the US. But the impact on relationships between African Americans/Blacks and animals probably has not been fully understood to date. Consider the following three perspectives (Harris-Perry 2010):

1. As African Americans/Blacks struggled for first-class citizenship in the US, dogs were commonly used for tracking, as guards, and as weapons of direct attack against individuals involved in those efforts. What lasting effect might this have on the evolving role of pets in current African American/Black culture?

2. In a sense, the chattel element of slavery creates a social construction of African American/Black people as beasts of burden. What does this say about proper treatment of animals and of the enslaved? And what lingering impacts might exist in today’s culture?

3. For purposes of shaming, African Americans/Blacks have even been directly depicted as animals during the course of this tortuous history. Is it possible that the effect was harmful to both animals and the African American/Black populations? Could this have resulted in active attempts to limit any sense of connection with animals?

From a somewhat different vantage, “snapshots” from Hurricane Katrina seemingly provide several intriguing lessons related to relationships with animals
in a multicultural community. Not surprisingly, some of these lessons appear to be conflicting. Potential implications exist as we work toward enhancing diversity and inclusion across a number of dimensions, including race, ethnicity, and class. Consider the following three additional perspectives (Harris-Perry 2010):

1. At the time of Hurricane Katrina, some regulations in existence prohibited the rescue of animals. Think of the message this sends related to the perceived value of animals for those who created the regulations. What was their cultural identity?

2. Some residents of flood-ravaged areas would not leave without their pets, and thus declined evacuation. As it turns out, losing animal companionship was often a key component of the human suffering. Again, what message does this send related to the perceived value of animals for those communities impacted by the flooding? In addition to race, ethnicity, and class, were there other important dimensions of diversity that were characteristic of the affected cultures?

3. To some, and in some circumstances, it seemed like animals may have even received a higher priority and better treatment than the people during the evacuations and subsequent relocations. Images of luxury buses loaded with pets being evacuated provide a stark contrast to images of flatbed trucks overloaded with people during the process.

We have much to learn regarding animals in underrepresented cultures. Existing knowledge needs to be widely shared across the veterinary medical profession. Understanding the multidimensional cultural context of animals and their roles will be vital to achieving a truly inclusive profession.

**STEM Discipline Challenges**

In underrepresented communities, preparation in the STEM disciplines has not been historically strong. Although this issue has been more thoroughly discussed in chapter 1, it warrants repeated emphasis here, as it is an important barrier to success as we seek to enhance diversity and inclusion in the veterinary medical profession.

**Focus Solely on Veterinarians**

Naturally, discussions about the veterinary medical profession tend to focus on veterinarians. However, as we seek to enhance diversity and inclusion in the veteri-
nary medical profession, it will be extremely important to expand the scope of the challenge to include the entire complement of staff members and paraprofessionals that work in the profession as well. In fact, diversifying the veterinary medical team should have substantially lower barriers, and should be eminently more achievable in the short run, than accomplishing the same task in the population of veterinarians. This is not to diminish the critical importance of the latter, but it gives us an avenue for tangible, short-term gains while providing an excellent approach for initiating the needed culture change within our practices.

**Business Case Is Not Well Understood**

In spite of the critical importance of diversity and inclusion to the future success of businesses in the veterinary medical profession, as discussed previously in this chapter, the business case is not well understood. Because demographic changes are generally insidious by nature, and because the veterinary medical profession has generally been successful from a business perspective, it may be easy to overlook the fact that underrepresented communities are also likely underserved; it may be easy to not fully appreciate the remarkable magnitude of the growing missed opportunity to at once grow our businesses and provide improved health care.

**Environmental Issues**

Within the veterinary medical profession, substantial challenges exist related to our work environments as well. Because of our historic lack of diversity, there exists a general lack of cultural competence in the profession. Cross-cultural communication has not been necessary because the profession has been composed primarily of the dominant culture. Multicultural teamwork has not been an issue because we have been largely homogeneous from a cultural perspective. Consequently, an entire new skill-set will be required if we are to become more diverse and inclusive.

Related to the environmental issue of cultural competence is a situation frequently experienced by the minority of veterinarians who come from underrepresented communities or cultures. Anecdotal conversations with these veterinarians commonly refer to a lack of acceptance into the professional “club” even though they’ve clearly been successful in navigating the required educational gauntlet leading to the degree. Unfortunately, not being a part of the dominant culture often seems to trump the fact that an individual has met all of the official requirements to practice veterinary medicine. Again, work on our professional environment(s) will be important as we seek to evolve in the future.
Role of Class Privilege

As it turns out, many of the underrepresented communities from which we would like to increase our recruitment for purposes of enhancing diversity and inclusion are also disadvantaged from a socioeconomic perspective. Unfortunately, this fact substantially complicates the situation. Access to, and chances of success in, quality preveterinary education at the K-12 or undergraduate levels may well be limited due to the absence of class privilege. Access to effective educational and career guidance and counseling might be limited as well. Further, ready access to those types of experiences that are potentially career-shaping—such as livestock production, equine husbandry, regulatory medicine, biomedical research, or even companion animal practice—may not be feasible for these potential students. Assuming these potential students from disadvantaged communities are able to successfully navigate all of the above and prepare a competitive application to veterinary school, affording the high tuitions that accompany veterinary medical school attendance, and achieving academic success become the next hurdles. Clearly, issues of class privilege must be carefully identified and thoughtfully addressed if we expect success with diversity and inclusion.

Educational Disadvantages

Weaved through all of these issues are topics that can result in considerable educational disadvantages related to class, culture, or both for students from underrepresented communities. Whether manifested as ineffective STEM education, inadequate advising and counseling, less-than-desired performance on standardized tests, or academic challenges arising from noninclusive learning environments, educational disadvantages abound for these students. Compounding these challenges is the fact that admissions committees are generally nondiverse because of the profession’s overall lack of diversity at this point. So the issue of dominant culture privilege becomes important when defining admissions criteria for colleges and schools of veterinary medicine. Without the advantage of cultural competence, it is quite feasible that unintentional barriers to admission exist that may not be visible to admissions directors and committees. As with each of the challenges and issues enumerated, these educational disadvantages need to be clearly identified and effectively addressed if we expect success in the realm of diversity and inclusion.
Summary

With regard to opportunities for enhancing inclusiveness in the veterinary medical profession, the question remains, “Will we find a way or make one?” As we have seen, success in this endeavor will require that we take a broad-based systems approach, considering factors along the entire span of the educational system that leads from preschool to the careers of veterinarians. This complex, dynamic system has key issues and challenges at each step of the way, issues and challenges that provide very real opportunities for enhancing our inclusiveness. However, these opportunities must be systematically identified, prudently prioritized, and thoughtfully addressed if we are to move forward. Absent such an approach, we will continue to languish in the historical situation: too few candidates from underrepresented cultures and communities being successfully recruited and retained in our educational pipeline. The systems approach will, in fact, help us find the way. But in the end, we will need to actively make our success through careful analysis of our myriad opportunities and effective action.

References


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