

Ethics in the University

James G. Speight



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Preface

For the most part, universities are a way of life in many countries. Faculty members collect factual data and assess new areas of knowledge. However, no one can foresee the tortuous path that the faculty endures to determine where experimentation and observation may lead. Then there is always the mode of data interpretation, data manipulation, and data reporting in various learned journals. The university requires that the faculty follow the path of freedom of thought and, in the academic sense, unrestricted communication. In many cases, it is through the ethical professionalism of the faculty members that world knowledge and technology advances. Yet there are continuous reports of unethical behavior in the form of misrepresentation of data, cheating, and plagiarism at the highest levels university faculty. The causes are manifold, whether they are (1) the need to advance from the lower to the higher faculty ranks, (2) to compete successfully for and obtain research funding, or (3) recognition by one's peers.

The pursuit of a career in academia requires (1) the ability to teach and impart knowledge to the students, (2) freedom of thought and, in the academic sense, (3) unrestricted communication. It is through the professionalism of the members of the worldwide academic community that world knowledge and technology advances. Yet the individuals in academia are hired to impart their knowledge to members of the younger generation aged (approximately) eighteen to twenty-two years. It is during this impressionable time that the younger generation become exposed to the vagaries of higher education as well as the vagaries of ethical behavior.

Of course, in spite of the examples presented in this book, not all academic faculty and staff are involved in misconduct. The overwhelming majority of faculty are extremely hardworking, and their workloads in these current budgetary circumstances are only increasing. In fact, faculty members and staff members with a high level of honesty would feel a high level of guilt if they were guilty of misconduct. However, it is the responsibility of the professor, staff member, or student to confront cheating and misconduct head-on. It is these persons who should recognize cheating and misconduct and who must offer suitable punishment as a deterrent. There appears to be a general consensus between students and professors

as to reasons for ignoring cheating, which suggests a general impression of denial. This attitude of nonreporting is, in itself, a form of cheating and it is pitiful. In the adage of the Old West, *circling the wagons* to protect all involved is not the way to deal with dishonest behavior.

However, it is the continuous reports of unethical behavior in the form of data manipulation, cheating, plagiarism, and other forms of unacceptable behavior that draw attention to the issues of misconduct. The causes of misconduct are manifold, including the need to advance in one of the chosen disciplines or to compete successfully for and obtain research funding. Disappointingly, individuals who are oriented to any form of dishonesty are those who had previously displayed little or no consideration for the feelings of others and are therefore more interested in themselves (at the expense of the students) and in getting others to recognize them by any means necessary.

Like a previous book (*Ethics in Science and Engineering*, J. G. Speight and R. Foote, Scrivener-Wiley, 2011), this project was triggered by a combination of factors – (1) awareness by the author of the increasing frequency of unethical practices in the realm of education, (2) recognition of the focus of the literature on ethical behavior, and (3) the realization that ethical/unethical behavior is the outcome of choice and is not due to chance.

There is no attempt to be judgmental but rather to encourage everyone to reflect on themselves philosophically (that is, in terms of individual values and beliefs) since it was absolutely clear that personal motivations and preferences can override any other contributory factor.

In fact, in recent years, as the external regulatory environment has expanded and ethical issues have become more prevalent, it became apparent that it was time for a careful review of existing policies and guidelines within the university systems. Thus, it is important for any university to clearly state the expected standards for ethical behavior. There must also be a systematic and realistic review of the wide variety of conflicts of interest faced by the university and there must be the appropriate means to monitor the potential for ethical conflicts and to be alert to the need to seek guidance from nonacademic experts.

On the basis of the observations and research by the author, this publication seeks to advance basic requirements for the application of ethical behavior, to mitigate the frequent occurrences of misconduct, which currently and frequently appear in academic institutions. Of course, the only way to stamp out unethical behavior by academic faculty and staff is for a university to first recognize that it does indeed occur and that such behavior must be dealt with seriously and not by a mere slap on the wrist for the miscreants. This is more difficult than it may seem.

This book examines the potential for unethical behavior by all academic staff – professionals and nonprofessionals. Documented examples are presented to show where the matter could have been halted before it became an ethical issue. The author also looks to the future to see what is in store for young people as they enter the academic world to further their education and even to seek job opportunities.

It is not the purpose of this book to determine causality or simply dependency or to comment on the reason for using mathematical modeling (or computer simulation) in the absence of data and the acceptance of untested assumptions. Nor is it the purpose of the book to comment on the use of incorrect analyses which can involve correct answers to incorrect questions or incorrect answers to correct questions. Data manipulation, the outcome of which is misconduct in research (or cheating in research), usually results when there has been a lack of appropriate controls (comparisons), collapsing data to provide *simpler* interpretations, invalid measurements, invalid analyses, as well as invalid assumptions.

Furthermore, this book is not meant to be judgmental but to encourage every faculty and staff member as well as student to reflect on their actions (that is, in terms of individual values and beliefs) since it is clear that personal motivations and preferences can override any other ethical and contributory factor. The potential for unethical behavior within the university system is examined, and documented examples are presented to show where the incident occurred. The author also looks to the future to see what is in store for faculty members and how (or if) the potential for unethical behavior can be negated.

Finally, it is not possible to claim completeness in a project of this nature but it is hoped that this preliminary treatment will stimulate discussions about ethics among students and faculty members within universities and other educational institutions. There is a further hope that such internal and external examination will encourage students and faculty to raise their own standards of ethical conduct without having to be forced to do so. Also, it is not the intent of the author to act as judge and jury but merely to report what has been found and presented elsewhere. Readers can then decide for themselves whether or not they require more details of each cited incident.

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1

The Concept of Ethics

1.1 Introduction

For the purposes of this book, the definition of ethics involves defending and recommending concepts of right and wrong conduct. In practice, ethics is an aid to resolving the various aspects of human behavior (conduct and misconduct) by defining the concepts of right and wrong. The purpose of this book is to apply the concept of ethics to behavior within the various universities and the recognition of unethical behavior or, as it is frequently referred to in the text, *misconduct* by faculty members, staff members, and by students. However, the purpose is not to be judgmental but to encourage every faculty member, staff member, and student to reflect on their actions (that is, in terms of individual values and beliefs) since it is clear that personal motivations and preferences can override any other ethical and contributory factor. In the book, the potential and occurrence of misconduct within the university system is examined and the means by which, or if, the potential for unethical behavior can be negated.

At this point, however, it is essential to define the terms *university* and *college* as used in this book.

In a general context, the words *college* and *university* have been used interchangeably but can cause confusion. In the context of this book, a university is an institution that offers undergraduate programs and graduate programs. The undergraduate programs lead to a baccalaureate degree while the graduate programs lead to a master's degree or to a doctorate. Universities may have medical programs and/or law programs leading to the respective professional degrees. Generally, universities have a diverse offering of classes and programs leading to a variety of degrees. On the other hand, again in the context of this book, a college is a part of the university in which specific departments exist to forward the educational aims of the college, such as a College of Science, a College of Engineering, a College of Law, and a College of Medicine. The term *university college* is used to denote such a college.

The *state university* system in the United States is a group of public universities supported by an individual state. These systems constitute the majority of public-funded universities and each state supports at least one such system. The amount of the financial subsidy from the state varies from university to university and state to state, but the effect is to lower tuition costs below that of private universities for students from that state or district. On the other hand, a private university is not operated by a (state) government, although many receive favorable tax credits, public student loans, and grants. Depending on their location, private universities may be subject to government regulation.

The head of a university is given the title *president* or *chancellor*. In the United States, the head of a university is most commonly a university president. If the occupant of either title (*president* or *chancellor*) is titular (i.e., the person is a ceremonial figurehead), the chief executive (equivalent to the private industry *chief operating officer*) of a university is the *provost* or *vice-chancellor*, respectively. The president or chancellor may serve as chairman of the governing body (the board of governors, the board of trustees, the board of regents) or, if not, this duty is often held by a chairman who has been appointed or elected to the board as an external (non-university) member.

Thus, a university is a multidisciplinary organization with a strong mandate to teach using research (that is funded by organizations external to the university) as a means of gaining knowledge and imparting knowledge to the students. It is in the best interests of all universities to maintain a high ethical and sustainable performance, although there are many plausible-sounding rules for defining ethical (and unethical) conduct which may add confusion (and a defensible position by a perpetrator) to the issue of misconduct (Woodward and Goodstein, 1996; Schulz, 2000; Cahn, 2011). There is also

the suggestion, perhaps plausible, perhaps not, that definitions of misconduct should include turning to the news media with a story of misconduct that may or may not be reported correctly (Roy, 1999). The default positions for the definitions of unethical behavior or misconduct are the definitions as presented in a code of ethics (sometimes referred to as a code of conduct) which should be available to, and understood by, all faculty, staff, and students. Even when universities find misconduct investigations difficult because of evidence confidentiality problems, the case must be taken to its conclusion by ensuring that the correct procedures are employed throughout the investigation (Hileman, 1997), and once the decision has been reached it is essential that no upper-level administrator should be allowed to make a unilateral decision to overturn the decision of the investigators.

By example and in classrooms, higher education must function as an important determiner of the ethical culture of the present and future (Davies *et al.*, 2009). The professionals who teach at universities are considered to be (or should be) highly ethical people who exhibit behavior that is of the highest ethical and moral standards and is beyond reproach. For many academic professionals this is a *credo* that is followed throughout their careers and they never move out of the lines that border the straight and narrow path of honesty and integrity. Unfortunately, there are those who perhaps do not even know how to define ethics and who fail to practice any form of honest behavior.

Ethics is “*the normative science of conduct, and conduct is a collective name for voluntary actions*” (Lillie, 2001). In this regard voluntary actions are those actions that could have been done differently, and such actions may be good or bad, right or wrong, moral or immoral. Ethics focuses not on what people think but what they ought to think and do. An ethical science is an in-depth systematic study of the standards for judging right and wrong, good and bad principles, guiding means, and how far we will or should go (Lillie, 2001; Howard and Korver 2008).

Whatever the definition, ethics is one of the pillars of any university community where higher education requires teaching and high standards of behavior and is assuredly one of the criteria for evaluating the quality of higher education. Despite the range of factors that contribute to ethical or unethical behavior, the central determinant is the personal thoughts (and behavior) of the faculty and staff members, which determines the meaning that the faculty and staff attach to ethics in respect of their profession and position within the university. Indeed, personal thoughts and behavior can override the influence of any other factor, including the code of ethics of a university or even the professional society of which the academic professional may hold membership (Adams *et al.*, 2001).

The ability to manage emotions during the processes of academic research orients many individuals to act on feelings and engage in unethical practices. This is reflected in the (increasing) frequency of reports of misconduct in various disciplines (Cahn, 2011; Speight and Foote, 2011). Briefly, research misconduct is “*fabrication, i.e., making up results and recording or reporting them, falsification, i.e., manipulation of research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record, and plagiarism, i.e., the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit*” (OSTP, 1999). However, no matter what excuses are made for questionable behavior by academic faculty, academic integrity is critical to higher education, especially where research and learning are manifested. However, faculty consensus is limited on what forms of behavior constitute dishonesty, even though a code of ethics or a code of conduct are available (Kibler, 1994; Rezaee *et al.*, 2001; Verschoor, 2002; Wood and Rimmer, 2003; McKay *et al.*, 2007; Papp and Wertz, 2009).

Indeed, ethical issues have come to and will remain at the fore because of the prioritization of differences by faculty as they seek a more privileged position in academia. This requirement has been compounded further by the emergence of procedural inconsistencies in several major research projects (Kitchener and Kitchener, 2009). Honesty has to be practiced at all times and must be evaluated on the basis of intentions and not outcomes, unlike some occupations. However, “*intentions will stop being regarded as good, if they repeatedly produce bad results or no results at all*” (Lillie, 2001). Moreover, the correctness of an action depends on the action as a whole and not on the past, and whether or not a faculty member’s conduct is good or bad may be: (1) instinctive and discernible through one’s actions, (2) intentional, which may be direct and motivating or indirect, (3) rooted in desire which is a consciousness to act in a particular manner, or (4) a matter of calculated choice (Lillie, 2001). Furthermore, the actions of one person can impact the actions of others and, as such, the general nature and direction of actions in a university may affect the choices of others and their level of consideration for moral standards. Such actions impact concerns for the common good, levels of egoism and altruism, and the eventual emergence of rights, duties, and entitlements.

Consequently, it must be recognized that (1) the end does not justify the means, (2) a rational basis must be established for dealing with uncertainty in any type of research, (3) some types of research may not be ethically justifiable, and (4) while researchers prefer to minimize errors, there are those who prefer false positives over false negatives (Shrader-Frechette,

1994). If the act that the individual performs is in his or her power not to perform, then he or she is responsible for that act and must face the consequences (Chisholm, 2008). This would establish the morality of the action but the orientation to autonomous or independent individual-level action is shaped and reshaped by the academic climate.

One of the hurdles of applying ethics to academia is to find the correct place to start. For example, one of the most vital areas of debate concerns the hands-on practice of the treatment of the experimental (research) data. If faculty members accept the premise that their actions are always moral, they will always conclude that their actions were correct. Whatever was written on paper cannot be faulted as it was the rationale for the additional ten experiments to produce a possible-maybe answer to the problem. Such attitudes are, in fact, the starting point of much of the traditional moral philosophy as applied to faculty behavior and are at the heart of the distinction between what is right and what is wrong with many faculty members. For example, faculty members may have burned the midnight oil to bring their model to a conclusion but they may have forgotten that many of their assumptions were invalid. Similarly, a scientific faculty member may have toiled in the laboratory (or had students toil in the laboratory) to complete the additional experiments that were invariably designed to prove a theory without even acknowledging that the theory could be irrational. Thus, there is a strong need for the faculty member to (1) clarify his or her perception of the issue, (2) take an alternative course of action, (3) choose from the options available, (4) decide the consequences and compare with his or her values, and (5) discuss with others in an attempt to gain further guidance in decision making (Smith, 1990). Another perspective that is applicable to ethical or unethical decision making and actions is the *Theory of Planned Behavior*, which emphasizes that intentions influence volitional behavior by exerting a motivational effect on the individual(s) (Kraft *et al.*, 2005; Kiriakidis, 2008).

The goal now is to make faculty members more sensitive to the ethical implications of their work. This requires a start from the basics of the education system where cheating and misconduct occur frequently, due to a variety of factors including the moral development of students and student-faculty interactions (i.e., professorial behavior) (Thweatt and McCroskey, 1996; Whitley, 1998; Kearney *et al.*, 2002; Banfield *et al.*, 2006; Nadelson, 2007; Young, 2010). Since cheating and misconduct occurs as early as the middle school years of a student, it is appropriate to discuss ethical questions in the schools, followed by the universities, and from there at the annual meetings of professional societies – if by then it is not too late (Smaglik and MacIlwain, 2001; Speight and Foote, 2011).

Teachers and professors need to make themselves more aware of the unethical and immoral implications of cheating and misconduct and they need to be more prepared to inform their students about ethical and unethical issues. Subsequently, it will be possible to come to a more general conclusion at national and international levels. The ethics of university faculty and staff are not only an issue of an individual university but also a collective problem that involves all universities. Indeed, the occurrence of unethical practices in academia and elsewhere brings to the front-stage not only the issue of ethics but also the need for recognition of the nature of ethics in the age of personal image, being the *top dog of the group*, and the recipients of copious awards (Madison and Fairbairn, 1999).

Making good ethical decisions requires that the faculty member has been made sensitive to ethical issues and a practiced method for exploring the ethical aspects of a decision and the ability to weigh the considerations that should impact the choice of a course of action. When a method for ethical decision making in the university is used regularly, it becomes second nature, and the faculty member can work through it automatically without consulting the specific steps (Markkula, 2010).

1.2 Professionalism and Ethics

The disciplines of faculty members in a university are composed of educated professionals who have the ability to apply themselves to the problems at hand through either theoretical studies or experimentation. To the academic professional, the outcome of this work that offers some form of gratification is (1) completion of a project and (2) publication of the data in a journal or similar medium for distribution to one's peers. This provides the faculty member with recognition for his or her work. However, no one can foresee the tortuous path of a university-based research investigation and know where experimentation and observation may lead. Then there is always the mode of data interpretation, and such interpretation must be made at the highest ethical level (Alcorn, 2001). In fact, research in any academic discipline can entail frustration and disappointment as well as satisfaction even when an experiment fails or a hypothesis turns out to be incorrect.

The individual qualifications of each faculty member will determine which academic career is most appropriate. Many baccalaureate graduates find satisfying careers in a variety of positions after the bachelor's degree. Other baccalaureate graduates find that a master's degree equips them well for professional careers. For those who hope for careers conducting

research and/or teaching at the higher level, a doctoral degree (typically a PhD) is required. However, no degree guarantees lifetime employment and, like professionals in other fields, the faculty member may still have to change jobs and even careers during a professional lifetime – perhaps even more than once. The path to an academic career can be demanding – mentally, physically, and emotionally – and not everyone has the perseverance to complete years of concentrated study. But the experience of doing post-baccalaureate work is exhilarating for those with sufficient interest and determination. There may be many teachers, mentors, or colleagues who are willing to help the emerging faculty member and assist with overcoming difficult hurdles that are needed to gain confidence and the ability to think and work independently. However, no one can foresee the winding of the path along which adventurous observation and experiment may lead and what boundaries can be set to the possibilities of interpretation.

It is the purpose of this chapter to lay the foundation for the journey into the hallowed halls of academia, no matter how many turns the path to academia may take.

Education is basic to achieving national goals in two ways. First, schools and universities are responsible for producing the teachers and researchers. Investigators in academia and industry lay the groundwork for the innovations of the future. Furthermore, by attracting outstanding students and faculty members (hopefully, who have some understanding of the nonacademic world), national systems have, to some extent, benefited from an infusion of both talent and ideas. A cohesive system of education is therefore important both as a source of future professionals and as a source of new ideas.

Thus, a profession is any occupation that provides a means by which to earn a living. In the sense intended here, the faculty-based professions are those forms of work involving advanced expertise, self-regulation, and honesty (Martin and Schinzinger, 2005). Faculty members play a major role in setting standards for admission to the profession, drafting codes of ethics, enforcing standards of conduct, and representing the profession to others. Briefly, a code of ethics provides a framework for ethical judgment (the incentive to do the *right thing*) by a professional (Adams *et al.*, 2001; Martin and Schinzinger, 2005; Fleddermann, 2008; Davies *et al.*, 2009) although there are thoughts (not necessarily agreeable) that many plausible-sounding rules for defining ethical conduct might be destructive to the aims of scientific enquiry (Woodward and Goodstein, 1996).

Professionals should maintain high ethical standards and to do so brings with it the recognition traditionally associated with the word *profession*. Professionalism entails a multiplicity of tasks and a variety of new roles;

not all individuals occupying these roles of trust have been adequately prepared for and socialized to them. Actions are often collective, i.e., via team approaches to problem posing and problem solving, which can undermine individual responsibility. Indeed, the importance of recognizing the role of the university in contributing to incidences of research misconduct was noted during conference discussions (Chalk *et al.*, 1980; Chalk, 2005). All of these potentially conflicting factors may make it difficult for a researcher to know with confidence what is ethically expected of him or her (Gorlin, 1986; Davis, 2002).

In general, the faculty members who are biased toward theory tend to produce data that are often abstract, and the intellectual contribution is expressed in the form of theories with proof. As a result, publication of the proceedings of a conference may be the only outlet for their efforts, after which publication in a *reputable* journal may be possible but only with considerable efforts or, for various reasons, may not be possible at all. But the importance of the work to the young faculty member or staff member can, again, be diminished when the names of a supervisor and any other persons higher up the academic food chain are included as coauthors.

For faculty members, publication of data in the proceedings from a conference often results in a shorter time to print. This follows from the opportunity to describe completed or partly completed work before peer faculty members and to receive a more complete review than the type of review that is typical for a journal. At a conference, the audience asks general and specific questions to the presenter that often provide recommendations for further work or a new line of investigation. Overall, this will help the presenter to finalize the document for publication in the proceedings (where the proceedings are published postconference). On the other hand, one has to wonder if journal reviewers really pay attention to the salient points of the potential publication or merely look for errors in style and grammar. An answer that several readers may relate to is *all of the above*. However, in many academic reviews, statements are made that publication in the proceedings of a prestige conference is inferior to publication in a prestige journal without realizing or being willing to admit that in relation to data presentation and publication, many conferences are superior to an established journal.

In academia, the young professional enters a department at the assistant professor grade (Chapter 2). At this level, the assistant professor has little choice in terms of teaching assignments and has administrative work thrust upon his or her shoulders while the older, tenured members of staff have the right to refuse such work without fear of reprisal. And yet, this is not the reason behind tenure.

Tenure (Chapter 2) was introduced to protect academic freedom in educational settings from the whims of politics – whether this is in the form of meddling from the outside or from the inside. Tenure was thus introduced to preserve academic autonomy and integrity because it was recognized that this was beneficial for academia. Tenure was not designed to allow faculty to refuse work! Professors who hold tenure are virtually impregnable fortresses and cannot (without considerable effort and expense) be dismissed from their appointment – the appointment, essentially, is for life. Tenure has come under attack over the past three to four decades by those who want a more businesslike approach to universities, including ending tenure and introducing accountability, performance review, audits, and performance-based salaries (Hacker and Dreifus, 2010; Taylor, 2010).

In addition, young assistant professors also have to acquire research funding and may even have to pass their reports and papers through a review committee prior to publication. This review committee will be made up of senior members of staff who, for many reasons that are often difficult to follow, can give a young professor a glowing performance report or a report that is somewhat less than glowing. It is at this time, if the latter is the case, that young professors can feel that they are suffering rejection by their colleagues. In fact, young professors may wonder if they are merely a pair of hands (for an overbearing supervisor or an overbearing department head or jealous colleagues) and not supposed to be given credit for the ability to think and solve a problem. Performance suffers and, with repeated negativism toward publication, the young academic professional starts to lose interest in the university.

1.3 Morals and Values

Teaching morals and ethical values to students should begin at the home of the student where parental influence is of paramount importance. In the education system it begins in schools where, unfortunately, cheating is not unknown. If the tendency for students to cheat is not curbed, the concept of cheating become ingrained in the students' psyche as a natural phenomenon and continues at university and thence unto adult life. Therefore, it is necessary for faculty members to promote moral and ethical values to the students and to ensure that these morals and values fit the needs of the modern world industries. The main objective in promoting morals and values education for students is to encourage universities to implement academic and other activities related to teaching, research and

extension programs embracing values and culture, such as seminars, conferences, workshops and orientation programs for faculty members and their students which can introduce concepts and ideals related to morals and values education.

However, universities themselves are rife with dishonesty and misconduct (Sykes, 1988) and in many universities students admit to having engaged in academic dishonesty at least once during their college career (McCabe and Trevino, 1993). Academic misconduct among students takes several forms (Table 1.1) (Martin and Schinzing, 2005), all of which should warrant some form of punishment. No matter how well the causes of such misconduct are explained or even covered up, there is no justification or rationalization for any such behavior. Misconduct in any form violates all procedures codes (codes of ethics and codes of conduct) by giving some students an unfair advantage.

Table 1.1 Forms of student misconduct.

Misconduct	General description
Cheating	The student deliberately violates the codes of ethics and conduct – such as copying from another student during a test.
Fabrication	The student intentionally falsifies available information or invents new information – such as faking and/or false manipulation the results of an experiment.
Plagiarism	The student intentionally or negligently submits work by another person as his or her own work – such as quoting the work of others without using quotation marks and citing the source; also falls under category of <i>cheating</i> .
Dishonesty	The student helps another student to engage in a dishonest practice – such as loaning work for copying; more often referred to as facilitating dishonesty.
Misrepresentation	The student gives false information to a faculty member – such as fabricating a reason (lying) for missing a test; also, failure to contribute to a collaborative project, but the student claims credit for doing so.
Sabotage	The student prevents others from doing their work – such as interfering with a laboratory experiment and causing the experiment to fail.
Theft	The student steals (1) library books or (2) the property of others or (3) the property of the university.

Universities need to create and maintain a culture of honesty through their codes which must set forth standards and punitive actions for those who do not stick by the codes, even though they may not be sufficient to curb cheating (Martin and Schinzinger, 2005). In addition, a university *must* support professors and students who report cheating and refuse to bend before the university administrators who may be concerned about losing a fee-paying student (or more likely, the parents of the student) by merely giving the miscreant a *do-not-be-a-naughty-boy talk* (or in these days of equality, a *do-not-be-a-naughty-girl talk*) or a slap on the wrist with a note *to run along and behave*. By doing this, the morals and ethics values, if they existed at the university, were thrown out of the window. To combat such behavior, universities need to maintain a climate of respect, fairness, and concern for students (universities are not rest homes for those who could not hold down a job in the outside world) and honor codes need to be explained clearly (Martin and Schinzinger, 2005). Opportunities to cheat should be minimized with firm and *enforced* disciplinary procedures applied to those caught cheating. Ready access to the Internet has made cheating easier but detecting plagiarism has also been made easier (Decoo, 2002). Furthermore, inclusion of classes related to academic integrity can be a valuable way to integrate an ethics component into courses (Martin and Schinzinger, 2005).

Academic integrity is much more important than simply guaranteeing that students adhere to rules of test taking and plagiarism avoidance and is linked inextricably to transmitting general ethical values to students (Bornstein, 2007). Universities must show that they are concerned that students not cheat on exams or engage in plagiarism. Frequently students perceive what faculty and college administrators say about academic integrity and plagiarism as unrealistic and generally unnecessary moralizing. This cynical view indicates that cheating is an acceptable way of university life (Callahan, 2004).

A recommendation worthy of consideration is the implementation of a foundation course for faculty members and staff members which can also be designed for students to gain conceptual clarity and respect for ethical behavior. Students can become engaged in presentations and discussions on pertinent themes such as spiritual, moral, cultural and environmental values, as well as values of democracy, scientific temper and communication skills in the skills in the workplace. This foundation course may serve the needs of faculty members and staff members who battle with serious work issues.

A university is a community of students and teachers committed to the pursuit of learning, accumulation of knowledge, the transmission of

this knowledge to succeeding generations, and the development of new knowledge. In addition, a university combines teaching, research, and discovery as well as community service. In this combination lies a community of scholarly faculty members which can give a university unique strength.

1.4 Codes of Ethics and Ethical Standards

Codes of ethics are intended to legally reinforce the need for respect for personal and experimental behavior and should remain at the forefront of faculty prioritization of differences as faculty members seek to attain a more privileged position in the world of academia. This requirement can be further compounded by procedural inconsistencies in any research project, and the absence of a philosophical basis for discussions of ethics dictates the need for a more comprehensive theory to guide future research (Kitchener and Kitchener 2009).

Many universities have developed codes of ethics that encompass a broad range of behavior and practice as a means of fostering research integrity. Colleges and universities are built on moral obligations, ethical responsibilities and principles and codes of behavior (Baca and Stein, 1983). Furthermore, there is a direct correlation between levels of moral outrage expressed and the importance of what is expected (the *norm* – an indicator of professionalism) from ethical standards (Braxton and Bayer, 1999). In the realm of higher education, norms specify the desired practices with respect to teaching, research, and service. Without norms, faculty members would be free to follow their own unconstrained preferences in teaching and research. Norms also represent what is considered important by a group articulating how professional choices mesh with service (Braxton and Brayer 2002).

The role of a *code of ethics* is characterized by both descriptive and prescriptive aspects, particularly (in the current context) for a faculty member when it might be expected that the requisite knowledge and skills demanded in such a position would be sufficient to guarantee research integrity, except in a few extraordinary cases. It might be argued (unsuccessfully one hopes) that it is difficult to establish unambiguous ethical standards in academia and this leads to a range of judgment calls (Whicker and Kronenfeld, 1994). In the academic world, as in many other professional worlds, most (if not all) faculty members believe that they are honest, capable of acting not from instinct but rather from a reasoned set of rules that are defined under various relevant *codes of ethics*.

These codes presumably represent the ideals and core values of a profession, and can be used to transmit those values and more detailed ethical prescriptions. They also provide standards for reviewing claims of misconduct and for sanctioning improper behavior. In fact, all universities should have a code of ethics that should be developed by professional disciplines, with the process of development offering ample opportunity for contributions from all sectors of a university. If a university decides to enforce its standards with review and disciplinary procedures, it should be prepared to devote adequate resources to do so effectively. Enforcement procedures should accord due process, and ways to initiate a grievance should be commonly known. However, when misconduct allegations are reviewed by university administrators, the results may not be made public, thereby diminishing the potential deterrent effect. A university should, therefore, consider making public the outcome of a misconduct review.

One of the pivotal questions faced by a university is whether to institute measures to enforce its code of ethics with disciplinary proceedings and sanctions. Many universities choose not to engage in enforcement, issuing a mere *slap on the wrist* instead, but enforcement of an ethics code allows the university to demonstrate willingness to hold the faculty and staff accountable for individual or collective misbehavior, and any form of teacher misconduct or professorial misconduct can and will result in a loss of teacher or professorial credibility, which will have an effect on student behavior and performance (Kowalski, 1997; Kearney *et al.*, 2002; Banfield *et al.*, 2006; Prohaska, 2012; Rich 2014). Another option adopted by many universities is referral of a claim of misbehavior on the part of a faculty member to an *investigative committee* to conduct an investigation, with the university reserving the right to publicize (or not to publicize) the findings of that investigation.

There are several considerations for any university regarding enforcement. Due process considerations are essential in a review of misconduct if expulsion from the university is a possible outcome. In addition, reviewers of misconduct allegations must have the right to access all sources of relevant information. There should also be in place a plan for transmitting a finding of misconduct to appropriate persons or organizations to protect the integrity of the research record. All parties involved in the review of misconduct are vulnerable to being sued and junior faculty and staff may be reluctant to participate in disciplinary proceedings out of fear of professional vulnerability through some form of retribution.

Enforcement of a code of ethics is not an easy task and a university must be willing to expend sufficient resources to do it well. The question of whether enforcement will serve as a real deterrent to misconduct is by

no means settled. Therefore, careful drafting or redrafting of a university code of ethics may permit enforcement while addressing some of these concerns. However, the potential for and the limitations of codes of ethics to ensure research integrity provoke varying points of view. While a code of ethics is intended to codify standards of behavior within the faculty (and staff), its limitations are such that conduct cannot be guaranteed and, in some instances, cannot be predicted. The contexts of scientific research can present unique circumstances that create difficulty in describing behavior that is uniformly right or wrong. Any decision or dilemma requires an examination of competing values as well as good judgment and common sense, and the individual value systems of each member must also be factored into decision making.

In the context of many university faculty disciplines, the most important factors are related to (1) authorship determination, (2) reporting misconduct procedures, (3) plagiarism, (4) duplicate publication, (5) obligation to report misconduct, (6) data retention, (7) mentoring/supervising roles, (8) responsibility of authors, (9) timely reporting of data, (10) complete reporting of data, and (11) order of authors. However, this list does not reveal how these provisions are interpreted by university faculty and the impact that the individual categories of the list has on faculty behavior.

All codes encourage general good conduct, summarized as: (1) perform research and consultation honestly, (2) work within the boundaries of competence, by following all applicable regulations and procedures, and (3) do no harm to the university, which may decide to deny any liability for the behavior of the faculty. This leads to the substantial commonalities that all the codes will contain: (1) honesty in conducting and reporting research, and (2) integrity in intellectual ownership and authorship. However, differences among a selection of codes of ethics will, undoubtedly, be found to be in the breadth and the level of specificity (i.e., articulated more abstractly as principles or as detailed expected behaviors) as well as the implied purpose (i.e., primarily to educate, to sanction, or to protect the public). In summary, the premise behind a code of ethics is to assist the university, when it is called upon to make a decision, to ensure that (usually most, if not all) understand the difference between *correct actions* and *incorrect actions* and to apply this understanding to its decision (Annas, 2006). It is at this stage that the intent of the university administration in enforcing the code of ethics can come under serious question.

In summary, the effectiveness of a code of ethics or a code of conduct is a function of the design, distribution, and implementation of the code (Yahr *et al.*, 2009). It should not be assumed or expected that a code covers

all intended practices and behaviors; codes evolve, and, as living documents, must be redesigned and implemented. Codes that are not assessed for effectiveness may be merely window dressing, but a professional audit of a code of ethics (code of conduct) may shed light on the issue of code effectiveness. A code of ethics or a code of conduct does not guarantee a desired outcome and cannot be effective, and successful implementation can be improved through mentoring, live educational sessions, or tutorials. Recalling or being reminded of a code of ethics may help. Reminders of ethical standards and standards of conduct can promote the practice of honesty to the detriment of the practice of dishonesty (Ariely, 2008).

1.5 Academic Freedom

Because there are references to academic freedom elsewhere in this book, it is appropriate at this point to delve briefly into the realms of academia and the meaning of the term academic freedom since professorial behavior, as part of academic freedom, falls under the umbrella of conduct and misconduct.

The academic tradition emphasizes “*intellectual honesty and critical self-discipline...with respect to ...the scholarship of discovery; the scholarship of integration; the scholarship of application; and the scholarships of teaching*” (Hamilton 2002). Furthermore, academic freedom has been defined as “*a condition of work, designed to enable academics without suffering adverse consequences in their employment*” (Tight, 1988). This allows for *expanding the current horizons* of knowledge. Academic freedom also exists in the ethical space between “*the autonomous pursuit of understanding and the specific historical, institutional and political realities that limit such pursuits*” (Scott, 1996). Such freedom allows researchers to uncover and discover contradictions, discrepancies, and information that has not been formerly revealed (Robinson, 2001). However, the nature and status of a university depend on the extent to which academic staff appreciate, understand, and behave in an ethical fashion while enjoying their academic freedom (Steneck, 1984). Furthermore, external pressures that force universities to be more competitive in the expanding marketplace can be and have been “*corrupting both of the spirit of the university and academic freedom*” (O’Hear, 1988). In addition, there is the thought that the accumulation of knowledge has been due to academic freedom but this is only partly true – the accumulation of knowledge that occurs outside of academia in governmental organizations and other nonacademic (commercial) organizations must not be forgotten or ignored.

In some instances, and in a different realm of their operations, mainly because of the autonomy that they have been allowed – including the lack of a well-defined peer review system and the overall lack of accountability of the professors – universities may knowingly or unknowingly engage in unethical practices (Swazey *et al.*, 1993). Issues of ethics generally occur on the boundaries of academic freedom and therefore raise questions about the need for discussion and consensus about the limits of academic freedom and, by extension, whether or not there should be limits to autonomy bestowed upon universities (Neave, 1988). These issues have to be addressed within the notion relating to the definition of a university and focus on views of university functions, such as the development of critical thinking and participation in and improvement of the quality of life while promoting self-reflection (Metz, 2009).

The modern university is *an institution for teaching, learning, protection of the culture, contributor to economic growth and a knowledge factory*, which is a shift from the university as “*a simple community of scholars and students united by a search for a deeper understanding of nature of nature and humankind*” (Pocklington and Tupper 2002). Moreover, the university has become “*a series of specialized factions, disciplines, students and research activities united only by occupancy of a common territory.... factions though, independent, broker deals with each other, undertake research that the public does not understand and utilize a language that the public cannot understand*” (Pocklington and Tupper, 2002) while professors establish academic tribes and territories. In such a context, academic freedom is synonymous with academic subjectivity as individuals utilize disciplinary jargon to justify their actions and guard their respective territories. The university has also been viewed as radical when “*in fact, it is most conservative in its institutional conduct*” (Kerr, 2001). It is also seen as “*a law unto itself; the external reality is that it is governed by history*” (Kerr, 2001).

To mitigate these issues (recalling that the prime mandate of a university is to teach and foster learning in the students), universities today have to adjust in three major areas: (1) growth, (2) shifting academic emphases, and (3) participation in a wide variety of university activities (Kerr, 2001). This requires that universities contribute to the creation of an environment that explores: (1) a more complete understanding of education, and (2) a culture and practice that take education to higher levels of ethics and morals. Furthermore, since academic freedom is “*socially engineered spaces in which parties engaged in specific pursuits enjoy protection from parties who would otherwise naturally seek to interfere in those pursuits*” (Menand, 1996) the accountability for such freedom has to be persistently monitored, which becomes conducive to self-regulation within the university.

In an era of increasing demands for accountability, universities must make an ethical commitment to justify their claims for university autonomy and academic freedom not only to those within their walls but also to those outside. As a result of the inclination to defer to academic authority in earlier times (Haskell, 1996), those with academic authority were (or, at least, should be) simultaneously obligated to preserve their integrity and disciplinary recognition.

Academic freedom evolved through several phases. In the early years, such freedom was constrained because of a combination of financial, political, moral, and religious concerns. Intellectual exchanges were only supposed to occur between competent academics who would clarify differences between error and incompetence (Hamilton, 2002). Academic freedom is rendered special because of self-examination by the faculty in peer review (Hamilton 2002). However, one must ask if the peer review system within a university actually exists as a formal means of evaluating the *performance of all of the faculty members* as well as the review of *all academic treatises prior to publication*.

To many – both inside and outside of the university system – the concept of academic freedom implies opportunities to choose what topics one wants to investigate and how far one wants to go in that regard. Choice involves acting on and sorting out whatever one wants by examining the consequences of each choice, which requires making decisions about means and ends (Stehr, 2008). In the determination of means and ends, ethical factors *must* be considered.

Statements about academic ethics, as reflected in the codes of ethics of disciplinary bodies, usually establish parameters to guide the actions of professors but, in general, faculty members (especially faculty members at the top of the professorial rank) are really free if they are the ones who decide on courses of action. This means that such professors are free to present any material (objectionable or not) they choose to students in whatever manner they wish. This is where responsibility and accountability come into play, and such accountability must be manifested in the behavior of the professor, which is related to ethical conduct. Every academic becomes obligated or it is the duty of academics to provide undergraduate and graduate students with certain assurances of ethical and moral behavior – hence, accountability – even though the concept of academic freedom implies that there are no boundaries to thoughts, words, and deeds as stated before. In fact, this might be at least one reason why the credibility of universities is being questioned, especially when individuality in a university begins to override the requirements of social and ethical behavior (Downing, 2005).

In summary, academic freedom means that a faculty member has the autonomy to teach, to perform research, and publish the results of that research but (what is often not recognized) *within the boundaries of ethical and moral behavior*. Students are good imitators of professorial behavior – *students see, students do*. Indeed, the mere act of engaging in unethical practices (which is not always covert) is also evidence of the fact that faculty members are not always rational, although they may be able to rationalize their emotions and their subsequent actions for data manipulation (Chapter 8).

Academic freedom must be used in an ethically acceptable fashion in teaching or research or both. The code of ethics is, however, the means by which this freedom of choice (i.e., academic freedom) is followed and practiced.

One aspect of academic freedom is the freedom of academic faculty members to choose their area of scholarship and the area of research in which they will be engaged. Research, as defined for the purposes of this book, is the investigation or experimentation of a particular subject area that is aimed at (1) the discovery and interpretation of facts, (2) revision of accepted theories in the light of new facts, or (3) practical application of such new or revised theories or laws. Thus, research involves the collection of information about a particular subject by careful or diligent search, including studious inquiry or examination.

Research in any discipline can entail frustration and disappointment as well as satisfaction. Whether or not an experiment fails or a hypothesis turns out to be incorrect are all learning experiences. Instead of attempting to rationalize why an experiment failed, the investigator should determine if the experimental design was correct (or incorrect) or whether the collapse of a favored hypothesis is more likely the commencement of a modified hypothesis that makes more sense and is more logical than the previous hypothesis.

In short, *unethical behavior* in university faculty occurs and continues to plague the minds of those who see such behavior as well as the general public who may become aware of such behavior when it is reported in the popular press. There is also the need to determine if *ethics* is alive. It is! But it is the minority (at least we hope a minority) of researchers who are the miscreants and give research a bad name because of their flaunting or bending of the truth or, for want of a better word (if there is such a word) *cheating*. Difficulties such as these can strain the composure of the beginning faculty member and senior faculty member alike. Individuals operate according to their own beliefs of what is and is not considered moral, and

there must be some overriding code of ethics to assist faculty members and staff as they work through their respective projects.

Many university administrators realize that the adoption of a code of ethics can be an important, but insufficient step for fostering responsible research practices among faculty members. In seeking ways to reinforce the message carried by their codes, the university may engage in a range of activities such as the promotion of integrity in research (Chapter 6). University-sponsored workshops in research ethics and professional responsibility are among the activities that should be conducted by the university but, unfortunately and regrettably, are not always a part of the university calendar.

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2

Codes of Ethics

2.1 Introduction

The previous chapter (Chapter 1) has laid out the general structure of the university and alluded to the behavior of the faculty members through the concept of *academic freedom*. Now is the time to begin to delve into the role of ethical behavior by university faculty and staff and the consequences of unethical behavior by university faculty members, staff members, and students.

Codes of ethics and codes of misconduct (*honor codes*) in universities are intended to legally reinforce the need for respect in teaching and research as well as for the behavior of students, faculty members, and staff members independent of what anybody thinks about gender, ethnicity, religious affiliation, age, culture, level of education and other characteristics (Speight and Foote, 2011; Klosterman, 2013.). Briefly as already stated (Chapter 1), a code of ethics provides a framework for ethical judgment (the incentive to do the *right thing*) by a scientist or engineer (Martin and Schinzinger, 2005; Fleddermann, 2008) although there are thoughts (not necessarily agreeable) that many plausible-sounding rules for defining ethical conduct might be destructive to the aims of scientific enquiry (Woodward and Goodstein, 1996).

Furthermore, the role of a *code of ethics* is characterized by both descriptive and prescriptive aspects. One can choose to affirm or deny role responsibility. Particularly when the occupant of a position is a faculty member, it might be expected that the requisite knowledge and skills demanded in these esteemed positions would be sufficient to guarantee research integrity, except in a few extraordinary cases. In fact, there is a direct relationship between the health of a profession and the maintenance of ethical standards, in academia and industry (Craine, 2004). Central to this relationship is the university culture, which varies within and across universities.

Ethical issues have come to the fore and will remain there because of the tendency for faculty members to prioritize differences as they seek to attain a more privileged position in their respective group in the world of academia. This requirement can be further compounded by procedural inconsistencies in any research project, and the absence of a philosophical basis for discussions of ethics dictates the need for a more comprehensive theory to guide future research (Kitchener and Kitchener 2009). This should focus on: (1) behavior and basic moral requirements, (2) ethical rules for decision making, (3) ethical principles that are used to justify ethical rules, (4) ethical theory providing explanations of how a faculty member should act, and (5) meta-ethics, which discusses and evaluates the meaning of ethics (Speight and Foote, 2011).

In addition, there seems to be much truth in the postmodern view of research ethics that every research activity, question, and decision has ethical underpinnings. Ethical issues must (they usually do) focus on: (1) research procedures of developing a title, research design, data collection, data interpretation and analysis, report writing and communication of findings, (2) power relations of the researcher and researched, (3) views of respondents about future use of research findings, and (4) the researcher's assessment of his or her beliefs and values (Thomas, 2009).

Professionalism entails a multiplicity of tasks and a variety of new roles, and the behavior of the professional within each profession should be guided by a code of conduct or a code of ethics (Appelbaum and Lawton, 1990). However, not all individuals occupying the various professional roles have been adequately prepared by studying the codes. A university is typically characterized by autonomous spheres of endeavor within which only some roles are realized, and therefore accountability may be weak or lacking. Conversely, actions are often collective, i.e., via team approaches to problem posing and problem solving, which can undermine individual responsibility. Indeed, the importance of recognizing the role of the university in contributing to failure to acknowledge incidences of research misconduct is essential. All of these potentially conflicting factors may

make it difficult for a researcher to know with confidence what is ethically expected of him or her.

Briefly, research misconduct is “*fabrication, i.e., making up results and recording or reporting them, falsification, i.e., manipulation of research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record, and plagiarism, i.e., the appropriation of another person’s ideas, processes results, or words without giving appropriate credit*” (OSTP, 1999). There is also the suggestion, perhaps plausible, perhaps not, that definitions of misconduct should include turning to the news media with a story of misconduct (Roy, 1999).

Codes of ethics are often considered to be controversial documents and some faculty members may even consider them to be unnecessary. On the other hand, others believe that codes are useful and important, but disagree (or are uncertain) about why codes are necessary. Yet, many universities have developed codes of ethics that encompass a broad range of behavior and practice as a means of fostering research integrity. These codes presumably represent the ideals and core values of a profession, and can be used to transmit those values and more detailed ethical prescriptions as part of the education of faculty members. They also provide standards for reviewing claims of misconduct and for sanctioning improper behavior. When misconduct allegations are reviewed by a university, the results may not be made public, thereby diminishing the potential deterrent effect. A university should, therefore, consider making public the outcomes of their misconduct reviews.

One of the pivotal questions faced by any university is whether to institute measures to enforce a code of ethics with disciplinary proceedings and sanctions. Many universities may appear not to engage in enforcement, using their respective codes of ethics primarily for educational purposes. However, for those universities that practice enforcement of the codes of ethics there is the demonstration of their willingness to hold the faculty, staff, and students accountable for their conduct. Yet another option adopted by some universities is to conduct an investigation with the university and reserving the right to publicize (or not to publicize) the findings of that investigation.

The potential for and the limitations of codes of ethics to ensure research integrity provoke varying points of view. While codes are intended to codify standards of behavior in professional roles, their limitations are such that conduct cannot be guaranteed and, in some instances, cannot be predicted. The contexts of academic research can present unique circumstances that create difficulty in describing behavior that is uniformly right

or wrong. Any decision or dilemma requires an examination of competing values as well as good judgment and common sense, and the individual value systems of each member must also be factored into decision making.

In the context of academic disciplines, the most important factors are related to (1) authorship determination, (2) reporting misconduct procedures, (3) plagiarism, (4) duplicate publication, (5) obligation to report misconduct, (6) data retention, (7) mentoring/supervising roles, (8) responsibility of authors, (9) timely/complete reporting of data, and (10) order of authors. However, this list does not reveal how these provisions are interpreted by the faculty members of the universities and the impact of these provisions on faculty behavior.

Conceptual work needs to focus not only on potential determinants of research integrity and misconduct but also on the specific indicators of research integrity and misconduct. It is important that research examines positive ethical practice as well as research misconduct. In considering misconduct, intent is also important because the very same manifestations may happen by design, by inattention or inadvertence, or even out of ignorance. Furthermore, departures from ethical standards may be isolated events or part of a more general pattern or practice of research misconduct.

Under the broad umbrella of research integrity and misconduct, a program of study would want to include attention to all aspects of the research process from data collection through dissemination. For example, research agreements ethics could usefully address such ethical elements of conduct/misconduct as:

- Authenticity of the work process.
- Fabrication of data.
- Falsification of data.
- Authenticity of work product.
- Plagiarism.
- Misappropriation of data from others.
- Accurate reporting of results.
- Having or using appropriate expertise in the conduct of research.
- Authorship and appropriate credit.
- Data access or sharing.

Honoring agreements of privacy and confidentiality

Manifestations of research misconduct can often be very low profile, invisible activities. At times, they are modest transgressions that become large in their significance because they are incremental over time. How

apparent or observable misconduct is and even when or where it takes place can be highly dependent on the research process itself. As suggested above, factors like the site of research (e.g., laboratory versus field) or even the mode of conducting studies (e.g., solo investigator versus multi-investigator team) can affect both the norms of and opportunities for misconduct.

If the provisions specified in a code of ethics can be supported with good reasons, there is no reason why a profession should not include an affirmation of those provisions as part of what it professes. This does not preclude individual members from autonomously accepting those provisions and jointly committing themselves to their support. In fact, there is always a strong positive case for professional codes of ethics. For those who disagree, perhaps an examination of the individual's ethics might be in order?

The code is to protect each professional from certain pressures (for example, the pressure to cut corners in laboratory work to get the next publication out). In fact, having a code of ethics allows a faculty member to object to pressure to produce substandard work not merely as an ordinary moral agent, but *as a professional*. Faculty members should be able to state, without recrimination, that as a professional, *I cannot ethically put personal or business concerns ahead of my professional ethics*.

Supporting a professional code will help assure each faculty member a working environment in which it will be easier than it would otherwise be to resist pressure to do much that the faculty and staff would rather not do. Faculty members and staff members should support the codes of their respective professions because supporting the code helps remove any discomfort they might feel about their profession, since the code should generate benefits for all faculty and staff (David, 1991).

The possible functions of a code of ethics include (1) a collective recognition by members of a profession of its responsibilities, (2) an environment in which ethical behavior is the norm and, therefore, expected, (3) the code can serve as a guide or reminder in specific situations, (4) the process of developing and modifying a code of ethics can be valuable for a profession, (5) a code can serve as an educational tool, providing a focal point for discussion in classes and professional meetings, and (6) a code can indicate to others that the profession is seriously concerned with responsible, professional conduct (Harris *et al.*, 1995; Hamilton, 2002; Harris, 2004).

2.2 Codes of Ethics

The realm of ethics is concerned with standards and requirements for socially acceptable behavior in addition to following proper procedures

for getting things done at any level of university interaction – individual, group, community, governmental or regional.

Ethics in the university has several strands: (1) descriptive ethics, that is, the actual behavior of faculty and staff and the ethical requirements of their behavior; (2) normative ethics or identification of the values that sufficient to guide interaction; (3) meta-ethics, which questions the meanings of all that ethics has been concerned about, and (4) applied ethics or the application of normative rights to specific issues, disciplines and settings (Kitchener and Kitchener, 2009).

The requirements in this regard are stipulated in various codes of ethics and codes of conduct documents of many universities across the world. However, such codes do not resolve the issues which, in the final analysis, depend on personal decision making and because knowledge claims must be free from bias, prejudice, and personal values (Kitchener and Kitchener, 2009). These codes cannot and must not be ignored by using claims of academic freedom. There are many instances where laws have been flaunted because an attorney has argued successfully that to obey the law is an infringement of a client's constitutional rights. It is *not* a client's constitutional right to bring harm to another person by violating a code of ethics.

There are several descriptions or definition of ethics including: (1) a system of moral principles, which are the ethics of human culture, (2) the rules of conduct recognized in respect to a particular class of human actions or a particular group, culture, which include medical ethics and Christian ethics, (3) moral principles, such as the ethics of an individual which forbid betraying a confidence, and (4) the branch of philosophy that deals with values relating to human conduct, especially in respect of the correct or incorrect nature of certain actions and the motives behind such actions (Becker and Becker, 2002). Ethics is also "*the normative of conduct and conduct is a collective name for voluntary actions*" (Lillie, 2001).

In this regard voluntary actions are those actions that could have been done differently (Lillie 2001; Harris, 2004). Such actions may be good or bad, right or wrong, moral or immoral. Ethics focuses not on what men think but what they ought to think and do. An ethical study is an in-depth systematic study of the standards for judging right and wrong, good and bad, principles guiding means and how far researchers will or should go (Lillie 2001; Howard and Corver, 2008).

Whether the conduct of a faculty member is correct or faulted may be (Lillie, 2001): (1) instinctive and discernible through individual actions, (2) intentional, which may be direct and motivating or indirect, (3) rooted in desire, which is a consciousness to act in a particular manner, or (4) a matter of calculated choice. Indeed, the actions of one person can impact the

actions of others and, as such, the general nature and direction of actions in a university may affect the choices of others and their level of consideration for moral standards (Lillie, 2001). This has an impact on concerns for the common good, levels of egoism and altruism and the eventual emergence of rights, duties and entitlements.

Ethics consists of those morally permissible standards of conduct each member of a group wants every other (member) to follow even if their following them would mean he or she had to follow them too. Thus, it is reasonable to assert that writing a properly functioning code of ethics is a collective task (Davis, 2007).

Ethical disagreements on rights, duties, and entitlements are also possible and may take the form of: (1) disagreement in belief, when an individual believes in "p" and another in "not p" and as such one persistently challenges the other, and (2) disagreement in attitude when one has a favorable and another an unfavorable attitude towards an issue (Stevenson, 2006).

Furthermore, a code of ethics should fulfill many purposes within a university by (1) increasing ethical sensitivity and judgment, (2) strengthening support for the moral courage, and (3) fine-tuning the sense of identity of the university. Furthermore, there is a wide variety of codes of ethics, which are written by specific technical groups and which have their own purpose for existence and allow each group to face a set of ethical challenges that are unique to the group (Lichtenberg, 1996).

A *code of ethics* should be the *benchmark of the acceptable standards of conduct* which faculty, staff, and students make binding upon themselves. Often, codes of ethics prioritize commonly conflicting principles, which underlie the standards of conduct within a university by prioritizing the principles in order to give guidance on how a member is to act as a responsible agent of the university when situations require an element of compromise between principles (Davis and Stark, 2001).

Because different groups are composed of different people with different purposes having differing means of accomplishing differing ends, priorities specific to one group may be contradictory to those of another group. The reason for the differences in, say, priorities is because the tasks of one group may directly involve the improvement of conditions of a university (or groups within a university) whereas the priorities of another group may involve the improvement of the condition of individuals. In addition, the type of activities engaged in by members of a university determines the situations in which the practice of ethical conduct may be jeopardized, and therein lies the reason for writing codes of ethics specific to the university students, faculty, and staff.

Moreover, an effective code establishes the ethical expectations for students, faculty members, and staff members, as well as administrators and sets forth the mechanisms for enforcement and consequences of non-compliance. In order to successfully apply the code to incidents of misconduct, the code must be unambiguous as well as being available to, and understood by, all faculty, staff, and students. Moreover, there should be no defensible position for misconduct by misinterpretation of any code of ethics (Chapter 1). Ignorance of the law – in this case the code of ethics – is not an excuse for misconduct. Indeed, no university can afford to pat itself on the back for instituting a code of ethics. Without a mechanism and follow-up for enforcement of the code, the code is of little value, as when there is obvious misconduct and the accused person is acquitted by a committee of his or her peers. When such a code is (1) an integral component of the university culture, (2) is understood, and (3) followed and enforced, it may not prevent the actions of a *rogue employee* (faculty member, staff member) or a student (or groups of students) to embarrass the university by instances of misconduct (Hileman, 2005).

Generally speaking, it seems that codes of ethics with a clearly defined purpose are more clearly stated and better organized. Many codes make effective use of defining a purpose by beginning the document with a *preamble* or a *statement of intent*. The *preamble* sets the tone of the document and outlines both the purpose of the university and the purpose of the code. The *statement of intent* fulfills a similar purpose, but it focuses more on the purpose of the code and less on the purpose of the university than does a *preamble*. Both are good ways to establish cohesion within the group that is essential to the proper functioning of a code of ethics.

To many, a code of ethics is merely well-meaning statements on a rarely seen and even less frequently and effectively implemented document but, in fact, a code of ethics must truly reflect the virtues of the group and be effective in its application (Yahr *et al.*, 2009). Through a process of achieving consensus, writing a code of ethics becomes an excellent group-defining task. Consequently, a well-defined membership in the group, an outcome of devising and publicizing a code, aids in the functioning of the code. Through identification as a member of the group, a member's sense of duty to other members of the group and to the group's collective agreements expressed in the code is strengthened. As a result, the effectiveness of the code of ethics is also strengthened.

In addition, there are several items that must be considered when deciding what should be included in the code of ethics: (1) the persons or groups of persons affected by the university, (2) the main area of activity of the university, (3) the unethical decisions and actions that the university would

like to prevent, (4) the means by which these the unethical decisions and actions can be prevented, (5) the types of ethical problems that students, faculty members, and staff members of the university are most likely to encounter, and (6) the means by which conflicting principles are resolved (Davis and Stark, 2001).

The answers to these questions lead to the formulation of what needs to be included in the university's code of ethics. Just as principles within a code differ from group to group, so too, methods of organization differ from faculty member to faculty member and within the respective subdisciplines. For example, the factors that may affect how a university develops a code of ethics could include such aspects as (1) the length of the code, (2) the means by which statements for inclusion in the code were formulated, and (3) the form of organization that is most familiar to the students, faculty, and staff (Schwartz, 2001, 2003, 2005). If relationships were a major consideration in the formulation of statements, it seems most appropriate to organize the code according to relationships. However, if relationships were not a major consideration but principles were a major consideration, it is most appropriate to organize the code according to principles and guidelines for the principles.

Thus, a code of ethics is a means of uniquely expressing the collective commitment of a university to a specific set of standards of conduct while offering guidance in how to best follow those codes. As such, authors of a code of ethics should explore methods of organizing a code and use of language in the code that will be well received (and readable and understandable and not in *legalese*) by the membership. For example, Mr. Shakespeare once wrote "let's *kill all the lawyers*" but this is often taken out of context and is not the intent of that particular speech as written in the play *Henry VI, part 2*. And yet, many people are willing to take this statement (as well as many other statements) out of context with their own individual preferences for the interpretation of the meaning. Codes of ethics should not allow the reader to do this! Giving guidance encourages the students, faculty, and staff of a university to develop and practice moral reasoning based on the collectively agreed-upon principles of the group enumerated in the code.

A workable code of ethics is written with the awareness that the code will be used in a variety of different situations, and each situation will prompt those involved to refer to the code for specific guidance (Harris, 2004). Thus, the code must be written with enough information to be of use in the specifics of a situation while remaining general enough to be used for a wide variety of situations. It is most likely this challenge that lies behind the inclusion of sections entitled, for example, *Suggested Guidelines for Use*

with the Code of Ethics, Standards of Practice or Rules and Procedures. In such sections, there are attempts by the university administration to foresee situations one might encounter that call for ethical considerations. In many instances these guidelines attempt to provide guidance on how to resolve conflicting principles (Davis and Stark, 2001).

The brevity of many codes of ethics seems insufficient for fulfilling the many purposes of the codes. While codes that are short in length and content do illustrate the commitment of the university to fundamental principles, these codes may fail to give substantial guidance to the students, faculty, and staff in situations which often require some sort of give and take between fundamental principles.

It is important for a code of ethics to include such guidance for two reasons: (1) through the development of a code, a university can form collective agreements about what conduct is ethical and what conduct is unethical, and (2) the practice of ethics may be (some would insist *always*) situation-specific. A code of ethics lacking in guidance fails to address this very important aspect of the practice of ethics; thus, the code will likely fail at accomplishing its intended purposes.

Codes of ethics change with time due to (1) changes in the university, (2) changes in external influences, and (3) a desire by the university administration to improve the effectiveness of a code. In this sense, a code of ethics should be thought of as a living document and must be adapted to the changing atmosphere of a university and the environment in which the university operates. Through a process of revision, the codes of ethics keep place with the times and changes in the law of the land. From this perspective, the future of codes of ethics and their ultimate usefulness are left to the university to responsibly fulfil the sections of the codes.

Since the actions of one person can impact the actions of others, the general nature and direction of actions in a university may affect the choices of others and their level of consideration for moral standards (Lillie 2001). This has a definite impact on concerns for the common good, levels of egoism and altruism, and the eventual emergence of rights, duties, and entitlements (Frankel, 1989). Among faculty, staff, and students, ethical disagreements on rights, duties, and entitlements are also possible and may take the form of: (1) disagreement in belief, when an individual believes in one aspect of the work and not in another and persistently challenges his or her colleagues and (2) disagreement in attitude when one has a favorable and another an unfavorable attitude towards the data (Stevenson 2006).

The extent and frequency of agreements and disagreements would vary with the extent to which an ethical environment exists (Haydon 2006). All universities have standards of behavior and these standards are synonymous with morals, which signify how people should treat each other. Norm conformity is recognized as an obligation or duty and, in the absence of norms being identified, people can be guided by the consequences of their actions.

Values, laws, and religious teachings are part of the ethical environment which must be evaluated and changed, if necessary (Haydon 2006). This can happen through individual action, legal changes, and education. Implicit in the creation and maintenance of an ethical environment is the emergence of regimes of reason/unreason which are constitutive of conscious and unconscious opposing and accepted values that often clash with each other in a university (Leitch 1992).

An assessment of rights, duties, and entitlements is also a moral issue, and human moral capacities and judgments are shaped by personality, socialization, situational demographic (such as age, gender, and ethnicity) and broader factors. For example, a PhD student following an experimental program decides that his or her original project title and synopsis require rigorous and taxing laboratory work, which may be beyond his or her capabilities. Although giving the supervisor/mentor glowing reports of the work as it (supposedly) progressed (but refusing to turn over the laboratory notebook for examination – each time using some convenient excuse) the student has changed the program. The student has been encouraged to do this by working with others who were not formally involved in the program and without the knowledge of the supervisor/mentor. No formal (or informal) requests were ever submitted by the student to formalize the change of plan, and the supervisor/mentor discovers the deception at the time of drafting the thesis. When confronted with this issue, the student is unrepentant and the university powers-that-be are perceived to agree with the student's actions (insofar as the student received no form of reprimand). By allowing this, the university is encouraging the student to move into an area of cheating and unethical behavior, and also the word gets around that students can graduate by doing whatsoever they wish without any form of guidance and by, essentially, flaunting the rules or bending the rules to accomplish graduation.

Generally, such actions are due to the need to achieve a purpose or satisfy an interest or desire (Furrow, 2005). These factors do not impact independently of each other but in combination. Indeed, morally inappropriate behavior is driven by thoughts and feelings that were cultivated

and reinforced across time and space. Furthermore, moral autonomy is not achievable when personal desires, emotions, and inclinations persistently influence the judgment of a faculty member. Moral autonomy must be exercised within certain ethical boundaries – even if it conflicts with an individual's needs and desires, and such needs and desires must be evaluated (Furrow, 2005). Reasoning is instrumental in helping to pursue and attain certain goals.

If the act performed by the individual faculty member is in his or her power not to perform, then the faculty member is responsible for that act and must face the consequences (Chisholm, 2008). This would establish the morality of the action given that to act morally is to act autonomously, not as a result of technical or social processes (Williams, 2006). However, the selective orientation to autonomous or independent individual-level action is not to be reshaped on emotion but on the basis of serious forethought and reinforced by accountability and evaluation standards. In addition to these, the promotion of ethical behavior would serve to reduce ethical lapses in the academic environment (where responsibility is often taken lightly but authority reigns supreme) as well as in other environments (Kezar *et al.*, 2008).

However, once a promise or commitment is made, faculty, staff, and students are obliged to keep it, and such obligations are very difficult to escape (Furrow, 2005). Some faculty, staff, and students may not keep their obligations because they are not quite comfortable with themselves and/or because others give them different advice. The result is diminished will-power or intention to fulfill an obligation. Intentions are the outcomes of deliberating with oneself to decide what to do (Williams, 2006).

While it is true that beliefs are not under voluntary control, it is also true that faculty in many disciplines choose what to believe, and, as a result, choice is under our control. In this regard, it is essential for the scientist and engineer to remain open-minded and always be ready to evaluate arguments, findings, and the different perspectives of each person involved. Consequently, it is necessary, in fact essential, to realize that (1) the end does not justify the means, (2) a rational basis must be established for dealing with uncertainty in any type of research, (3) while researchers prefer to minimize errors, the outcome of such preferences must be thoroughly evaluated (Shrader-Frechette 1994).

As noted above, if the act that the individual performs is in his or her power not to perform, then the individual is responsible for that act and must face the consequences. It must be noted, however, that the orientation to autonomous or independent individual-level action is shaped and

reshaped by a university. As a result, the central influencing factor is the quality of individual-level socialization despite the changing nature of the context. It is further reinforced by law enforcement, cultural influences, accountability arrangements, and monitoring and evaluation standards. In addition to these, the promotion of equity initiatives would serve to reduce ethical lapses in universities and other settings (Kipnis, 1983; Kezar *et al.*, 2008).

2.3 Ethics in the University

A *code of ethics* is adopted by a university in an attempt to assist the faculty, staff, and students when called upon to make a decision with the understanding of the difference between *correct actions* and *incorrect actions* and to apply this understanding to their decision (Annas, 2006). Codes of ethics should be developed by all disciplines, with the process of development offering ample opportunity for contributions from all sectors of the faculty and staff.

Ethics and publication standards are not always effectively transmitted from one generation of faculty (or staff) to the next, or even to current members of the faculty and staff. Hence, any effort to develop standards should be linked to a plan for their dissemination and for the education of those to whom they (will) apply. For example, ethics consulting services sponsored by universities may help faculty and staff to assess options for responsible conduct as long as the differences between right and wrong are recognized.

If a university decides to enforce its standards with review and disciplinary procedures, it should be prepared to devote adequate resources to do so effectively. The university should also recognize, through a review of the code of ethics or code of conduct that an action that could have been an accepted norm or simply ignored years ago might be viewed in the modern world as blatant impropriety. Thus, the code of ethics should be frequently updated to move with the times and maintain a cautious over-watch of the behavior of the members. In action, the code should also evolve to show the ways to initiate a grievance as well as the disciplinary action or punishment that will be accorded the perpetrator.

Thus, for university faculty and staff, a code of ethics often focuses on issues related to work, although the *code* may also focus on social issues and set out general principles about the tenets of the university on matters such as (1) mission statement, (2) quality of work, (3) standards of behavior

towards others, (4) privacy, and/or (5) the environment. More important, the *code* should delineate proper procedures to determine whether a violation of the code of ethics has occurred and, if so, what remedies should be imposed (Luegenbiehl, 1983; Johnson, 1991; Ladd, 1991). In addition, the effectiveness of a code of ethics depends on the extent to which the university administration supports it with sanctions and rewards. Violations of the code of ethics of a university can (or should) subject the perpetrator or violator to the prescribed consequences, such as expulsion from the university.

The underlying premise of any code of ethics is that the faculty member should not sacrifice professionalism by rejecting one or more of the guidelines in relevant code of ethics of the university. However, the relevant code of ethics should offer the following: (1) clear and unambiguous advice, (2) no opportunity for someone endorsing the opposite course of action to also use the code to support his or her choice, (3) the different guidelines within the code should not give conflicting guidance but guidelines should point to the same outcome, and (4) the professional code of ethics should not conflict with the individual moral compass of a faculty or staff member (Davis and Stark, 2001).

Multiple factors shape the norms, values, knowledge, and conduct of faculty researchers and thus should be part of any research agenda on research integrity. Since the research enterprise is itself a social process, there are a number of individual, situational, and structural influences that can affect what faculty and staff believe and how they work in general as well as under special conditions. Due process considerations are essential in a review of misconduct if expulsion from the university is a possible outcome. In addition, reviewers of misconduct allegations must have the right to access all sources of relevant information. There should also be a plan for transmitting a finding of misconduct to appropriate persons or organizations to protect the integrity of the research record. All parties involved in the review of misconduct are vulnerable to being sued, and junior faculty members may be reluctant to participate in disciplinary proceedings out of fear of professional vulnerability.

Enforcement of a code of ethics is not an easy task and a university must be willing to expend sufficient resources to do it well. The question of whether enforcement will serve as a real deterrent to misconduct is by no means settled. Therefore, careful drafting or redrafting of codes of ethics and/or codes of conduct may permit justifiable enforcement. However, there is always the rogue faculty member, staff member, or student who, having received a copy of the code of ethics will immediately give thought to how the code might be circumvented. For example, some faculty and

staff may feel that it is all right to tell a little *white lie* (Chapter 11) or to make a long-distance personal telephone call that is charged to the university as long as they can justify it in their mind. While this may not be a serious infringement of the code, it is the beginning step of the long and winding path to serious infringement.

As best as is known at this time, every university has a range of norms in place to guide the behavior of its members. Similarly, universities are built on moral obligations, ethical responsibilities, and principles and codes of behavior (Baca and Stein, 1983, p. 7). Furthermore, there is a direct correlation between levels of moral outrage expressed and the importance of what is expected (the *norm* – an indicator of professionalism) from ethical standards (Braxton and Bayer, 1999, p. 3).

In the realm of higher education, norms specify the desired practices with respect to teaching, research, and service. Without norms, faculty members would be free to follow their own unconstrained preferences in teaching and research. Norms also represent what is considered important by a group articulating how professional choices mesh with service (Braxton and Brayer 2002, p. 4).

It might be argued (unsuccessfully one hopes) that it is difficult to establish unambiguous ethical standards in academia and this leads to a range of judgment calls (Whicker and Kronenfeld, 1994, p. 9). The nature of this challenge is shaped by factors such as information overload and competency, both of which impact departmental cultures, individual academic roles and identities. Furthermore, there is a relationship between academic communities and the ideas they express (Becher and Trowler, 2001, p. 23). Academic culture comprises disciplinary knowledge, growth, enquiry methods, and research outcomes.

Whether or not they are in the academic, commercial, or governmental world, most university faculty and staff believe that they are honest, capable of acting not from instinct but rather from a reasoned set of rules that are defined under various relevant *codes of ethics*. For most of history, the discussion of ethics was dominated first by superstition and later by religious doctrine, and thus largely resistant to reasoned examination. It is only in the last few centuries that the study of ethics been rigorously pursued outside of religious doctrine. Currently, even those who hold strong religious convictions are dependent upon arguments from secular ethics to resolve disagreements with people of different religious beliefs and cultures. Likewise, most religious doctrines now accept that their texts should be viewed critically as products, at least in part, of human cultures. Alternatively, if a faculty member does not consider a religious text as the first, last, and only word on ethics, then he or she is left to

find another basis for ethics (Schwartz, 2001, 2003, 2005). To reduce the problem of interpretation and the prevalence of inherent prejudices, one needs to seek a universal basis that can transcend the boundaries of faith and culture.

Despite the capacity for rationality, faculty members may have several significant obstacles to overcome when considering ethics. Foremost, there is evolutionary memory and behavior patterns which can lead faculty members to value themselves first, the university community second, and colleague third, if they are given any value at all. Such patterns of thought are often referred to as *moral intuition* or *moral instinct* – i.e., that which *feels right is right* (or ethical) (Sommer, 2001).

However, not every faculty member has the same instincts about ethics and not all instincts appear to be equally valid. Indeed, it is easy for any faculty member to criticize or condemn the value or prejudices of others and so free themselves from ethical issues. Indeed, it is very difficult for faculty members to distance themselves from their own views, so that they can dispassionately search for prejudices among the beliefs and values others hold. It is important that ethics, whenever possible, avoid deferring to potentially prejudiced instincts. As rational beings, faculty members are not supposed or required to be slaves to these instincts.

Individuals can operate according to their own beliefs of what is considered moral and what is not but there must be some overriding code of ethics. However, there will always be those faculty, staff, and students whose code is very simple: self first, self last, and, if there is anything left, self again.

The ethical culture of a university is a combination of intended and unintended outcomes that emerge from each of the facets of the university, and the nature of the ethical environment depends on the impact these facets have at the membership level. Leaders of the university administration are (or should be) mandated to enforce policies, rules and regulations. The manner in which that is done depends on the administrative style of leaders of each particular university.

The various research disciplines are worldwide professional disciplines (Harris, 2004). The members of these disciplines collect factual data, and the ensuing treatment of the data to discover new arenas of knowledge is universal. No one can foresee the tortuous path of research and know where experimentation and observation may lead. The pursuit of research requires freedom of thought and, in the academic sense, unrestricted communication. It is through the professionalism of the faculty members that world knowledge and technology advances. Yet there are continuous reports of unethical behavior in the form of data

manipulation, cheating, and plagiarism at the highest levels of the disciplines. The causes are manifold whether it is the need to advance in one of the chosen disciplines or to compete successfully for and obtain research funding.

Also, faculty members have many opportunities to work with different people to explore new fields and broaden their expertise, especially where disciplines overlap (Harris, 2004).

The reliability of derived knowledge also derives partly from the interactions among faculty members on an open and trustworthy basis (Davis, 1991; Alcorn, 2001; Altman, 1997). By engaging in such social interactions at meetings and other forums where knowledge is presented and discussed, faculty researchers must call on their technical understanding of the world and convince a *collection* (or *community* if the work is published in a technical journal) of peers of the correctness of their concepts, which requires a fine understanding of the methods, techniques, and conventions of faculty-oriented research.

It is at this stage that many technical researchers decide that the experimental design was not incorrect or the failed hypothesis was not incorrect and they push forward to explain the experimental results. If the conduct of research is not monitored closely by peers and supervisors a situation exists where *bending of the truth* (it may not be called *cheating* but that is what it is) and the empirical objectivity of the researchers is lost. And when this occurs, technical integrity has been forfeit.

For example, the experiment that failed becomes the experiment that succeeded because of a data point that has just been *discovered*. The defeated hypothesis becomes the successful hypothesis because the experimental design produced a datum point that the researcher was seeking. The means by which the datum point came about is another issue and is looked upon as good fortune by the supposedly unbiased and totally honorable involved researcher. Or the datum point was discovered in a blinding flash of untruthful inspiration by the researcher's coworker who knew how important such a data point would be. The experiment that failed becomes the experiment that provided crucial proof of a concept.

On the other hand, too many points can be a hindrance to a researcher and lead to hours (or minutes or seconds) of heart-rending consideration. The result might be that out of twenty-four shotgun-patterned points on an x-y chart, eighteen points are omitted as flyers. The result is an x-y relationship on the chart that gives credence, even proof, to the hypothesis and results in wide acceptance of the hypothesis and copious honors for the researcher. After the success of such a brilliant hypothesis, there are few

if any (perhaps because of funding constraints) who will repeat the work to determine if the data are correct. The hypothesis lives on and it is only after serious issues have been raised at some future time that the hypothesis is reworked. By then the original researcher may have retired after a *distinguished career* whose reputation is now beyond reproach. Younger researchers who could not make any sense of the hypothesis and report their data are at first criticized and ostracized.

Deleting data points is hardly uncommon – initially, all of the data points are printed on a scatter plot, and so-called flyers that do not match the plot are omitted. This is such a familiar situation in research that there are many reasons for deleting the nonconforming data.

This would imply that there are certain situations in which the practice is considered to be acceptable but such deletion actually amounts to misrepresentation. Flyers can be influential or not influential insofar as they are far removed and inconsistent with the rest of the data or are far removed but consistent with the rest of the data. In the former case, summarization and analysis of the data both with and without the outliers can be performed and the different inferences and conclusions are assessed – with and without the flyers. Nevertheless, and in either case, all outliers must be reported. To do otherwise is tantamount to technical fraud though dishonesty (intentional deception) (Resnik, 1998, 2000).

Another form of deception occurs when the reader is led to believe that the research design and execution were, according to the data points, flawless. Needless to say, both of these false impressions are intended not to further the ends of research but to further the self-interest of the investigator, such as making the work more publishable, to garner honor or admiration or funding for the investigator and his or her research school.

Deception in data reporting is a remarkably reprehensible act and dishonors faculty researchers from whom we expect the truth. Deception in data reporting also dishonors the university – which technically owns the data unless there is an external sponsor of the research – so that the act of misrepresentation blemishes, by extension, the reputation of the university and to the extent that the data might someday be implemented in a commercial scenario. Consequently, researchers who are blasé about deleting data points have probably neither thought through their moral obligations as researchers nor have they reasoned about the possible consequences that their deception might influence future research participants. It is an expression of self-interest and egomania.

In short, it is unfortunate that *unethical behavior* in the various disciplines is alive

2.4 Ethics and Research

Basic research can provide an understanding of the manifestations of research integrity and misconduct and the factors that affect their occurrence. In addition, basic research can help refine measures of research integrity. This research base can also offer a solid framework for intervention strategies designed to have a positive impact on research behaviors. However, the research process does not end with the implementation of intervention activities. Evaluation of interventions is an important component of any agenda of inquiry.

As universities become more intentionally involved in devising strategies to promote research integrity (or consider new approaches for doing so), they would do well to examine very carefully what they are doing and the effects of any such actions. Many faculty members have long maintained that evaluation research should accompany any planned change. Rigorous evaluation, especially when grounded in a commitment to continuous quality improvement, provides a framework for meaningful assessment and for self-correction. As a research strategy, it permits examining the impact of interventions or actions through an assessment of both the implementation process and the outcomes for targeted groups.

When universities develop programs to monitor integrity in research, evaluation research can play an important role in assessing the effectiveness of these initiatives. Further, it offers additional empirical assessments of relationships among factors that are hypothesized to promote research integrity. Results from evaluation studies provide evidence about what works and does not work, which in turn contributes to program improvement efforts over time. For example, if basic research finds that conforming to the standards of responsible research conduct is highly correlated with the level of knowledge persons have about the standards, this work has implications for the development of an intervention strategy. It would be logical to develop an educational program to help professionals learn what is considered appropriate versus inappropriate research behavior. But, what is an effective educational strategy? Is an online educational course going to be effective? Or is an educational approach based on a mentoring model likely to be more effective? As with any intervention, often it is useful to conduct pilot projects where different strategies can be introduced, ideally on a randomized basis, and compared to determine the most effective methods.

Evaluation research provides the methodology for conducting such research, involving both a process and outcome evaluation of the interventions implemented. The key elements to consider in conducting an

evaluation include: (1) defining program goals for a specified target audience (e.g., graduate students will be made aware of the ethical standards for research and the strategies for adhering to these standards), (2) designing and implementing activities to achieve these goals (e.g., an educational program consisting of a one-credit course established as a graduation requirement or developing an independent learning CD-Rom training module), (3) delineating in advance a plan for evaluation, which addresses issues of a) measurements and instrumentation (e.g., measures of knowledge that use a paper/pencil test or measures of decision making that use hypothetical case scenarios); b) timing of data collection (e.g., at the end of each course); c) methods of analysis (e.g., quantitative); d) plan and format for reporting the results; and e) implications for the university's activities, and (4) reporting results and ensuring a system for linking knowledge gained through research to further planning and action.

Evaluation of the research offers considerable benefits to a university and, while the goals of the research may be clear, the strategies likely to achieve those goals may be quite uncertain. Introducing change on an experimental basis with appropriate evaluation has the advantage of encouraging a university to be open to change without a long-term commitment to any given strategy. Such a model generates evidence, which becomes valuable input into decisions about future changes that may need to be made to improve further the outcomes of programmatic efforts.

In an effort to mitigate unethical behavior, the *ethics review process* should be detailed in the code, although if a charge is brought against a member, where appropriate, it is recommended that the university that employs the member should make the investigation and resolve the issue. When it is determined that an ethical violation has occurred, a recommendation is made to the president (or chancellor) of the university for action, who must be able to follow specific guidelines. A finding of plagiarism may result in a letter of reprimand and an author can be barred from publishing his or her work for up to five years and, in addition, a correction or retraction by the author should also be required. The penalties for fabrication or falsification need to be more severe. Publication of a retraction is mandatory, and various publications, leadership roles, privileges and rewards are precluded. The university may decide to publish the charges and findings in one or more relevant publications (such as a newsletter or weekly/monthly magazine). In addition, the university must also be prepared to review and, if necessary, revise the code of ethics over a three-year period, even if the revised code is longer and more detailed than the original code of ethics. Therefore, while intentional change of

any scope should be evaluated, it is also the case that basic research be reviewed by peers.

Finally, a lesson might be learned from history. Caesar (Caius Julius Caesar, the Roman dictator) divorced his second wife Pompeia (his first wife, Cornelia, died during childbirth) not because she had done anything wrong but because there was the perception that she had (or might) do something wrong. This gave rise to an adage, *Caesar's wife must be above suspicion*. Thus, like Caesar's wife, faculty members (as well as staff members and students) must be above suspicion in all of their activities.

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3

Academia

3.1 Introduction

The purpose of the previous chapter (Chapter 2) was to set the stage for what is defined as ethics and ethical (or unethical) behavior. Now it is time to turn to the focus of this book, which is ethical and unethical behavior amongst those worthy ladies and gentlemen who are mandated to teach and educate young people (Hamilton, 2002; Cahn, 2011; Tustin, 2013). In addition, the concept of a university education is to instill into these same young people a sense of self-worth and the meaning of ethical behavior. Also, the mandate of the university is to teach young men and young women (even mature men and mature women) if they are educated to a sufficient level, no matter what the income of the parents. It is time to recognize that *every student has the right to attend university, if he or she is good enough*. In this sense, there is no substitute for taking examinations (Cahn, 2011). Accepting students with poor grades (who may not wish to attend university) because dear old father and mother have the money is not a sufficient reason for entry of that student into the university system. Commendably, some universities (such as the University of Chicago) have already started to smooth out the bumps in the road that represent income

inequality and have instituted programs to attract (or assist) students from lower-income backgrounds to obtain a university education (Leonhardt, 2014).

The modern university derived its origin from the schools (*gymnasia*) started up by the Greek philosophers where teachers (for example, Aristotle) would surround themselves with students and teach them the various principles of subjects such as natural history, rhetoric, and ethics. In the current context, these centers of learning evolved into the earliest universities which developed outside of the monasteries and priories leading to universities in Italy in the cities of Salerno (ninth century) and Bologna (eleventh century). At that time and in the following two centuries the university was considered to be a scholastic guild and was further developed by analogy with the guilds that were initiated by tradesmen such as carpenters and stone masons (Lucas, 1972; Hay, 1989).

From this beginning, centers of learning were to be established in a number of the leading European cities, and by the end of the twelfth century universities were claiming not only excellence in teaching but also to regional and national importance rather than merely of local importance to the city where the university was founded. In all, twenty-three universities were founded in Europe prior to 1300 – three in Italy, five in France, and two in England.

The name *university* likely originates from the word *universitas*, which often referred to the student body, organized for the communal protection of the men who otherwise, being from outside of the city where they were to study, were at the mercy (i.e., the pricing policies) of local inn-keepers and tradesmen. However, at the close of the medieval period these distinctions between the university and the student body were no longer used and the word *universitas* was used alone to mean a university and the student body.

After the medieval period, universities combined many of the features of the earlier establishments. In England, however, it was not until the nineteenth century that a new university was founded, though the Inns of Court and Chancery (primarily in London) had some right to the claim to be *universities of the law*. At that time, universities founded during the nineteenth century were often the product of provincial civic pride, and owed their existence to a growing desire for education, rather than for the so-called education of the sons of gentlemen. This coincided with the commencement of the Industrial Revolution in the late eighteenth century and the ensuing need for educated men (women were largely ignored) to promote and develop the science and engineering disciplines.

In the twentieth century the structural changes that the universities have faced have been more a consequence of economic necessity and

government imposition than scholarly reflection. For better or for worse, various level of government became involved in the construction and operation of these centers of learning. This is an issue that is still hotly debated, except when the university administration requires increases in the levels of funding, which is an issue discussed in several later chapters in this book.

Finally, there are many activities that take place on the campus of the modern university campus. There is a variety of faculty and nonfaculty positions of which the most common are: (1) university administration, which include the university president, the provost, and various vice presidents, (2) professor, which also includes nonteaching heads of departments, (3) associate professor, (4) assistant professor, and (5) nonacademic staff such as those who are placed in the personnel office and the finance office. Thus, a series of definitions is necessary for clarity so that the focus of the book will not be lost in terminology. In addition, most universities have in place a policy to the effect that faculty members and staff members may not engage in activities that would place them in a conflict of interest situation or disclose confidential information without proper authorization (Hamilton, 2002). Such cases might include a university administrator directing work to companies owned or operated by acquaintances and/or authorizing costly changes (*change orders*) during the life of the project or a university administrator sitting on the boards of various companies, especially companies that do business with the university (Perez, 2013; Zernike, 2013).

3.2 Definitions

Briefly, and in the context of this book, the word *university* includes all institutions of higher learning where entry to the institution requires (at a minimum) graduation from high school or an institution of equivalent learning. It is this type of a qualification that gives the student access (through the official channels of earned scholarship and registration) to a university campus.

Following from this umbrella definition of the university, a university campus is a collection (some observers would prefer the term *willy-nilly conglomeration*) of buildings that are used to house different areas of scholarship as well as the relevant faculty that teach the subjects and which may or may not have been built without any specific purpose in mind. For example, a recent quote from a university official was that “there have been some instances where the purpose of a building ... was identified prior to the facility being built” (Steere, 2014).

Be that as it may, and to continue the definitions, the word *campus* is derived from the Latin word *field*, and use of the word commenced with the medieval European universities where the students and teachers lived and worked together in a somewhat cloistered environment. Like the abbeys and monasteries, the presence of nonteachers and nonstudents was usually restricted to tradesmen who had specific business on campus – markets and other forms of commerce were not welcome and were, in many cases, prohibited. Thus, the word *campus* became recognized as an important aspect of academic life that caused many universities to adopt the word as descriptive of university property. The importance of the campus was also recognized as the means by which students and teachers could be isolated (for the purposes of education) from the remainder of the community. But, for the most part, students were not prohibited from leaving the campus to satisfy other aspects of their lives. As the university evolved, some preferred the use of the word *yard* in place of *campus* (e.g., Harvard Yard).

Finally, a *faculty* is a division within a university comprising one subject area, or a number of related subject areas. In the United States, such divisions are generally referred to as *colleges* (e.g., in the context of this book, the College of Sciences, the College of Engineering, or there may be the School of Chemistry or the School of Engineering). The *faculty* may also be referred to as the *academic staff*. Whatever the title, the cornerstone of any university (for the science-oriented or engineering-oriented student) is the members of the science and engineering faculty who have been chosen for their individual intellectual excellence but, hopefully, in the selection process there was also the requirement (which was not ignored) of the dedication-to-teaching component as well as the commitment of each faculty member to help students develop their potential.

3.3 The Faculty

Typically, in North America and in many countries of the Western world, the word *faculty* is a catch-all word which includes the academic staff of a university: professors, associate professors, assistant professors, lecturers/instructors, and/or researchers (such as research professors). Typically, the faculty members with the rank of *professor* and *associate professor* are tenured while faculty members holding the rank of *assistant professor* are on the *tenure track* as specified by the terms of the employment contract. Tenure-track faculty members may have – subject to satisfactory performance, which is not always an objective decision – the opportunity to be promoted to a tenured position (associate professor) (Joughin, 1969).

Tenure should be respected and treated with dignity and not as a shield from the repercussions that may follow any form of behavior, including wrongdoing or misconduct (Kowalski, 1997; Bruni, 2014). Related to this, the tenure policy should indicate what steps the university will take if a faculty member under consideration for tenure is charged with misconduct or if other negative events emerge (ACE, 2007).

Members of university administration (such as the president, the provost, vice presidents, deans, department chairs, deans, vice presidents, presidents, and the campus librarians) are often also faculty members, in many cases beginning (and remaining) at the rank of professor, although the salary levels are much higher than the professor salary level. In some universities, the distinction between *academic faculty* and *administrative faculty* is made explicit by the former being contracted for nine months per year, meaning that they can take vacation or devote their time to research (and possibly be absent from the campus) during the summer months, while the latter (*administrative faculty* members) are contracted for twelve months per year (including vacation time). These two types of faculty status are sometimes known as *nine-month faculty* and *twelve-month faculty*, but neither term is always descriptive of the time spent on campus by the various faculty members. Faculty members who are paid a nine-month salary (which may be the annual salary paid over nine months) are typically allowed to seek extra funds from external (noncampus) funding agencies to partially or fully support their research activities (and themselves) during the summer months.

Most university faculty members hold a doctorate degree (PhD or an equivalent doctorate). On the other hand, some professionals or instructors from other institutions who are associated with a particular university (e.g., by teaching selected courses or supervising graduate students) but do not hold appointments as a professor may be appointed as *adjunct faculty* or *visiting faculty*.

Other than universities, some community colleges and secondary or primary schools also use the terms *faculty* and *professor*. Other institutions (e.g., teaching hospitals) may also be inclined to use the term *faculty*. This is distinct from, for example, the British (and European) usage, in which all employees of the institution are staff either on academic or professional (i.e., nonacademic) contracts.

3.3.1 Professor

A professor (often referred to as a *full professor*) is first and foremost a teacher who *professes* to have knowledge to impart to the students, but

(although the duties may be the same or similar) the precise meaning of the term varies by country. In many countries the term *professor* has been accepted to indicate an expert in his or her discipline and who is a teacher of the highest rank and who holds a senior academic position at a university, typically a department chair, or an awarded chair specifically bestowed on an individual at the university. A professor should be a highly accomplished and recognized teacher or (in the modern university) a highly accomplished and recognized researcher academic. The title is in most cases awarded to senior academics only after decades of scholarly work (teaching and research).

Professors are qualified experts who generally (should) perform a series of duties, such as: (1) teach campus-based or campus-related online courses, (2) conduct lectures and seminars in his or her area of scholarship, (3) perform advanced research in chosen areas of scholarship, (4) mentor and assess graduate students, (5) conduct administrative or managerial functions as required but usually at a high level (e.g., deans, heads of departments), and (6) perform *pro bono* (volunteer) community service, including consulting functions (such as advising government and non-profit organizations).

Other roles of the professor-rank faculty depend on the university, its legacy, protocols, place (country), and time. For example, professors at research-oriented universities in the United States, Canada, and, generally, at European universities, are promoted primarily on the basis of research achievements and external fund-raising success. Depending on the professional status, expertise, and tenure of the professor, he or she may also serve as a public intellectual, offering opinions to media (such as CNN and the NBC, CBS, ABC, and Fox networks or local affiliates of these networks) and in other forums on current events, controversies, and other simple-to-complex matters where the professor is considered to be an expert or at least professes to be able to speak as an expert on the subject at hand.

A tenured professor has an appointment that lasts until retirement age, except for the possibility of dismissal for *due cause*, which happens only rarely. A common justification for the existence of such a privileged position is the principle of *academic freedom*, which holds that it allows the professor to think freely without any political encumbrances (Hamilton, 2002). Thus, according to the tenets of academic freedom, professors should be free to examine, hold, and advance controversial views without fear of dismissal from their jobs or fear of any form of reprisal. In addition, the bestowing of tenure is a practical way to keep the notion of academic freedom alive and well on the campus - even if

ideas or inquiry are contrary to the *status quo* (Joughin, 1969; Arnett and Arneson, 1997).

The typical faculty justification for academic freedom is utilitarian, because many faculty members want more subsidy and less regulation (Weidner, 2003). A related notion is that faculty votes should determine major policy decisions within the university, including decisions about faculty appointments, retention, discipline, and tenure. The faculty tend to shun accountability (Sykes, 1988) although the movement to accountability has (as anticipated) been received with mixed emotion (Kowalski, 1997). Increased demands for university accountability, and increased competitiveness among universities, combine to put the dean under pressure to increase and enforce expectations for faculty (Heck *et al.*, 2000; Rosser *et al.*, 2003; Strain *et al.*, 2009). However, as attempts to hold faculty accountable to the interests of the university and of the public, claims will be made that there is a violation of academic freedom, but there needs to be the recognition that faculty members who shun accountability will lose the academic freedom they have enjoyed (Weidner, 2003).

At some stage in his or her career, a professor might fill the role of department chair or department head. However, while many universities stipulate that department chairs have a record of scholarship and publication, all universities expect a department chair or a department head to be more than a role model or figurehead. The department chair (department head) must assume multiple roles insofar as the chair is the primary spokesperson for department faculty, staff, and students. At the same time, universities have an increasing reliance upon department chairs to implement and carry out campus policy and the mission of the university on behalf of the central administration. Consequently, a department chair is the essential link between the administration and department members. When chairs fulfill their role effectively, there is good communication between the administration and faculty. When chairs do not succeed in this task, there is often a lack of trust between the administration and the faculty because neither constituency understands either the needs or perspectives of the other (Seagren *et al.*, 1993; Hecht *et al.*, 1999).

3.3.2 Associate Professor

The rank of *associate professor* is an intermediate rank between assistant professor and professor (full professor) and typically refers to an assistant professor who has been awarded tenure and promoted to a tenured rank. Like all other professors, the associate professor participates in the

three sets of duties that are a part of a career in academia: (1) teaching, (2) research, and (3) service, which are further defined under the duties of the full professor (above).

In addition to teaching courses, there is also the stipulation (or requirement) for scholarly work which involves presenting (at conferences and symposia) and publishing work in peer-reviewed and journals. Service duties entail all of the administrative work that keeps a university running smoothly and includes sitting on committees ranging from creating and evaluating curricula to overseeing workplace safety.

As an associate professor becomes more senior, he or she will be expected to become more active and take on more leadership roles. Given that the associate professor has earned tenure and cannot be dismissed *without due cause*, the associate professor will also be involved in the service tasks that the assistant professor (also called a *junior faculty member*) cannot, such as evaluating other professors for tenure and promotion. Some professors remain in the associate rank for the rest of their careers while others seek promotion to the highest academic rank: professor.

3.3.3 Assistant Professor

Typically, an assistant professor is an entry-level faculty member, although depending upon circumstances a new doctoral recipient may be appointed a step lower at the *lecturer* (instructor) level or the *research fellow* level. An assistant professor does not have tenure and is generally (but not always) on the tenure track, and appointment at the *assistant professor* level does not guarantee a tenure-track appointment. Generally, within a time frame (approximately five to seven years) an assistant professor will either be promoted to associate professor or (through lack or prevention of upward mobility) will leave the university, although it is theoretically possible to remain an assistant professor forever.

At this level, the assistant professor has little choice in terms of choosing teaching assignments and has administrative work thrust upon his or her shoulders while the older tenured members of staff have the right to refuse such work without fear of reprisal – using any lame excuse that comes to mind. This, surely is a breach of ethics, which may involve untruths or merely laziness. In addition, the young assistant professor also has to acquire research funding and may even have to pass his or her reports and papers through a review committee prior to publication. This review committee will be made up of senior members of staff who, for many reasons that are often difficult to follow, can give the young professor a glowing performance report or a report that is somewhat less than glowing. It is at

this time, if the latter is the case, that the young professor can feel that he or she is suffering rejection by one's colleagues.

In some countries, both assistant professors and associate professors are frequently tenured but while associate professors are expected to develop their own line of research, assistant professors can work on topics specified by their *boss* (a full professor or the department head). Neither assistant nor associate professors can formally supervise graduate doctoral students but may be allowed to be a cosupervisor.

While an assistant professor is one step lower than an associate professor, the move upward to the associate professor rank is equated to receiving tenure – but this is not always the case and a university may frequently appoint nontenured associate professors.

3.3.4 Lecturer

The lecturer (often called an *instructor* in many universities) typically (1) holds a minimum of a master's degree or equivalent, (2) has completed most or all of the requirements for the doctorate or equivalent, and (3) is expected to demonstrate effectiveness primarily as a teacher. The title *lecturer* should not be confused with the same title used in the older European universities, in which it was equivalent to associate professor in the United States and Canada. A simplified general equivalency of the academic ranks is:

assistant lecturer (Europe) = assistant professor (United States
and Canada)
lecturer (Europe) = associate professor (United States and
Canada)
senior lecturer (Europe) = full professor (United States and
Canada)

In many universities, the *instructor* is the entry-level rank for those who have recently completed their postdoctoral training, residency, or fellowship training. This rank is appropriate for a new faculty member, generally with a doctorate or equivalent degree, who has the potential for academic advancement. Individuals at the instructor level may be in positions of advanced training prior to leaving the university or being promoted to the assistant professor rank.

For the most part, all full-time instructors may be entitled (depending on the by-laws of the university) to attend and participate in the faculty meetings of their respective school or college. If authorized by the school

or college faculty, the instructor may also have the right to vote. However, in some universities the lecturer (instructor) may not be a member of any faculty assembly.

3.3.5 Teaching Assistant

Finally, it will be a rare student who, at some time during his or her baccalaureate experience is not faced with a teaching assistant as the class teacher.

A *teaching assistant* is an individual who assists a professor with instructional responsibilities. In high school a person who assists the teacher with instructional responsibilities is a *teacher's aide* (TA) – who may be a retired teacher or a young teacher seeking employment. In either case the teacher's aide should have some experience with children in the education system. In the university system, a *teaching assistant* (TA) is a *graduate teaching assistant* (GTA) who is a registered full-time graduate student and has been chosen for the appointment as a result of excellent scholarship and promise as a teacher.

Under faculty supervision, the duties of a teaching assistant may include: (1) providing help sessions; leading discussion, recitation, laboratory, or quiz sections, (2) holding office conferences with students, (3) preparing materials for faculty-guided classroom or laboratory instruction, (4) assisting the professor in the design of a course, (5) assisting in the design and/or preparation of exams or quizzes, (6) proctoring examinations; and grading student papers and/or examinations to faculty-guided standards. In actual fact, the professor may pass all of these activities on to the shoulders of the teaching assistant. But this may not always be the case because of the limited experience of the teaching assistant and the obvious absence (due to research activities or travel or lack of interest) of the professor responsible for the course.

If the teaching assistant is selected on the basis of his or her abilities, the basis for the selection *must* be clearly defined as there may be considerable wonderment by the students (the fee-paying clients) about the selection process by which a teaching assistant (or an assistant professor) was hired and whether or not he or she had any prior academic teaching experience – other than laboratory research – and the evaluation of that person during the hiring process. In fact, there seems to be an overall lack of information about the criteria used for hiring university professors at any rank – perhaps even without due diligence in regard to the performance of the candidate – other than research experience with the accompanying success at acquiring research funding.

For a person with limited experience, the teaching assistant might, under such guidelines, be thrown in at the deep end with the hope that he or she can swim. In addition, a considerable number of undergraduate courses are taught by foreign graduate students who do not have a good command of the English language (Matthews, 2007). In fact, rogue or renegade faculty members aside (who do not participate in any departmental activities), many of the complaints from undergraduate students are related to the use of graduate students as teaching assistants in the undergraduate programs.

Finally, with all of these duties for the teaching assistant taken into account, there may be wonderment about the activities of the professor – i.e., the activities of the designated teacher of the course and, presumably, curiosity about the basis on which the course costs are determined. It might also be wondered if this is true value for the fee paid to the university each year (or each semester) by the students or by their parents (the clients) and whether or not the cost can be (or should be) reduced and the universities rated according to the quality of education offered by the university (Vedder *et al.*, 2010; Dynarski, 2014).

3.3.6 Other Faculty Positions

Other faculty appointments are classified into ranks and groups by title, and these classifications have significance in regard to benefits and rights that may or may not pertain to each category or classification. The basic qualifications and standards established to identify the degree and types of achievement expected in each rank vary among the various universities and the programs within the universities and include ranks such as: (1) adjunct faculty, (2) research professor, (3) professor emeritus, (4) endowed chair, (5) reader, and (6) docent.

3.3.6.1 *Adjunct Faculty*

Any faculty title preceded with the qualifier *adjunct* typically denotes part-time status for persons who may have primary employment elsewhere (either another university or as a practicing professional) or as a retired professional. In addition, an adjunct faculty member may also denote a faculty member from another academic department whose research or teaching interests overlap substantially with those of the department in which the appointment is effective.

An adjunct professor is generally an expert in a special discipline or field and is appointed to give instruction on a part-time or discontinuous basis. The adjunct appointment may be in the ranks of: (1) adjunct

assistant professor, (2) adjunct associate professor, (3) adjunct professor, and duties usually include the teaching and advising of students but do not include service on departmental committees.

3.3.6.2 *Research Professor*

The title *research professor* refers to a person appointed at the professor rank whose primary effort is in research rather than teaching. Research professor appointments are typically not tenure-track appointments. However, a research professor may be encouraged to participate in educational activities to the degree consistent with his or her research responsibilities. Some universities may also appoint researchers as research associate professor and research assistant professor.

When appropriate, the research professor may contribute to seminars, classes, and symposia as may be arranged with the instructional department. In many cases, a research professor can assist in the research training of dissertation candidates or postdoctoral trainees. The manner in which instructional activities are included in determining promotion and advancement depends upon the policies of the individual department or university.

3.3.6.3 *Professor Emeritus*

The title *professor emeritus* is conferred upon a tenured full professor (regardless of gender) who retires from a university in good standing – the title *professor emerita* is sometimes used for female retirees. In most universities, the rank is bestowed on all professors who have retired in good standing, while at others it needs a special act or vote of the faculty. A professor emeritus may, depending on local circumstances, retain office space or other privileges and, in some universities the title has been expanded to include tenured associate professors or non-tenure-track faculty. In some European universities, the title may only be conferred on a person of outstanding merit who had full professorial status before he or she retired.

3.3.6.4 *Endowed Chair*

An endowed chair honors and recognizes the distinction of outstanding faculty while providing invaluable support above and beyond salary, for use in research, teaching or service activities.

The chair is established with a sizeable gift to an academic area designated by the donor, that is invested in an interest-bearing fund for which the principal remains intact and the interest provides a perpetual source of annual income. These endowments may be used to attract faculty members to a campus, or to retain faculty members who are being recruited by other

universities or commercial enterprises. The chair holder typically submits annual narratives of the past year's activities and the use of the endowment funds to the department chair or research head. It is forwarded to campus administration for inclusion in an annual report to donors.

3.3.6.5 *Reader*

The title of *reader* – an academic rank above senior lecturer/professor – is an older rank that is still used in some universities in Europe and other countries and denotes an appointment for a senior academic faculty member with a distinguished international reputation in scholarship and original research.

Generally, in appointing a person as a reader or conferring the title of reader upon a faculty member consideration must be given to the person's standing and promise in the relevant subject or profession as established by important contributions to advancement of the field through publications, creative work, or other appropriate forms of scholarship or performance, and through teaching. Other contributions to the work of the university, learned societies, and other relevant bodies may also be taken into account.

The rank is equivalent to that of professor (head of department) in European universities but without being the chair (head) of the department. The promotion criteria applied to the rank of reader is similar to those applied to the rank of professorship but does require evidence of a distinguished record of original research. Many universities that formerly had the rank of reader in various departments have recently dispensed with the rank. (Those faculty members that currently hold the rank retain the title, but no new readers are being appointed.)

3.3.6.6 *Docent*

Docent is a rank used at some universities generically for a person who has the right to teach. Becoming a docent is a general indication that the holder is capable for appointment at the level of associate professor or full professor. Docent is the highest academic title in several countries, and the qualifying criteria are research output that corresponds to three to five doctoral dissertations, supervision of doctoral students, and evidence of teaching at undergraduate and graduate level.

To add confusion to the use of the title, the rank of docent is, in some universities, used to denote a specific academic appointment within a set structure of academic ranks below professor (i.e., associate professor) and above assistant professor. The title may also be applied to a person who is not a regular faculty member or to a lecturer or tour guide in a museum or cathedral.

3.4 Faculty Leave

Sabbatical leave for a faculty member is a period of paid leave from work given periodically for study to allow, typically, for independent investigation and research. The thinking on this issue is that by having a dedicated break from traditional responsibilities, faculty members have self-reported rejuvenation and recommitment to their professional work (Page, 2010). On the other hand, taking time away from a professional routine to learn new skills or return to the workplace a better employee has been criticized (Romano, 1995; Carr and Tang, 2005).

As a general (but not cast-in-concrete) rule and dependent upon the university, up to half-year sabbatical leaves are usually granted at full salary. Greater than six-month to full-year sabbatical leaves are usually at half salary and require the faculty member to obtain financial support if full salary is required. The faculty member may be required to pay his or her travel expenses and other expenses incidental to the expenses covered by the sabbatical leave policy. If the faculty member, or the host university, has outside financial support from a foundation, endowment, or other nonuniversity source for an activity associated with the sabbatical leave, travel and other incidental expenses may be included in that budget.

University policies are not always specific about the leave policy and may lack measures to help guide (direct) faculty in their planned activities during the leave period and there is little agreement about the short-term and long-term benefits of sabbatical leave programs (Miller and Bai, 1997). Although faculty members taking sabbaticals typically report positive experiences and report that their change in academic duties has been beneficial (Benshoff and Spruill, 2002), these are typically self-reported outcomes or anecdotal commentary on the benefits of taking time away from a routine to gain a different perspective on what has become ordinary (Bai *et al.*, 2000). The self-reported outcome leaves open the issue of whether or not the leave was beneficial. For example, what about the professor who takes a sabbatical (paid) leave to write a book and ten years after completion of the leave the book has not been published? Or the professor who takes a sabbatical (paid) leave to write a book and after the book is published the professor (not the university) receives the royalties? Or the professor who takes a sabbatical (paid) leave to write a book and after the book is published the professor insists that his or her student purchase the book as a course requirement and he or she (not the university) receives the royalties? Or the professor who used sabbatical leave to search for another appointment and does not return to the university which granted the leave? In addition, there is a sentiment that sabbatical leave, while enjoyable and beneficial for the tenured faculty

member and their families who accompany them, come at the exploitation of cheaply paid adjunct and special appointment faculty (Potter, 2010).

In order to show the sabbatical leave period has been spent in a professional manner, it is wise if any member of the faculty taking sabbatical leave is obligated to return to the university for at least one full year of service. In addition, most universities require the faculty member to submit to the president of the university (and the board of trustees, or board of regents, whichever name is appropriate) through the regular administrative channels (the department head/chair and the dean) a report that contains the following elements: (1) a detailed description of the leave activities in direct relation to the objectives in the leave application, (2) a list of publications, exhibits, and papers presented as a result of activities, (3) a list of instructional materials developed as a result of leave activities, (4) plans for future work in the area of the leave activities, and (5) the impact of the leave on the professional responsibilities of the applicant.

Although it is the responsibility of faculty members to meet all scheduled classes, as well as their other commitments, there may be occasions when it may be necessary for a professor to miss a class or other obligation. Whenever this occurs, a faculty member should have prior written approval from the department head and/or the dean before missing classes or missing other scheduled duties. In addition, when a faculty member must miss an occasional class (such as for professional meetings, health reasons, or religious observances – consulting duties are not included in such leave) he or she is expected to arrange for a guest lecturer or provide an alternative form of instruction. The policies of most universities do not allow the faculty to reschedule classes outside of the published class schedule, although waivers are available for service learning or other similar course-related activities, such as a site visit to an industrial operation.

And yet, there are examples of faculty attending society meetings and/or honoring consulting engagements during a semester when classes are scheduled. Supposedly, this is where the teaching assistant is used to fill the teaching gap caused by the absence of the faculty member.

It must not be forgotten that although faculty members may engage in outside consulting, their obligations to the university must remain their primary commitment. As part of any consulting arrangement, faculty should not enter into potential conflicts of interest where there are obligations for ownership of intellectual property by the university (Chapter 6). Faculty behavior should be consistent with the patent acknowledgement document that most universities (should) require that faculty must sign when beginning their employment with the university.

3.5 Nonacademic Staff

Nonacademic staff members are professional employees who make a significant contribution to the operational aspects of the university by bringing a collection of varied professional skills as well as working with the faculty to support the mission of the university.

The contribution of nonacademic staff can also impact the student experience and make contributions towards the success of the students through many support and operational services. Nonacademic staff members should guide the students (1) through admission and registration processes, (2) offer advice on scholarships and awards, (3) orient the students to the university system, and (4) monitor progress of the students towards completion of the necessary course work. Furthermore, the implementation of new policies falls largely upon the shoulders of the nonacademic staff as well as monitoring financial resources, increasing enrolment, increasing regulation and accountability, and addressing innovations in technology that may be of some (financial) benefit to the university.

However, many nonacademic staff are treated as second-class citizens (doctorates are not required for appointment or employment as non-academic staff) within the hallowed halls of academia and are also disappointed (even resentful, with some justification) that their insights are often ignored when important administrative decisions are made.

3.5.1 The Personnel Office

The role of the personnel office should be to provide a range of services to academic staff and to support staff within the university, which involves advising professors (at all levels) nonprofessors (at all levels), line managers (at all levels), employees (at all levels), and students on employment law and employment policies and procedures of the university.

In fact, it is the role of the personnel office to ensure that all staff appointments and personnel actions are made in accordance with the affirmative action plan of the university and other appropriate personnel policies and procedures, and in accordance with federal, state, and local fair-employment practice laws. Typically, the staff should be represented on all search committees formed to screen and recommend candidates for any staff or administrative position.

The staff of the personnel office should also ensure that all applications and résumés submitted for advertised positions are handled in a timely and professional (nonpartisan) manner and without inference from friends or

cronies of the applicant. In fact, any such inference should be reported immediately to the relevant authorities.

3.5.2 The Finance Office

The role of the university finance office is to support (not *control*) all operations of the university by providing total financial services in order to assist campus departments manage any financial challenges and financial planning needs. These services should be supplied in a professional manner with the responsiveness, courtesy, and respect characteristic of a culture of service. The staff of the finance office should remember that it is the academic faculty who attract the students and the associated fees. And furthermore, the means by which the fees are applied to students must be transparent and understandable so that students (and parents) can assess the potential for future debt (Simon and Barry, 2013; Lewin, 2015).

The finance office may also include the office of student financial aid, which must be committed to investigate the various paths by which a university education can be made affordable for worthy students and their families. In short, the staff of the office of student financial aid should willingly offer a variety of services and programs designed to help the students find ways to meet all educational expenses, and the staff must be dedicated to make sure all students receive financial aid in a friendly, timely, and efficient manner.

3.6 Tenure and Tenure Track

Any discussion related to the definition of the concept of a university and the academic faculty would be incomplete without acknowledgement of the concept of tenure (Chapter 1). In many cases nonacademic staff may also be awarded tenure but it may be a less obvious event than for academic faculty. Tenure has typically been used (and defined) to provide school teachers and university professors with job protection (Smallwood, 2003; Batterbury, 2008). Tenure track is the path a nontenured faculty member must take to achieve the lofty position of being *tenured*.

The origins of *tenure* are unclear and seem to be lost in the mists of university history but the concept of tenure, whatever the origins, is protected and defended with more than the usual verbal vehemence expected from faculty members. There is the general belief that the concept of tenure originated in schools during the late nineteenth century into the 1920s when teachers, especially female teachers (who dominated the teaching

profession) started fighting for their rights – unions for teachers had not been formed at that time. Teachers came together to gain protections for such rights which ensured they could not be fired without reason. Following from this, the concept of tenure in the university may have raised its head shortly thereafter, or even before the awarding of tenure to teachers.

Tenure in the university was originally conceived to allow faculty members to continue teaching in the area of scholarship at the university that awarded the tenured position. In fact, tenure has become a designated feature of academic faculty employment as well as employment in schools. However, through misinterpretation or misappropriation of the meaning of the word, tenure has evolved over the decades to mean *job protection for life*, and an appointment without tenure is not always a palatable option for many would-be teachers and professors. Indeed, an appointment to an academic faculty position (higher than the assistant professor level) where continued employment is dependent upon measured standards of performance is also not always palatable in the university unless tenure goes with the appointment.

Many faculty members in universities consider tenure to be an employment contract with no specific end date. Reviews for tenure consider many factors and there are many levels of review; only the governing board (the board of trustees, the board of regents) supposedly can grant tenure (Holcomb *et al.*, 1987) but there are very few recorded instances where such bodies have refused to grant tenure to faculty members when such appointments are recommended by the president and/or the relevant dean of a university.

There is the misconception that once tenure is awarded, the appointment (from lower faculty status to upper faculty status, i.e., from the nontenured assistant professor to the tenured associate professor) is a job for life, but tenure, in reality, means that the appointee of tenure is qualified to continue teaching at the university (McKenzie, 1996; Hill, 2014). Thus, for the wrong reasons, the common definition of a *tenured professor* is a faculty member who has been given a *job for life* at his or her university. Furthermore, it is also a general belief (actually, it is a misbelief) that a tenured professor cannot (will not) be fired, except in extreme circumstances, such as committing a very serious crime, and even then, extenuating circumstances may arise from somewhere and for some, not always logical, reason. The holders of tenured positions can often, singly or collectively, rationalize a decision or action (however bad or wrong) seven ways from Sunday!

On the other hand, many observers in the nonacademic world heartily (and loudly) disagree with the concept of tenure as they feel it tends to promote immediate job security (upon the receipt of *tenure*) and removes

the impetus to work conscientiously as well as the impetus to reduce any of the pre-tenure perceived workload. In other words, may observers feel that those with tenure have *ultimate protection from accountability* and the permanence of the appointment is unlikely to be affected (Sykes, 1988, p. 137; Glencorse, 2013). Tenure is way of life for the university faculty members but not for people in an industrial or government laboratory where promotion and job security are generally based on performance.

The actual activities of faculty members, how their activities are perceived, and how these activities are rewarded (salary increases are also issues in the academic world but are not the subject of this text) are varied. Nevertheless, all roads for the faculty in academia lead, not to Rome, but to *tenure*. Thus, for those persons who choose an academic career as their professional goal, the concept of tenure will arise or, perhaps, should have arisen before the decision to lean towards academia had been formulated. During the doctorate work, the student will have been exposed to the idea (and behavior) of tenured professors, as well as some who are not granted tenure. Therefore, this is an opportune place to insert further comments that relate to the concept of tenure.

The definition of *tenure* generally focuses on *academic freedom* in the United States (Hofstadter and Metzger, 1952; Conrad, 1993; AAUP, 2006; Andreescu, 2009; Robinson, 2013). In the United States, *academic freedom* means that a university can determine – on academic grounds – the following: (1) who may teach, (2) what may be taught, (3) how it should be taught, and (4) who may be admitted to study. It has also been decided in court (*Stronach v. Virginia State University*, civil action 3:07-CV-646-HEH, E.D. Va. Jan. 15, 2008 <http://eric.ed.gov/?id=EJ794152>) that individual professors do not have academic freedom but that *all* academic freedom resides with the university.

The most common definition of *tenure* is (put simply) the status of a teacher or professor holding his or her position on a permanent basis without the need for periodic evaluation and contract renewal. Although the constitutions of various universities and related other documents clearly define tenure, the definition may not always be enforced in the event of wrongdoing by a holder of tenure. Thus, it is not surprising that considerable confusion remains among the nonuniversity public as to the meaning of tenure and the evaluation of performance for its achievement. In theory as well as in practice, tenure is not (or should not) be a guarantee of lifetime employment, although that is how it is looked upon by many faculty members.

Under the tenure systems adopted as internal policy by many universities – especially in the United States and Canada – tenure is

associated with more senior job titles such as associate professor and professor. An assistant professor (or a nontenured teacher) will not be promoted to a tenured position without meeting the goals of the university. This may often (though not always) include demonstrating a strong record of teaching, published research, project funding, academic visibility, and administrative service. The emphasis may (or, likely will) be different in different universities and may even be focused on research in some universities, which can be to the detriment of teaching (Johnston, 1991). It is to be hoped that those responsible for developing the college curriculum, the faculty workloads, and the provisions for professional development will successfully resist those pressures to conform to a predominantly research atmosphere.

Academic protocols typically allow a limited period for the nontenured academic to establish such a record and also limit the number of years that any faculty member can hold a junior appointment title such as lecturer or assistant professor – in the United States and Canada. A university may also offer other academic titles that are not time-limited, such as adjunct professor, or research professor, or visiting professor, but these positions do not carry the possibility of moving up the academic ladder to be awarded and occupy a tenured position and, therefore, are often described as non-tenure track appointments.

Generally, (but not always), the process of earning tenure typically lasts approximately six years, during which the candidate's teaching, research, and service are evaluated by departmental tenured faculty; input from non-departmental faculty may also be sought in person or by a written evaluation of the candidate's work and performance. Annual evaluations, which should be taken very seriously, are required but are not always performed with any degree of regularity or professionalism. At any time during the six-year period, the individual can be notified, supposedly with specific advance notice and with cause, that his or her contract will not be renewed. Whether or not unbiased professionalism (by the departmental tenured faculty and/or by the department head or chair) is practiced in such cases is not always obvious or is guaranteed to occur.

Instead of leaving the process wide open for much (in some cases, non-sensical) discussion, each university should formulate an *official* university definition of *adequate cause*, specifically misconduct or incompetence (Hamilton, 2002). If this is not done or enforced by the university, the fault must be laid upon the shoulders of the faculty members who have the responsibility to participate fully in setting the standards and expectations for themselves and each of their colleagues. Unfortunately, this is a responsibility that is put into practice infrequently – in many cases it is not

put into practice at all. The failure of faculty to shoulder and to exercise this responsibility is the main source of much of the frustration with the behavior of faculty members.

Tenure at many universities depends solely on research publications and research grants even though there are statements in the official policies of the university that tenure depends on research, teaching, and service to the university or to the community (Boyer, 1990). Even articles in refereed journals and project funding may not (for reasons unknown) count towards tenure within some university departments. But assuming that all is well, the department head sends forward the departmental recommendation on tenure. This is not always final as there have been instances where the faculty voted unanimously to tenure an individual but the chairperson or the dean of the college sent forward a recommendation not to grant tenure to an individual with an opinion (not always written, often verbal) that was diametrically opposed to the recommendations of the faculty members who sat and deliberated as members of the *tenure committee*.

On the other hand, if everyone of consequence is in agreement, once tenure is granted, the newly tenured members became part of an operative system (*an old boy's club* or *an old girl's club*) that exists which is often disrespectful to those faculty members who do not have tenure. Furthermore, those faculty members who have achieved tenure can (and often do) become averse to any form of teaching and/or research activity. The tenured faculty can resist necessary reforms by administrators who they generally outlast – many administrators are often employed on time-limited contracts to be renewed or not to be renewed. Typically, the tenured faculty members also control academic appointments and such control contributes to the practice hiring more of the same kind of person and, thus, maintains and propagates the system for eternity (Riley, 2011).

In the past, there have been serious and justifiable calls for changes to the tenure system (Sykes, 1988) in which it has been suggested that capable professors be given tenure much sooner than the standard four to six years so as not to hamper their classroom teaching. However, there was the accompanying suggestion that tenured professors be reviewed on a designated schedule (say, every seven years) to help eliminate incompetent teachers who otherwise would find refuge in the tenure system (Sykes 1988). It has also been suggested that tenure may have the effect of diminishing academic freedom among those seeking it – that they must appear to conform to the political or academic views of the field or the university where they seek tenure, and tenure may have the opposite effect on the goal of diversifying freedom of expression (Michaels, 2004; Robinson, 2013). Other criticisms include the *publish or perish* pressures in which faculty

members publish papers that have very little to offer to the scholarly literature but which add up one by one to a creditable number in a specific time period.

In what should be *normal* (some would use the word *typical*, being unable to define the word *normal* in academia) circumstances, the final tenure evaluation is conducted by scholars from across the university community and includes assessment by individuals from other universities. The decision on tenure means that a collection or committee of scholars has judged the candidate to have excelled (or not excelled) in teaching, research, and service; that the committee has confidence (or no confidence) in the performance of the candidate, after which he or she is welcomed into (or rejected from) membership in the academic community.

On a practical level, the major difference between the tenured faculty member and the untenured individual is that the latter can be removed from academia fairly easily (*Contract is not renewed, old boy – you are free to leave as soon as possible!*) while the tenured individual can only be removed (with some difficulty, perhaps even great difficulty) from academia for adequate cause. Thus removal of either nontenured or tenured faculty typically involves building a case (personnel) file of wrongdoings or no-doings (failure to attend departmental meetings and refusal to teach courses). At the same time, the tenured miscreant may have been awarded annual or regular salary increases to keep him or her quiet. So the university may have difficulty in building a reliable and prosecutable case against the miscreant!

As a result, it is not surprising that critics have observed (and stated) that tenure makes it virtually impossible to fire bad or incompetent professors – getting rid of tenured professors can involve years of review and having to leap over bureaucratic hurdles, and can cost tens of thousands of dollars per teacher/professor (Garrett, 2013). Another issue is that many candidates are not always correctly (objectively) evaluated before being granted tenure. Many schools and universities have set the bar far too low for the achievement of tenure and it is no longer based on teacher or professor effectiveness, but instead on a length of service by (or familiarity with) the teacher/professor. With tenure being granted after only a few years, some teachers or professors may not have the chance to show their worth, or their ineptitude. That is a legitimate concern and a school principal or school board (university dean or president and the board of trustees) should not be afraid of advising a candidate that teaching and/or research is not his or her profession (Garrett, 2013). In fact, it would be good governance to take such action (Salmi and Helms, 2013).

3.7 The Student

Typically, some faculty members at a university are well known for achievements in their research fields but not always for their ability to teach or their dedication to teaching. The would-be university student would be well advised to investigate those faculty members whose dedication to teaching outweighs their dedication to research activities. It is not always possible (in fact, it may be impossible) to find such preferences in a printed prospectus, and fulfilling the desire for meaningful information may require a visit to the campus and conversations with current and former students. The university student-faculty ratio (specifically in the college of science and the college of engineering as well as in the various departments) should be evident from a prospectus and should be sufficiently low to reflect the commitment of the university to providing students with excellent teacher-student relationships. In an ideal world the name of the professor should be given in the prospectus and the courses taught by the professor but, in the real world, this information is not always available until the commencement of classes at the beginning of the semester.

Unless the student is willing to spend an inordinate amount of time investigating the background of each professor – perhaps the high school teacher can assist in such an endeavor – it is virtually impossible for a would-be university student to select the university based on faculty profiles and research or teaching preferences. The student can, however, investigate the student-faculty ratio which, assuming that all faculty members are conscientious workers (even when told it is so by the university president, college dean, or department head, the student can only assume this to be the case), can be of some assistance in the choice of a university.

In addition, the student should also attempt to determine which professors have the ability to cooperate effectively with the students as well as with departmental colleagues and peers in other departments. Collaboration in the classroom requires that the professor be able to relate to (empathize with) students and accept them as they are, yet maintain a positive and authoritative (not autocratic) approach to classroom learning. Interested and able students should be encouraged to continue with and excel in the course work but learning will be difficult for the students if the new (or even experienced) professor does not understand their needs.

When deciding on a university, the high school student along with his or her school mentor may recognize the name of an accomplished faculty member and make the decision to attend that university on that basis. There is no knowledge or realization that the accomplishments of the

faculty member may be based on research but the student and the high school teacher-mentor assume that there is a teaching component that has contributed to the accomplishments, and so the choice is made to attend that university. And then after day one – the first day of classes in the academic year – the student does not see the professor in class and is dismayed to see that the place of the professor is being taken by a teaching assistant of unknown capabilities.

Furthermore, with all of the duties for the teaching assistant taken into account (Section 3.5), there may be wonderment about the activities of the professor – i.e., the activities of the designated teacher of the course and, presumably, curiosity about the basis on which the course costs are determined. It might also be wondered if this is true value for the fee money paid to the university each year (or each semester) by the student or by his or her parents (the clients).

It must never be forgotten by the university faculty members, staff members, and administrators that the students are the paying clients and for their payment they (and their parents or guardians) have the right to expect a good education based on lectures and guidance from competent professors. The role of the students in supporting that university is best represented by a series of connective relationships, viz.:

Student attendance = fees to the university (whether the parents
or a funding agency pays)

Number of students = amount of revenues

Fees to the university = enrichment of the university coffers

Revenues into the university coffers = ability of the university to
hire professors

Revenues into the university coffers = ability of the university to
hire nonacademic staff

These relationships can be rewritten as a more direct (harsher) series of relationships that most professors fail to recognize:

No students = no fees

No fees = no revenues

No revenues = no university

No university = no faculty or staff

In summary, without students and the accompanying fees, there are no revenues, leaving the faculty and staff to lecture and manipulate numbers in the fiscal darkness, but without pay.

3.8 Research Funding

Funding for research within a university comes from many sources but can be conveniently divided into three classes: (1) funding from the university, (2) funding from a government funding agency, and (3) funding from a commercial source. As a paying client of funding research, any innovations arising from the work belong to the client unless a prior agreement has been reached between the university and the client. As the paying client, no matter what the source of financial support (scholarship or parental deep pockets) the client should be treated with dignity and respect that is due to a client.

Thus, no university or funding organization owes professors a living, and professors should not be of the opinion that their living arises because they have gone through a rite of passage into a job-for-life no matter how little they work or how lazy they are as a teacher, mentor, or researcher. By the same token, students must recognize that, being fee-paying clients of the university does not give them the right to be discourteous or disrespectful to (or argumentative with) the professors and the university administration.

Students must also recognize that class time does not contain a segment related to demonstrations and destroying university property. Students should have studied the university rules before entering the hallowed halls and by paying the necessary fees recognized the right of the university to have a degree of control over their activities. There are, no doubt, constitutional lawyers who would yell, scream, and cry foul that this last sentence presents constitutional heresy and is an infringement of constitutional rights of the student. So what! House rules are house rules. Try accusing one of the worthy gambling establishments in Las Vegas about the validity of their house rules and see what happens!

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4

Integrity in Academia

4.1 Introduction

The university is built on a foundation of trust insofar as all teaching and research is an honest and accurate reflection of university principles that is (or, should be) built on moral obligations, ethical responsibilities and principles and codes of behavior (Baca and Stein, 1983, p. 7). In this respect, the administrators of the university must equally trust teaching faculty and research faculty (who must also trust each other) to do the job demanded of them – this includes reporting the results of teaching (examination results) and research (experimental data) accurately (Del Favero and Bray, 2005). When this trust is misplaced, the integrity of the university (or universities) is called into question (Branscomb, 1985; Casselman, 2012). In fact, as professionalism becomes an integral part of university teaching and research, the impact on the ethical practices of academics must be given serious consideration as well as the importance of universities remaining centers of open discourse on ethics in the future, not only in academia but in other aspects of public life (Strain *et al.*, 2009, Bai, 2014).

However, not every faculty member has the same instincts about ethics and not all instincts appear to be equally valid. Indeed, it is easy for any

faculty member to criticize or condemn the value or prejudices of others and so free themselves from ethical issues. Indeed, it is very difficult for faculty members to distance themselves from their own views, so that they can dispassionately search for prejudices among the beliefs and values others hold. In fact, in the realm of the university, *norms* (the *norm* is supposedly an indicator of professionalism but is not always measured by any code) specify the desired practices with respect to teaching, research, and service. Without norms, faculty members would be free to follow their own unconstrained preferences in teaching and research. Norms also represent what is considered important by a group articulating how professional choices mesh with service (Braxton and Brayer 2002, p. 4). There is also a direct correlation between levels of moral outrage expressed and the importance of what is expected from ethical standards (Braxton and Bayer, 1999, p. 3).

It might be argued (unsuccessfully one hopes) that it is difficult to establish unambiguous ethical standards in academia and this leads to a range of judgment calls (Chapter 1) (Whicker and Kronenfeld, 1994, p. 9). The nature of this challenge is shaped by factors such as information overload and competency, both of which impact departmental cultures and individual academic roles and identities. Furthermore, there is a relationship between academic communities and the ideas they express (Becher and Trowler, 2001, p. 23). Academic culture comprises disciplinary knowledge, growth, enquiry methods, and research outcomes. However, there is misconduct on many (some would say *all*) campuses.

Misconduct is the word used to describe the most serious violations of trust and is defined by the government of the United States. Furthermore, *misconduct in research* is defined as *fabrication or falsification of factual data* or *plagiarism of the data of others* which has been expanded to include misquoting facts to the media in order to lead to fame and/or notoriety as well as additional funding for future programs (Bertozzi, 1999; Roy, 1999; Ritter, 2001). In addition, improper behavior between faculty and between students and faculty should also be included under the definition of *misconduct*.

Nevertheless, faculty who violate standards of behavior should be made to discourage questionable research practices through a broad range of formal admonishment, not just a *slap-on-the-wrist*. The faculty should also be expected to accept responsibility for determining which questionable behavioral practices exist within their ranks and make every attempt to ensure that the penalties (as dictated by the university code) are enacted. Standards apply throughout the university enterprise but faculty behavior and practices can vary among universities. Understanding

both the underlying standards and the differing practices in any university is an important aspect of cooperative behavior among university faculty members.

Therefore, integrity in any university is the application of truth to all activities in which the faculty (and staff) are involved without the use of metaphors or other forms of wordsmithery (Brown, 2003). Furthermore, integrity or ethics in any university can have many facets, among which examples are (1) defining misconduct, (2) reporting misconduct, and (3) conducting *unbiased* investigation of the reports of misconduct (Whitbeck, 1998; Cheung, 2014). In fact, ethical integrity in a university is about promoting excellence (high quality) in the teaching and research, and a positive emphasis on excellence should be paramount in thinking about honesty in the university (Martin and Schinzinger, 2005). Furthermore, in spite of the recent and continuing institution of various campus laws against misconduct on campus, there are claims that athletic misconduct is on the rise along with on-campus cheating (Brandfield-Harvey, 2015; Russo, 2015).

There have been attempts to define misconduct using both wider and narrower definitions, developed in specific contexts, and for different purposes. For example, if the purpose is to punish wrongdoers, a narrow and legalistic definition should be operative. On the other hand, if the purpose of the definition is to assure high-quality teaching and research, a wider definition might be adopted which will typically emphasize honesty in all aspect of university life, and include theft, other misuses of funds, and sexual harassment (Martin and Schinzinger, 2005). Above all, misconduct is misconduct, and it is preferable that any form of misconduct be recognized, whatever form the definition may take.

A lasting commitment to ethical integrity is best achieved by providing sound training in the practice and ethical conduct of being a faculty member or a staff member and by creating a professional environment that reinforces the high standards that are (should be) necessary on and off any campus. Ideally, this educational process should begin early in the appointment of faculty and staff and should continue with annual (or biannual) reminders through the most senior career stages, even up to and including the office of the president of the university. This is in addition to any reminders of behavior of integrity from the relevant professional societies, which must also bear responsibility for disciplining errant faculty and staff (Ryan, 1995; Speight, 2015). However, for any university, integrity is a commitment to creating an environment that promotes responsible conduct by embracing standards of excellence, trustworthiness, and willingness of faculty and staff to follow university rules and regulations. If faculty and staff

make appropriate and ethical choices and are willing to accept responsibly for their (individual or collective) actions, everyone wins.

In fact, within the various document that exist at university level, state level, and federal level, the legal responsibilities are usually well defined and are often points of emphasis that determine the range of legal responsibilities for faculty, staff, and members of athletic departments, including the coaching staff. These responsibilities usually are formulated to maintain the safety and well-being of the student and to maintain the educational focus of the university programs. Reporting of any misconduct or actions that fall outside of the rules and regulations is (or should be) a legal responsibility of all members of the faculty or staff.

There is also the necessity for university administrators to determine if *ethics* is alive and well (Chapter 1, Chapter 2). It is! But it is the minority (at least it is hoped to be a minority) of faculty and/or staff who are the miscreants and give ethics a bad name because of their flaunting or bending of the truth or engaging in, for the want of a better word (if there is such a word) *misconduct*.

4.2 Faculty Evaluation

In academia, young professionals enter a department at the assistant professor grade. At this level, the new young faculty members have little choice in terms of teaching assignments and have administrative work thrust upon their shoulders – and can complain about the workload at their peril – while the older tenured members of staff have the right to refuse such work without fear of any form of reprisal.

In addition, assistant professors also have to acquire research funding and may even have to pass their reports and papers through a review committee prior to publication. This review committee will be made up of senior members of staff who, for many reasons that are often difficult to follow, can give a young professor a glowing performance report or a report that is somewhat less than glowing (Chapter 1, Chapter 3). In many cases, the report may be subjective rather than objective. The latter is of some use to the assistant professor – it is as a result of a subjective assessment that young assistant professors can feel that they are suffering rejection by their colleagues and they become determined to move at the first or best opportunity. On the other hand, an objective assessment can be very helpful and show assistant professors that their work is recognized and appreciated or there may be holes in the work that should be filled before finalization of the manuscript.

Unfortunately, the processes by which faculty members are evaluated may be the most detrimental aspect, decreasing the will of the young faculty member to perform at an adequate level. Many evaluators focus on the faults and errors made by the interviewee – it is easier to find fault than it is to offer praise and to see the benefits of someone's work. Most of all, the evaluation process should involve knowledge of the education of the relevant disciplines – being evaluated by one or more faculty members who have no concept of the principles of the discipline of the person being evaluated or by members of the university administration is not the way to proceed!

In addition, the evaluation process may seem to focus on the *do-as-I-say dictum* of the mentor, the department head, or academic senior colleagues. In academia, the additional dictum of *publish or perish* is also operative, insofar as *publish* has the standard academic meaning of *publish in recognized journals that we, the evaluation committee, say are recognized journals* irrespective of the knowledge of the members of the evaluation committee of the reputation of the journal – and we should not forget, the number of papers published in the time period from the last evaluation is an easy mathematical exercise for any supervisor. Relying on journal publications as the *do-as-I-say* syndrome or the academic *publish or perish* syndrome as the sole demonstration of faculty achievement is a sad state of affairs and needs to be a thoroughly reevaluated with the realization that *pro forma* evaluations should also be discontinued.

In the first instance (i.e., the *do-as-I-say* syndrome), young professors may find that they are up against the proverbial brick wall. The department head may be all powerful and junior professors have little or no recourse for appeal. Furthermore, counting the number of publications in recognized journals (recognized by whom?) ignores (1) the nature of the journal, (2) the quality of a publication, as well as (3) the potential for benefit through ownership (by the university) of intellectual property. Counting the number of publications in recognized journals ignores the quality of any particular publication as well as the potential for benefit through ownership (by the university and the inventor who may share any royalties) of intellectual property (Wilson, 2016). For example, publication of work in a patent followed by publication of the work in a conference proceedings are tangible means of conveying ideas and insight that relate to intellectual property and can result in the university and the inventor sharing royalties, but a contract should be drawn up so that both the university and the inventor know the division of any royalties (Wilson, 2016). In addition, and in the current context, obligating faculty members to be evaluated without giving true credence to intellectual property is a handicap and is

ruinous of a true method of evaluation. It is also ruinous to the university insofar as opportunities for additional revenue streams are lost.

The evaluation process must be objective and honest, with no bias towards or against the candidate or towards the outcome of the work. Furthermore, if the evaluation process involves an annual meeting between the young professor and the department head, the process should not involve a surprise at the end of the year – the annual performance evaluation should be a reaffirmation of the comments made during regular communication throughout the year.

4.3 Faculty Conduct and Misconduct

While faculty and staff behavior and conduct are stipulated by various research councils and professional associations, misconduct still occurs on a regular basis (as evidenced by the reports in the news media). In fact, since this book went into production there has been at least ten reports in the news media of misconduct or universities not handling claims of misconduct in a satisfactory manner.

4.3.1 Reporting Research Data

The modern university is an institution for teaching, learning, protection of the culture, contributor to economic growth, and a knowledge factory. The university used to be a community of scholars and students united by a search for a deeper understanding of nature and humankind but it has become a series of specialized factions, disciplines, with students and research activities united only by occupancy of a common territory (Pocklington and Topper, 2002). Professors establish academic tribes and territories and, in such a context, academic freedom is synonymous with academic subjectivity as individuals utilize disciplinary jargon to justify their actions and guard their territories. The university has also been viewed as radical when, in fact, it is most conservative in its conduct, and it is also seen as a law unto itself (Kerr, 2001).

Research data must be presented in a manner that avoids future misuse or misinterpretation. This is partly done by avoiding hasty, unconfirmed statements, incomplete analyses and by speaking out about these in the studies of peers, thus the significance of peer reviews. This is why many journals have stipulations to deal with fraud and may require researchers to place their raw data in a special archive (Shrader-Frechette, 1994, p. 57). Faculty researchers must aspire to high standards of reliability and validity in order to minimize

damaging implications. Research misconduct in the university is, under any circumstances, *significant misbehavior* that risks corrupting the record or compromising the integrity of scholarly practices. Such behavior is unethical and unacceptable in proposing, conducting, or reporting research, or in reviewing the proposals or research reports of others.

Throughout the university system, no formal process exists for reviewing questions about the integrity of faculty – academic freedom does not include the preclusion of peer review before a manuscript is sent to a journal for publication. Thus, universities must bear particular responsibility for maintaining high professional standards (Ryan, 1995). In fact, there is a direct relationship between the health of the academic profession and the maintenance of ethical standards. Central to this relationship is a departmental culture which varies within and across campuses. Departmental cultures should be characterized by: (1) the willingness of academics to act responsibly at all times, and (2) the maintenance of self-regulation and peer review within the boundaries of academic freedom and collegial self-governance.

In the modern university world, many faculty members are not always committed to think of the consequences of their actions (Kearney, 1999) – the focus is on personal image. For example, when a professor has stolen an idea or concept and the holder or owner of the idea or concept has complained to the university authorities, an answer such as “it is only a young professor seeking funding for his project” is totally unacceptable. From that point, the matter is dismissed by the university management and the board of trustees (board of regents or board of CYA, as they are often called – the term CYA being open to interpretation by the reader!).

The academic tradition emphasizes intellectual honesty and critical self-discipline with respect to the scholarship of discovery; the scholarship of integration; the scholarship of application; and the scholarship of teaching (Hamilton 2002). However, academic freedom is *a condition of work, designed to enable academics without suffering adverse consequences in their employment* (Tight 1988). Moreover, the integrity of the academic staff depends on how well they appreciate, understand, and behave in an ethical fashion while enjoying their academic freedom.

In some instances, and in a different realm of their operations, universities (through the university administration) may engage in unethical practices because of the autonomy that they have been allowed. Issues of ethics generally occur on (or outside of) the boundaries of academic freedom and therefore raise questions about the need for discussion and consensus about the limits of academic freedom (Neave, 1988) and, by extension, whether or not there should be limits to university autonomy.

Most university researchers do care about responsible behavior in research and pay a great deal of attention to best research practices. However, the fact remains that it can take some effort to find out what these practices are and how to act when the complex rules for responsible practice seem to conflict with one another.

4.3.2 Misrepresenting Credentials

Reporting research data aside, *misrepresenting credentials* (lying on a *résumé*) is another type of deception when the best approach is to tell the truth (Ogden, 1999). Researchers have been known to forge credentials, which can be either blatant or take subtler forms (Ogden, 1999; Martin and Schinzinger, 2005). Some candidates embellish a little on their *résumé*, while some embellish a lot, and others just *lie*. Most of the time, that lie is about their education. The key to stop such practices is to check a *résumé* thoroughly, not just by checking the address and telephone number, but by thoroughly checking every line item listed for education and employment. Without assiduously checking the facts and claims, it is impossible to determine who will include untruths on their *résumé*.

One of the earliest cases discussed by the NSPE Board of Ethical Review (Case 79-5) related to the case of an engineer who received a PhD from a non-descript (*diploma mill*) university that required no attendance or study at the campus facilities. The engineer then listed the degree on all his professional correspondence and brochures and the NSPE board believed (or has ruled in the past) that when listing a PhD, there is no reason to identify the university from which the degree was obtained. The mere listing of the advanced degree makes it widely understood that it conveys an earned doctorate.

4.4 Faculty Relationships

There are several types of relationships on any campus: (1) faculty-student relationships, (2) faculty-graduate student relationships, (3) faculty-faculty relationships, and (4) faculty-staff relationships. Each one can have a bearing on how a university is perceived by the outside world and even within the campus.

4.4.1 Faculty-Student Relationships

While the professional relationships between professors and students are an important aspect of university life, informal interaction must also be

encouraged. In fact, in order for a university education to be meaningful, the classroom cannot be the sole place of encounter between students and faculty. On the other hand, it can also be argued that close, nonacademic relationships with students are inappropriate (Cahn, 2011). The possibility for professors and students to become too close personally can lead to hindrances in professional relationships, which are necessary for learning, and there is the real possibility that faculty members may play favorites with certain students. Thus, the student-faculty relationship is first and foremost a professional relationship – despite having passed through the student learning programs themselves, student life is largely a mystery to many faculty members.

Many faculty members see students during only a part of their days, and their dorm and extracurricular lives are mostly a mystery. Some universities attempt to move beyond this knowledge barrier by establishing *common rooms* where undergraduates are encouraged to invite their professors for a drink and conversation. It is hoped that the informal environment of the *common rooms* (if there is such an environment) provides both students and professors the opportunity to get to know one another as fellow human beings rather than in their roles as student and teacher. Whether or not such a concept is truly workable is not fully known or appreciated.

Many students never engage their professors in meaningful conversations outside the classroom. Research (Campbell and Campbell, 1997; Kuh and Hu, 1991) shows that student-faculty relationships are the most crucial connection within a university community. Like any relationship, those between faculty members and students require nurturing and must be approached with caution.

When students feel connected to the campus community, they are more often retained and excel academically because lack of integration, or isolation of the student within the university, has been identified as an important factor in contributing to student departure (Gregerman *et al.*, 1998). A sense of connection with teachers helps students feel like they belong at the university and faculty members who understand the learning needs and interests of their students can appropriately tailor assignments, expectations, and conversations.

4.4.2 Faculty-Graduate Student Relationships

A graduate degree is conferred upon a graduate degree candidate after a period of research in a graduate school, which is part of a university – typically, the number of years spent in such research is unspecified at the

beginning of the research period. Producing original research is often a significant component of graduate studies, including the writing and defense of a *thesis* (also called a *dissertation*).

A *graduate school* (a North American term) is that part of a university that awards advanced academic degrees (such as master's degrees and doctoral degrees) with the general requirement that students must have earned a previous undergraduate (baccalaureate) degree. A distinction is typically made between graduate schools (where courses of study do not provide training for a particular profession) and a professional school, which offers specialized advanced degrees in professional fields such as medicine, business, law, or the ministry.

The graduate degree experience has long been known as a *work-study* program which takes the form of laboratory research and often (as required by department/university policies or by the professor/mentor) as teaching assistantships. This serves the dual purposes of providing training in research – at the same time assisting faculty in their research and teaching and, in the case of teaching assistantships (Chapter 7), teaching responsibilities. Furthermore, just as the baccalaureate student needs a mentor, the graduate student also needs a mentor – perhaps even more so because of the more complex nature of the work and the associated workload.

Thus, upon completion of the baccalaureate degree, the educational system offers the student two further degree goals: (1) the master's degree and (2) the doctorate. Both degrees are awarded following a term of *apprenticeship* (study and hands-on laboratory or field work under a supervisor/mentor) in graduate school, but there is a considerable difference between the degrees.

4.4.2.1 *The Master's Degree*

The baccalaureate degree gives students a basic education in the fundamental knowledge of a chosen discipline. Becoming an independent research worker seeking a higher-level (research) degree demands that the student experience the advanced specialized learning and hands-on apprenticeship of graduate study.

Briefly, the term *apprentice* refers to (1) a person (typically, a young person) bound by legal agreement to work for another for a specific amount of time in return for instruction in a trade, art, or business or (2) a person who is learning a trade or occupation, especially as a member of a labor union, or (3) a beginner; a learner. The term is rarely (if at all) used in academia but that is essentially what the graduate student is: a young person who works for someone else (the professor) in return for instruction in the chosen discipline.

Apprentice or not, the short course to a post-baccalaureate degree is the master's degree, usually one or two years of study, mostly in the classroom. The specialized knowledge of the recipient of the master's degree should bring enhanced earning power and professional responsibility. The doctorate requires a longer-term commitment, which is a time period of (preferably) four to five years (hopefully, not more) of low-paid apprenticeship, which typically gives the survivor full professional standing. However, there are those professors who are quite adamant that to allow a doctoral candidate to leave after four to five years of work is unacceptable because the candidate is not ready, and a more prolonged period (seven to ten years) is necessary for completion of the work.

A master's degree may entail two years of coursework only. Some programs for the master's degree require submission of a research thesis, others do not. In the latter case, the master's degree is not so much a terminal degree as a recognition of the coursework (really, an extension of more advanced classwork) and qualifying examinations completed after about two years in a doctoral program. However, in recent decades, the two-year master's degree has served in some fields as the terminal degree.

The master's degree can serve many purposes: (1) as a professional credential, (2) as an intermediate step to a doctorate, or (3) as a consolation prize for not being able to survive (for a variety of reasons) doctoral study. The master's degree has long been an important final degree for many professions but the degree is not always suitable for entry into the research workforce. Furthermore, the holder of such a master's degree may find that he or she is, unfortunately, relegated to the ranks of technician within the academic workforce. Thus, the attractiveness of a master's degree varies with the supply and demand of those with higher credentials. In fields with readily available doctoral graduates, holders of master's degrees may find themselves working as less-than-serious members of a research team or even as laboratory technicians. On the other hand, an active job market (with high salaries) can lure students with a master's degree away from the university and effectively discourage them from continuing to the doctorate level. There are reports of spurious job claims in which graduates are hired by the university for fellowships that boost the employment of graduates and raise the university ranking in terms of availability of jobs and job offers for graduates (Gershman, 2015). In my own experience, there was a student who graduated with a course-oriented master's degree who failed to get a job (or did not try to get a job) but was offered a job by the program professor as a research assistant. (In truth, she was a filing clerk.) Then the program professor, with other similar manipulations and claims (such as students returning to jobs in industry from which they had taken

leave of absence to study for the degree) used the data to show (and claim) that his students were, after graduation, all able to find gainful employment that was, it goes without saying, related to the recent awarding of the master's degree to these same students.

4.4.2.2 *The Doctoral Degree*

A doctorate is appropriate for most students who desire research careers, including academic research and industrial research. If students are ready to make the leap to graduate school, they should be encouraged to use the telephone, visit campuses (and their websites), talk with current students and faculty, seek out alumni, attend conferences, and read publications by faculty (NRC, 2003). Personal meetings with professionals and students can bring a feel for the profession and are an excellent basis for choosing an appropriate learning environment. In fact, doctoral programs in most disciplines are not only the final formal stage of education, but also are the means of initiation into the research community.

Doctoral study in most disciplines usually takes (should take no more than) four to five years – assuming the student does *not* already have a relevant master's degree. The first year may be partially spent taking advanced classes, and preparing for oral and written qualifying examinations that most universities require new graduate students to pass before they can continue their studies. The beginning graduate student often also teaches undergraduates as a teaching assistant, or may be active in laboratory research. Some entering students have already arranged to work with a certain faculty member, and may have a research agenda planned out. Most new graduate students, however, spend no more than one-year learning about various research activities at their university.

The choice of a research project and thesis advisor depends on a constellation of factors: (1) positions available in various laboratories, (2) the student's interest, (3) funding opportunities, (4) a mentor's perceptions of what constitutes a significant research problem (the potential thesis topic), and (5) luck (timing and serendipity). Postdoctoral students should be those who are doing laboratory research (nearly) full time after the first year. Moreover, the graduate student is not only a professional-in-training, but also a productive researcher. The uncertainty of basic research means that a project *must* (sooner or later) produce meaningful results – sometimes the initial stages of the program is christened *search* rather than *research* – and that research projects are subject to change during the course of thesis research. Above all, to earn a doctorate, the graduate student must (1) make a significant contribution to knowledge in his or

her field of research, (2) complete a written thesis, and (3) pass an oral examination.

The typical doctoral program constitutes a two-part system that lasts four or more years. The first part consists of up to approximately two years of course work while the second part focuses on a doctoral dissertation based on original laboratory (or field) research that might take two or three years or more to complete. The dissertation, which serves as a demonstration of ability of the candidate to carry out independent research, is the focus of the doctoral program. When completed, the thesis must contain a detailed description of the work performed by the candidate in the form of (1) the actual research work and the results, (2) the relevance of the research to previous work, and (3) the importance of the results in extending an understanding of the area of scholarship. This format is not absolute in all universities and much variation is seen in the content of doctoral theses.

It is customary in most fields for a doctoral candidate to be invited to work as a research assistant (RA) on the project of a faculty member and an aspect of this research project often becomes the subject of the thesis written by the candidate. A traditional expectation of a candidate, as well as the respective professor, is that the candidate will extend this work by becoming a university faculty member. If this is indeed the case, promotion and tenure depend to a great extent on publication arising from the research. But promises made are not always honored or become a reality.

Yet, many universities are burdened with at least one senior faculty members (if not many) who displays flagrant disregard for teaching duties, research duties, mentoring duties, attending meetings, and even appearing at his or her office on campus. Yet this person is virtually untouchable because of tenure. There has been the observation (Cahn, 2011) that most tenured faculty who have lapsed into apparent professional incompetence were marginal cases when their original tenure status was being considered. The golden rule should be *when in doubt, say "no"*. In addition, it would be wise to request faculty members (who are members of the tenure committee) to explain their votes to discourage dereliction of duty and any prejudicial thoughts on the part of those faculty members (Cahn, 2011).

A properly structured requirement for the demonstrated ability to perform independent research continues to be the most effective means to prepare academically inclined, motivated people for research careers. However, original research demands high ethical standards, perseverance, and a firsthand understanding of evidence, controls, and problem solving, all of which have value in a wide array of professional careers. In the course of dissertation research, doctoral candidates perform much of the work of

faculty research projects and also take on (by choice or as a result of *various forms of gentle persuasion*) some of the teaching duties at the university. Therefore, universities and individual professors have incentives to accept and help to educate as many doctoral (and postdoctoral) researchers as they can support on research grants, teaching assistantships, and other sources of funding. By the time that a student receives his or her doctorate, the student may have been a research assistant or a teaching assistant. This system is advantageous for universities and brings motivated students, outside funding, and the prestige of original research programs. In addition, it is advantageous for the doctoral students, for whom it supports an original research experience as part of their education.

Over the last forty years, the average time it takes graduate students to complete their doctoral programs, called the *time to degree* (TTD), has increased steadily. One measure is the median time that new recipients of doctoral degrees have been registered in graduate school where many professors consider (in a distinctly uncomplimentary manner) that the student is a source of cheap labor to provide research data for the furtherance of the publication career of the professor. As a result, many students now spend five or six years (with the encouragement of the professor, that may often lead to a ten-year period) to obtain the degree rather than a more presentable three to four years. At the same time (over the last forty years), the time required to study for a master's degree does not seem to have increased much beyond eighteen months to two years.

The lengthening of the period of graduate work is accompanied by a second trend. It has become more common for new doctoral graduates in many fields to enter a period of postdoctoral study, to work in temporary research positions, and to take a one-year faculty job before finding a tenure-track or other potentially permanent career-track position. However, *registered time* is the amount of time actually enrolled in graduate school – thus, it might be less than the time elapsed from entry into graduate school and completion of the doctoral work. It is significant that spending relatively more time in doctoral or postdoctoral activities might not be the most effective way to use the talents of young graduates.

The median number of years between receipt of a baccalaureate degree and a doctorate in many disciplines has increased from three to five years during the 1960s to six to ten years in the past decade. On the other hand, some doctoral students may take a time out between the baccalaureate degree and graduate degree, which can be valuable for gaining work experience (as an intern) leading to more mature decision making about careers and, thus, an increase in years from bachelor's degree to doctorate can be beneficial.

But registered time to degree (RTTD) has also increased steadily over the last forty years (Speight, 2015). Some researchers explain the increase in time to degree by pointing to the increasing complexity and quantity of knowledge required for expertise in a given field. Another possible explanation is the tendency of some faculty to extend the time that the students spend on research projects beyond what is necessary to meet appropriate requirements for a dissertation. In addition, the lack of financial support during the dissertation phase substantially extends time to degree, as do difficulties in topic selection, unrealistic expectations for the amount of work that can be completed in a dissertation and inadequate guidance by advisers. Still other reasons are (1) poor undergraduate preparation, (2) student reluctance to leave the congenial life of academia, and (3) postponement of graduation in a job market where employment is uncertain. However, there is insufficient investigation (but a lot of speculation) of the reasons for students to spend the extra time that they take to earn a degree, whether in classwork, studying for general examinations, doing thesis research, or working as teaching assistants and/or research assistants. In a sparse labor market, students might hope that the extra time can provide them with a better thesis and thus a better chance at a research position.

At the graduate level, the *choice of a research adviser is one of the most important decisions a student will make*. The mentor can encourage students to shop around carefully, to talk to present and former advisees, and to gain personal impressions through face-to-face interviews. Students should also be advised to examine the performance of possible mentors: (1) publication record, (2) financial-support base, (3) reputation, (4) success of recent graduates, (5) recognition of student accomplishments such as by coauthorship, (6) laboratory organization, and, most important, (7) willingness to spend time with students. Much of this information can be learned directly from the potential mentor and from the mentor's current and past students.

Finally, a distinguishing aspect of the doctoral degree is the necessity of the degree for employment in academia. Academia is a nontraditional market in its use of tenure and its emphasis on externally funded research, both of which (hopefully) provide stability and insulation from some, though certainly not all, economic incentives that drive other, more typical labor markets. Many doctoral graduates who plan an academic career also accept a temporary postdoctoral research appointment following their degree, which provides a valuable period of time for new doctoral graduates to immerse themselves in research, free from teaching responsibilities, so that they can prove themselves as full-fledged independent researchers.

Perhaps more truthfully and to the point, the post-doctoral period is also a labor market buffer – it is a holding tank (or breathing space) for young researchers during a tight market with few tenure-track academic posts and few jobs in industry but the availability of research money for post-doctoral programs.

4.4.2.3 *The Research Fellowship*

A research fellowship is a research position in a university, and the research fellow (the man or woman appointed to the position) may act either as an independent researcher or (more typically) under the supervision of a principal researcher. In some universities, the term *research fellow* often refers to a junior researcher who is appointed to work on a specific project on a temporary basis.

In contrast to an appointment as a *research assistant* (who may not necessarily hold a doctorate but is assigned to a professor on a research project), appointment to the position of research fellow normally requires that the appointee hold a doctoral degree or is about to be awarded a doctoral degree and the issue is merely the timing of the award ceremony. Some research fellows undertake a moderate level of teaching responsibilities. Research fellow positions vary in different countries and universities – in some cases, the research fellowship may lead to the possibility of promotion to assistant professor, thereby leading (hopefully) to a tenured position at the university, while in other instances the appointment is a fixed-term (usually two-year) temporary appointment. In contrast, a *senior research fellow* (who holds a rank equivalent to professor) is often an established high-ranking faculty member (professor) on sabbatical leave, often from another university, who is working on conducting a research project in the university of his or her appointment.

Research fellows tend to be paid either from central university funds or by an outside organization such as a charity or company, or through an external grant-awarding body such as a research council or a society. Particularly in Oxford and Cambridge-style universities, research fellows appointed as fellows of a college tended to, or still do, partially receive remuneration in the form of college housing and subsistence.

4.4.3 **Faculty-Faculty Relationships**

Throughout the campus life of students, the professor-professor relationship must also be evident and not have an adverse effect on the attitude of the student to the university. These relationships can vary from friendship

to a closer, sexual relationship, which is subject to the behavior protocols of the various universities. The most commonly accepted relationship is one where a more mature (older) professor offers guidance to a younger faculty member (mentoring).

Typically, this type of relationship shares good instructional strategies but, in some cases, mentoring may move past the advice of teaching and learning. This occurs when the mentoring becomes more personal. This can lead to an embarrassing situation, especially if the senior (or junior) faculty member is elevated to the position of department chair (department head) or dean. In such situations, the mentor-mentored person relationship may be taken to task by other faculty who believe that favoritism is raising its ugly head. There are also the effects of such relationships on the attitude of the students – *if they can do it, why can't I?*

In summary, caution is advised when a faculty-faculty relationship blossoms into a close personal relationship.

4.4.4 Faculty-Staff Relationships

Faculty-staff relationships are most often not defined. In many cases, staff members consider themselves to be controllers of faculty activities when, in reality, the staff are hired to assist the faculty. Staff members need to remember the simple equations:

Faculty = teaching
 Teaching = fees
 Fees = revenues to the university
 Revenue = staff jobs
 No fees = no revenue
 No revenues = no university
 No university = no staff jobs

Similar equations can be written by replacing the word *teaching* with the word *research*.

It is also essential that faculty members remember that the staff members are hired to ensure that the faculty are advised on the various protocols of the university and should be treated with courtesy and respect. The faculty also need to remember that not everyone requires a doctorate to perform well in a job.

The university needs to work on ensuring that faculty and staff understand the differing relationships between faculty members and staff members by better defining the tasks and helping to overcome any

miscommunications. Partnerships, which are key to improved relations, must be developed between faculty members and staff members, and procedures for open dialogue to talk across boundaries that create a negative atmosphere in the workplace must be developed.

The staff also have a responsibility towards the students. Just as faculty-student relationships that had moved beyond the teacher-student discourse are frowned upon – even forbidden – staff members should also be aware that staff-student relationships that also move beyond the giving of advice and assistance to the student by the staff are also discouraged by many universities. Indeed, because of the potential for abuse or the appearance of abuse and the inherent differential in authority between students and counselors and other staff members who hold positions of authority over the students, universities generally prohibit any member of the university community from engaging in a romantic and/or sexual relationship or in romantic and/or sexual conduct with any student whom he or she educates, counsels, coaches, supervises, or evaluates in any way.

In summary, the faculty are the revenue generators, whether the revenue comes from undergraduate fees or from externally funded research programs. The faculty need assistance (from the staff members) to ensure that the revenue streams (whatever the source) are not interrupted and continue to come in to the university.

4.4.5 Dating Relationships

On most campuses, dating between students is a way of life. But there are other dating relationships that are not always permitted. Rather than have these dating relationships included in the relationships described above and the meaning lost to the reader, it is preferable that dating relationships that are not between students be presented here.

4.4.5.1 Student-Professor Dating

The best time for a student to date his or her professor, if at all, is after the student has graduated from the university. While it is true that some students have been able to date their professors without any problems, this is the exception rather than the rule.

There are a multitude of issues that arise from student-professor dating. For example, the professor has so much power over student grades (and hence student future), it is difficult to have a relationship of equals. Furthermore, if the relationship is known to other people and the student grades are excellent, some students and/or faculty may question the validity of the grades and find

it hard to take the student seriously. On the other hand, if the relationship is secret people could still find out about it and again question the validity of the student grades. A personal relationship is likely to influence the objectivity of the professor, which can also lead to the student being uncertain of his or her true academic performance, which can lead to self-doubt.

If the student-professor relationship ends badly with hard feelings on both sides, the professor can sabotage the student grade, or at least leave the student wondering if his or her personal feelings influenced the grade. In addition, the professor may decide to talk (or brag) about the relationship to faculty colleagues, which can have a negative influence on how other faculty members perceive the student. Even if the relationship ends amicably it would be difficult to know with any degree of certainty if the grade was influenced by the personal feelings of the professor, and it might still be awkward for the student to be in any of his or her classes in the future.

On the basis of the above points, and whether or not the relationship has developed along a romantic or sexual pathway, a student would be well advised not to enter into a dating relationship with a professor, and the professor should not enter into a dating relationships with a student, even if the regulations of the university do not prohibit such relationships. It may only be a matter of time before one or both members of the relationship move into areas of misconduct in terms of what each is expecting from the other. If such a relationship exists or has existed between a professor and a student over whom the professor has evaluative or supervisory authority, the professor should report the relationship to his or her department chair, dean, or dean of the graduate school.

4.4.5.2 *Student-Teaching Assistant Dating*

Teaching assistants do not typically have evaluative, supervisory, or instructional authority (including the assignment of grades) over a student with whom the teaching assistant is having or has recently had a romantic or sexual relationship. If such a relationship exists or has existed between a teaching assistant and a student over whom the teaching assistant has evaluative or supervisory authority, the teaching assistant must report the relationship to his or her department chair, dean, or dean of the graduate school.

4.5 A Matter of Control

One of the pivotal questions faced by a university is whether or not to institute measures to enforce the published code of ethics with disciplinary

proceedings and sanctions. Some universities may choose not to engage in enforcement, using the code of ethics primarily for educational purposes. On the other hand, enforcement of the code of ethics allows the university to demonstrate a willingness to hold the faculty and staff accountable for their conduct (Kowalski, 1997).

The most effective control is the development and publication of codes of ethics but ethics and behavioral standards are not always effectively transmitted from one generation of faculty and staff to the next, or even to current members of faculty and staff. Hence, any effort to develop standards should be linked to a plan for their dissemination and for the education of those to whom they (will) apply. Furthermore, if a university decides to enforce the standards with effective review and disciplinary procedures, adequate resources should be devoted to the task. In addition, enforcement procedures should accord due process, and ways to initiate a grievance should be commonly known. Above all, there should be no cover-up or attempted cover-up of misconduct in any of the disciplines.

Once misconduct by a member of any university has been proven, there should be no grandiose show of wrist-slapping. The employment of the faculty or staff member responsible for the misconduct should be expelled from the university and it made known publically why he or she is no longer welcome as a faculty member or staff member of that university. The means to control campus relationship between students and students or between faculty and students or between faculty and faculty is for one or both participants (1) to analyze the relationship, and (2) terminate the relationship no matter what the nature of the relationship (Table 4.1).

Another pivotal question relates to the issue of evaluation and the awarding of tenure. Evaluations cannot be (but often are) subjective where one of the *good old boys* or *good old girls* is given a good evaluation and the accompanying raise precisely because of the good old boy/girl network. In some instances, it might be the administrator (the president and/or the dean) who has reached his or her highest level on incompetence (Peter and Hull, 1969; Lazear, 2000; Pluchino *et al.*, 2010) – often called the *Peter Principle*.

Briefly, the *Peter Principle* is a proposition that states that the members of any organization where promotion is based on achievement, success, and merit will eventually be promoted beyond their level of ability – otherwise referenced by the phrase *employees tend to rise to their level of incompetence* (Peter and Hull, 1969) The principle holds that in a hierarchy, members are promoted so long as they work competently (or for whatever other reasons) until, eventually, they are promoted to a position at which they are no longer competent (their *level of incompetence*), and there they

Table 4.1 Comments on various campus relationships.*

Healthy relationships	Unhealthy relationships
Equality: Partners share decisions and responsibilities on a fair and equal basis.	Control: One partner makes all the decisions and tells the other what to do.
Honesty: Partners share their thoughts with each other.	Dishonesty: One partner lies to or retains information from the other.
Physical safety: Partners feel comfortable in the relationship.	Physical abuse: One partner uses force to get his/her way.
Respect: Partners accept each other's opinions and interests.	Disrespect: One partner makes fun of the opinions and interests of the other partner.
Comfort: Partners feel safe with each other and respect each other's differences.	Intimidation: One partner tries to control every aspect of the other's life.
Sexual respect: Partners never insist on sexual activity or insist on activity that makes the other uncomfortable.	Sexual abuse: One partner pressures or forces the other into sexual activity against his/her will.
Humor: The relationship is enjoyable for both partners.	Hostility: One partner has to act cautiously to avoid annoying the other.

*Adapted from the United States Department of Health and Human Services. http://www.hhs.gov/opa/familylife/tech_assistance/etraining/partner/healthy/index.html

remain, being unable to earn further promotions. Unfortunately, the Peter Principle is incorrect at this point insofar as some (perhaps, many) teachers and professors continue to receive promotion by managing upward – the concept of subordinates finding ways to subtly manipulate their superiors in order to prevent them from interfering with their upward mobility.

In many cases, evaluations are typically perfunctory compliance exercises that rate all teachers/professors as *good* or *exceptional* and yield little useful information. This system only serves to frustrate teachers/professors who feel that their good work goes unrecognized and ignores other teachers who would benefit from additional support. The main goal is to avoid the faults and deficiencies of the less than useful *old boy/old girl* evaluation systems or the *compliance exercises* that only provide false evaluations and assessments. Evaluations should consider multiple *relevant* measures of performance, primarily the impact of the teacher/professor on the scholastic growth of the students.

In addition, the performance evaluation should employ four to five rating levels to describe differences in teacher/professor effectiveness and should invoke the concept of regular constructive critical feedback. It serves no purpose for the performance of a teacher/professor to be reflected in the contents of a personnel folder that is two inches thick where 90 percent of the one-page inserts are complaints from students (and perhaps even complaints from colleagues) and the department head dismissed such complaints as inconsequential. The outcome of any evaluation (and the contents of the personnel folder) must be a major factor in key employment decisions and all teachers/professors should be evaluated at least annually and given clear expectations, which are not subject to misinterpretation.

A professional evaluation should produce information that can be factored into important decisions about tenure, compensation, development, promotion, and dismissal. In short, the results of any evaluation must be accurate, objective and easy to interpret. Some administrators may support using evaluation results only to reward good/excellent teachers/professors (such as awarding tenure), and not for decisions such as dismissal – which does not happen (even though it may be warranted) in many schools and universities.

As long as the evaluation process is objective, the results can be used to form the foundation of teacher/professor development but there *must* be meaningful consequences for consistently poor performance. With better teacher evaluations in place, the leaders of schools and universities can be held accountable for teacher/professor and student performance. In this way, evaluations can play a major role in important employment decisions – teachers and professor exhibiting consistently poor performance as well as the president and/or the dean should be dismissed, which is the way of the outside (nonscholastic) world. Making teachers/professors accountable or responsible – two bad words in many institutions of learning where the focus is on unmitigated authority and a lack of responsibility – for the outcome of their activities is a necessary part of any learning system.

In short, and to make the evaluation process as objective as possible, a teacher/professor evaluation should involve the following criteria: (1) a process in which all teachers should be truthfully evaluated at least annually, (2) there should be clear, rigorous expectations, (3) the evaluation should be based on clear standards of teaching that prioritize student learning, (4) the evaluation should involve multiple measures of performance, (5) the evaluation should employ four to five rating levels to describe differences in teacher/professor effectiveness, (6) there should

be regular constructive feedback, and (7) there must be significance to the evaluation and the outcome and it should be a major factor in key employment decisions about faculty members. Finally, the ultimate success of the evaluation systems – no matter how pertinent the design and operation of the system – depends on how well the system is implemented by the educational administrators.

In summary, taking into account the academic history of the student, reasonable attainable goals must be set for the academic progress expected for students during the course of a year. Since the primary professional responsibility of the teacher/professor is to ensure that students learn, measures of student learning should play a predominant role in teacher/professor evaluations. While it may not be the only criterion, it does mean that teachers/professors should be accountable for *helping* students make measurable progress against the learning standards. Through focused and rigorous observation of classroom practice, examination of student work, and analysis of student performance, it is possible to accurately distinguish effective teaching from ineffective teaching.

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5

Integrity in Teaching

5.1 Introduction

The mandate of any university is to teach – unless the university has been founded and funded as a research university but, even then, the mandate to is perform research activities and, as a result of the research to teach students the key elements of a successful career in research. But teaching, in this modern world, should be focused on the practical (Anonymous, 2003). In any case, the key mandate in any university is education by teaching, which is the fundamental basis that eventually leads to innovation and advancement of knowledge by research. And a university must establish the role of the faculty in teaching by defining the role of the professor (Bauerlein, 2015).

If the point of professors is to teach, should they be allowed to leave the university for travel to a society meeting or for consulting purposes during a semester when they are (supposedly) teaching classes? Another form of faculty misconduct during teaching involves faculty members who procrastinate (for whatever the reason short of a prolonged emergency stay in hospital and recuperation) and return examination results after weeks

or even months (Cahn, 2011) as well as arrive late for class or office hours, and in general show a dereliction of duty in teaching the required subject matter (Braxton and Bayer, 1999; Hamilton, 2002).

A *code of ethics* should be the *benchmark of the acceptable standards of conduct* which members of a university make binding upon themselves. Often, codes of ethics prioritize commonly conflicting principles, which underlie the standards of conduct within an organization by prioritizing the principles in order to give guidance on how a member is to act as a responsible agent of the organization when situations require an element of compromise between principles (Davis and Stark, 2001). However, the differences in the focus of their respective codes of ethics reflect the differences in the challenges that faculty, staff, and students face while attempting to address their respective concerns.

It would be an error of judgment if the university administrators were not perpetually watchful for violations of the code of ethics. To many faculty, staff, and students, a code of ethics may merely be a series of well-meaning statements on a rarely seen and even less frequently and effectively implemented document but, in fact, a code of ethics must truly reflect the virtues of the university. Through a process of achieving consensus, writing a code of ethics becomes an excellent university-defining task and as a result, the effectiveness of the code of ethics is also strengthened.

Accordingly, it follows that the university administration must be held responsible for the activities of the professors and for producing qualified professionals in a multitude of disciplines, but this is not always the case and improvements in the university system and attitude are needed (Curtis, 2014). It is necessary to educate students in the context of meeting the challenges of careers in any part of the modern world. Furthermore, by attracting outstanding faculty members (hopefully who have some understanding of the nonacademic world) the university can benefit from the influx of talent and innovative ideas. In fact, an increase in faculty knowledge and experience and the manner in which it is passed on to the students is absolutely essential for the success of the university in terms of developing new innovations (Speight and Foote, 2011).

Furthermore, the future of any university rests with decisions to select the necessary faculty who will prepare students to make *informed* decisions (and not based on the throw of the dice) that lead to the choice of a career. Among the factors that are important to this decision are: (1) the type of university and the courses offered, (2) teaching practices employed by the faculty members, (3) the abilities of the faculty members, and (4) the credibility of the faculty members. Unfortunately, in some universities (some observers might be inclined to say *in many universities*) gender, race or

ethnicity, parental occupations, and socioeconomic status still remain decisive factors (OTA, 1988a; Leach, 2013; Bilefsky, 2015).

In reality, the greatest influence on the quality of the graduating students is the quality of teaching in the university, which also includes online courses (Lewin, 2013; Curtis, 2014). And the university (through the efforts of the faculty members) must shoulder much of the responsibility for instilling interest in the various courses and assuring that the students obtain a high-quality education. For example, professors who proudly boast (aloud, to anyone who will listen) that they have not changed their course notes for twenty years (when the subject taught is evolving and changing on an annual basis) are not setting the best example of faculty behavior!

The culture of the classroom, which is established by the professor and the culture of the university, also has an impact on whether students cheat. Students might explain their behavior by stating “Everybody does it” and the influence of peer behavior may suggest that academic dishonesty not only is learned from observing the behavior of peers but peer behavior provides support for cheating. In addition, the fact that others are cheating may also suggest that the noncheater in the class feels left at a disadvantage and cheating may come to be viewed as an acceptable way of getting ahead and staying ahead.

Throughout all of this, it must be recognized that the faculty can exert significant influence in the classroom environment and thus influence student behavior. For example, the professor who, literally, has retired on the job and is teaching under pressure (what else should he or she do to fill in the time?) is the causal agent or the initiator of such behavior but the tendency for misconduct was already lurking in the nether regions of the mind of the student. Perhaps the lack of interest and lack of motivational speaking leads to student cheating – there are reasons to indicate that relationships do exist between motivational variables (or lack of motivation) and cheating (Newstead *et al.*, 1996). In fact, there was an occasion when the system was faulted for the role of students in a cheating scandal (Pérez-Peña, 2012; Pérez-Peña and Bidgood, 2012).

A university, through the employment of responsible faculty members, must strive to generate interest and prepare students with the necessary background in the course matter of their choice (OTA, 1988b). Any blame for not achieving such a goal must fall squarely on the shoulders of the universities who employ poor-quality faculty because of the failure of the university (through the faculty) to provide the necessary training programs and to mentor the students in any meaningful way, especially in terms of the degree obtained by the students. Online courses have been criticized as possibly contributing to a lower-quality education (Lewin,

2013) and while there are accusations of worthless degrees for other reasons, many of the accused institutions continue to receive federal funding (Cohen, 2015).

Unfortunately, many universities fall back on a ready-made excuse for poor performance in teaching (and mentoring) by loudly and unashamedly expressing disappointment about the quality of students emerging from the schools into the university system. The converse is also true, in which the schools can blame the universities for failing to educate students. It is time to recognize that *every student has the right to attend university, if he or she is good enough!* Accepting students with poor grades (who may not wish to attend university) because dear old father and mother have the money is not a sufficient reason for entry into the university system.

Thus, each university needs to recognize that the task is to do the best with the available students rather than bemoan the situation and lay blame everywhere but where blame should be laid. Another frequently used expression is: *it is not my fault, it is their/his/her fault* works well within the university system where professors can justify seven ways from Sunday the reason for a certain *action* (or *inaction*) by hiding the excuse in a myriad of meaningless words and sentences – sometimes referred to as *academic pontificating!* There are very few instances where anyone in academia has ever admitted that *it is my fault*. And to make matters even worse, some of the *less-than-acceptable* quality students who seem to be able to pass examinations (without the marks being made public) or their performance being monitored may even move on to become teachers or professors! There is also a report (Olson, 2015) that some universities, dismayed by the poor performance of students in examinations, may be reconsidering the need for examinations and investigation of other forms of grading students, such as two years of apprenticeship rather than two days of tests. The issue then relates to whether or not an apprenticeship can be indicative of the quality of the students as well as their level of knowledge. In fact, there is no substitute for taking examinations, which are a key indicator of the progress and knowledge level of students. They also emphasize the acquisition of factual knowledge of the student leads to the development of but to the extent of creativity (Cahn, 2011).

The training of professors as teachers with the necessary emphasis on teaching methods is often ignored and research activities are often favored (Basken, 2011). The focus in terms of this preference is often the funding that goes with research projects. However, there is also funding associated with teaching – the fees brought in by the students can be represented by the accumulation of a series of simple equations (Chapter 3):

Students = fees
 No students = no fees
 No fees = no revenues
 No revenues = no university
 No university = no faculty or staff

The fact that students registering for the various pre-baccalaureate courses bring in money is often forgotten by those persons who favor research over teaching. And it must not be forgotten that the mandate of the university is to teach students (i.e., those paying the fees, whether it is parents of the student or a scholarship-awarding agency).

Parents who pay fees and a variety of other costs to have their children educated are clients who have a right to expect a reasonable return (quality teaching) for their investment (Stensaker, 2013). In addition, students paying their own fees (as well as the associated costs) have an equal right to be educated and expect a reasonable return (quality teaching) for their investment. In addition, many students take out loans to fulfill their educational dreams, and repayment of the loans can carry over well into professional life (Weingarten, 2013). Furthermore, it is also interesting to note that student debt more rapidly accumulates in universities with the highest executive paid leaders (Lewin, 2014) which points to the need for reevaluation of the salaries of the highest-paid executives in a university compared to the quality of education in the university.

However, in order to maintain a name as a teaching university the quality of teaching within the university and the quality of the baccalaureate graduates must not be allowed to lapse and cause detriment to the name of the university. Generally, the methods of the delivery of knowledge in the classroom at university must be of such a high quality as to impress upon the minds of the students an understanding of, and enthusiasm for, the subject matter of the course. However, if the subject matter comes across to the students as a collection of uninteresting and unintelligible facts which bear no relationship to reality and do not offer enticing prospects for a career, the university has failed as a teaching university (Matthews, 2007).

5.2 The Learning Path

Unfortunately, as has become more common over the past several decades, many beginning baccalaureate-level students are ill-prepared for education by a university. This is a serious error of judgment (or lack of judgment) by the university and may be due, in many cases, to students registering

to attend university without even knowing or even failing to give serious consideration to the areas of study as well as where the study areas will lead in terms of their future. The idea of students attending a university for a year *to find themselves* is an attitude that seemed to evolve during the late 1960s and early 1970s and continued since then – obviously with some valid or invalid reasons that are not up for discussion or judgment here but certainly are the cause of wonderment and perhaps dismay.

Moreover, professors who teach classes need to keep abreast of recent developments in the respective disciplines related to the classes taught in the interest of staying current for their students as well as for their own benefit. *Switching off* any mental processes once the faculty member has left the classroom is not the way to keep up to date in knowledge and teaching methods. In fact, teaching professors should welcome the opportunity to expand their own level of knowledge, which can then be useful in imparting knowledge to the students. Many professional disciplines, though societies and associations, attempt to provide opportunities for personal enrichment, for increasing professional skills and knowledge, and for interacting with others in the field (Speight, 2015).

5.2.1 Degree Courses

Before exiting the high school years and before entering the university, students should be giving consideration to finalizing their career goals and choosing the most appropriate classes to move towards this goal. Attending a broad variety of classes outside of the primary discipline that only *might* be useful at some future time may be wishful thinking and is surely a waste of time and funds – providing students have been able to express their wishes and have been advised and mentored accordingly. This is where the relevant teaching faculty at the high school should have played an extremely important role in the lives and career goals of students. It is also the time for the university faculty members to move into the life of the student and play an equally important (if not, an even more important) role in advising students about possible career goals and the necessity of choosing the appropriate courses.

Briefly as a recap (Chapter 1), the *faculty* (which may also be referred to as the *academic staff*) is a division within a university comprising one subject area, or a number of related subject areas. In the United States, such divisions are generally referred to as *colleges* (such as the College of Arts, the College of Sciences, the College of Engineering). Whatever the title, the basic tenet of any university should be that *the faculty members have been chosen for their individual intellectual excellence and ability to pass on knowledge to the students*. It is to be hoped that in the selection process

there was also the requirement (which was not ignored) of the dedication-to-teaching component as well as the commitment of each aspiring faculty member to help develop the potential of the students.

Typically, some faculty members at a university are well known for achievements in their research fields but not always for their ability to teach or their dedication to teaching (Chapter 3). There may (should) also be those faculty members whose dedication to teaching outweighs their dedication to research activities. It is not always possible (in fact, it may be impossible) to find such preferences in a printed prospectus, and meaningful information may only be acquired by a visit to the campus and/or by conversations with current and former students. The university student-faculty ratio (specifically in any of the university colleges as well as in the various departments) should be evident from a prospectus and should be sufficiently low to reflect the commitment of the university to providing students with excellent professor-student contact. In an ideal world the name of the professor should be given in the prospectus as well as the courses taught by the professor but, in the real world, this information is not always made available by the university until the commencement of classes at the beginning of the semester.

At the baccalaureate level, the professor must have competence in a wide range of knowledge and skills. The ideal professor must understand the practical aspects of teaching, such as: (1) how to set up a syllabus, (2) how to evaluate oral and written work, (3) how to grade fairly, and (4) how to set the pass-fail level and to stay with these principles even when there are more course/exam fail marks than anticipated (Speight, 2015). More important, the professor must have a broad enough background (and should also be sufficiently well educated) to be able to teach at all levels within his or her area of scholarship and must be willing to expand that background by being alert to new developments in scholarship and by developing (and adding) new course content to meet the needs of the students.

Professors will (should) know how to select appropriate textbooks (not necessarily—indeed, preferably not—books written by them, which may carry the hidden innuendo *buy my book and pass*) and how to teach all levels of the subject area. It is a practice that some classes are not allowed to adopt texts written by the professor teaching that class because the professor earns royalties on the required purchases. This removes the stigma or perception of a conflict of interest. However, it may be that the book chosen for the class (written or not by the professor teaching the class) is the most appropriate book for the class (Cahn, 2011). Furthermore, it is of increasing importance that professors be skilled in the available technology that will help improve their teaching performance, such as video-based instruction,

computer programs, and the use of the Internet – remembering that many students will be following the classroom teaching methods using the now readily available tablet.

In addition, the professor must have the ability to communicate effectively with the students as well as with departmental colleagues and peers in other departments. Also, there are increasing pressures for university professors not to parrot facts without understanding the background or derivation of the facts. Unfortunately, the pressure (not to parrot equations or facts) is largely ignored by the university where the faculty members, or at least some of them, are able to attract large research grants. University students are often in a situation where the professor stands with his or her back to the class and merely writes equations on the boards. This is not meaningful teaching by the professor, it is simply *here is the stuff, learn it, so I can get back to whatever I was doing before this class commenced*.

Obviously, a challenge facing administrators at universities with a strong focus on research (if the university administrators will accept the challenge) is to find a balance between the fundamental activities of teaching and research (Matthews, 2007; Basken, 2011). Within the various disciplines, attempting to find the flexibility to blend the priorities of teaching and research has been (and continues to be) a perennial, seemingly unsolvable problem. The *standing* or *reputation* of a university directly related to the research productivity of the faculty, and the competition for grants, has led many universities to place increased emphasis on research at the expense of teaching. Unfortunately, deemphasizing teaching in favor of research which, in turn, may be deemphasized in favor of sports programs (Chapter 10) is not the pathway to the collection of knowledge for learning.

An additional challenge for administrators of the predominantly research-oriented university is the need to address complaints concerning performance of faculty members during undergraduate teaching. The faculty member who (1) does not teach, (2) does not attend meetings, and (3) rarely appears on campus is not only an example of unethical behavior towards the students but fails to display any form of loyalty to the student – the paying clients (Chapter 1) – or to the university, which is paid by the client (the student) to provide a service (education).

Not receiving any assignments from the department head because of his or her actions (or lack of actions) or because the faculty member is off-campus doing private consulting and/or travel during a semester, or because of complaints by students is surely a reason for the department head or dean to build up a *paper trail* with the goal of changing the attitude of the offending faculty member and/or terminating that person's employment. It is always a pity (even a disgrace) that the respective board of

trustees (board of regents, or whatever the name of the governing body of the university) do not take up such issues and resolve them as an example to all of the errant faculty who may choose to follow a path of inactivity or personal consulting. Withholding (legally) a pay cheque or telling the errant professor to find a (paying) job in the outside world would be a wonderful stimulus and wake-up call to many inactive faculty members. This would require good governance by the board of trustees (board of regents), through the university president, which is not a matter of *some action is better than no action but a matter of taking the correct action* (Salmi and Helms, 2013). On the other hand, if the board of trustees makes a wrong decision it (individually and collectively) should be held accountable for that erroneous decision rather than being allowed to withdraw from the decision-making process.

5.2.2 Graduate Degree Courses

A graduate degree is conferred upon a graduate degree candidate after a period of research in a graduate school, which is part of a university – typically, the number of years spent in such research is unspecified at the beginning of the research period. Producing original research is a significant component of graduate studies, including the writing and defense of a *thesis* (also called a *dissertation*) (Chapter 4).

A *graduate school* (a North American term) is that part of a university that awards advanced academic degrees (such as master's degrees and doctoral degrees) with the general requirement that students must have earned a previous undergraduate (baccalaureate) degree. A distinction is typically made between graduate schools (where courses of study do not provide training for a particular profession) and a professional school, which offers specialized advanced degrees in professional fields such as medicine, business, law, or the ministry.

The graduate degree experience takes the form of laboratory research (sometimes course-work is required) and often (as required by department/university policies or by the professor/mentor) teaching assistantships. This serves the dual purposes of providing training in research – at the same time assisting faculty in their research and teaching and, in the case of teaching assistantships (Chapter 3), teaching responsibilities. Furthermore, just as the baccalaureate student needs a mentor, the graduate student also needs a mentor – perhaps even more so because of the more complex nature of the work and the associated workload. There is also the often-ignored issue of laboratory safety, in which the mentor should ensure that the research student or graduate student has received

the necessary training in laboratory safety and protocols, and student mentoring, and that the university has provided a safe work environment (Broadwith, 2012; Kemsley and Torrice, 2012; Torrice and Kemsley, 2012; Evans, 2014; Kemsley, 2014a, 2014b; Torrice and Kemsley, 2014; Trager, 2011, 2013, 2014, 2015, 2016).

Thus, upon completion of the baccalaureate degree, the educational system offers the student two further degree goals: (1) the master's degree and (2) the doctoral degree. Both degrees are awarded following a term of *apprenticeship* (study and hands-on laboratory or field work under a supervisor/mentor) in graduate school, but there is a considerable difference between the degrees.

Briefly (Chapter 4), the term *apprentice* refers to (1) a person (typically, a young person) bound by legal agreement to work for another for a specific amount of time in return for instruction in a trade, art, or business or (2) a person who is learning a trade or occupation, especially as a member of a labor union, or (3) a beginner; a learner. The term is rarely (if at all) used in academia but that is essentially the nature of employment by the graduate student: a young person who *works for* a professor in return for instruction in a specific area of scholarship. This requires that the student experience the advanced specialized learning and hands-on apprenticeship of graduate study.

5.2.2.1 *The Master's Degree*

Apprentice or not, the short course to a post-baccalaureate degree is the master's degree, usually one or two years of study, frequently in the classroom. The specialized knowledge of the recipient of the master's degree should bring enhanced earning power and professional responsibility. The doctorate requires a longer-term commitment, which is a time period of (preferably) four to five years (hopefully, not more) of low-paid apprenticeship and which typically gives the survivor full professional standing. However, there are those professors who are quite adamant that to allow a doctoral candidate to leave after four to five years of work is unacceptable because the candidate is *not ready* (whatever *not ready* means) and a more prolonged period (seven to ten years) is necessary for completion of the work.

A master's degree may entail coursework for two years. Some programs for the master's degree require submission of a research thesis, others do not. In the latter case, the master's degree is not so much a terminal degree as a recognition of the coursework (really, an extension of more advanced classwork than baccalaureate coursework) and completion of qualifying examinations.

5.2.2.2 *The Doctorate*

The doctorate is the basic professional degree in most areas of scholarship and is appropriate for most students who desire research careers, including academic research and industrial research (Chapter 4). If students are ready to make the leap to graduate school, a pre-emptive assessment of the available campuses is necessary (NRC, 2003). In addition, personal meetings with professionals and students can bring a feel for the profession and are an excellent basis for choosing an appropriate learning environment. A doctoral study usually takes four to five years (sometimes more) – assuming the student does *not* already have a relevant master's degree. The first year may be partially spent taking advanced classes, and preparing for oral and written qualifying examinations that most universities require new graduate students to pass before they can continue their studies.

The choice of a research project and thesis advisor depends on a constellation of factors: (1) positions available in various laboratories, (2) the student's interest, (3) funding opportunities, (4) a mentor's perceptions of what constitutes a significant research problem (the potential thesis topic), and (5) luck (timing and serendipity). Postdoctoral students should be those who are doing laboratory research (nearly) full time after the first year. Moreover, the graduate student is not only a faculty member in training but also a productive researcher. The uncertainty of basic research means that a project *must* (sooner or later) produce meaningful results – sometimes the initial stages of the program is christened *search* rather than *research* – and that research projects are subject to change during the course of thesis research. Above all, to earn a doctorate, the graduate student must (1) make a significant contribution to knowledge in his or her field of research, (2) complete a written thesis, and (3) pass an oral examination.

The typical doctoral program constitutes a two-part system. The first part consists of up to approximately two years of course work while the second part focuses on a doctoral dissertation based on original laboratory (or field) research that might take two or three years or more to complete. The dissertation, which serves as a demonstration of ability of the candidate to carry out independent research, is the focus of the doctoral program. When completed, the thesis must contain a detailed description of the work performed by the candidate in the form of (1) the actual research work and the results, (2) the relevance of the research to previous work, and (3) the importance of the results in extending an understanding of the area of scholarship. However, this format is not absolute in all universities and much variation is seen in the content of doctoral theses.

A properly structured requirement for the demonstrated ability to perform independent research continues to be the most effective means to prepare motivated people for research careers. However, original research demands high ethical standards, perseverance, and a firsthand understanding of evidence, controls, and problem solving, all of which have value in a wide array of professional careers. In the course of the research, doctoral candidates perform much of the work of faculty research projects and also take on (by choice or as a result of *various forms of gentle persuasion*) some of the teaching duties at the university. Therefore, universities and individual professors have incentives to accept as many doctoral (and postdoctoral) researchers as they can support on research grants, teaching assistantships, and other sources of funding. This system is advantageous for it brings motivated students, outside funding, and the prestige of original research programs to the universities.

Over the last forty years, the time that it takes for graduate students to complete their doctoral programs, called the *registered time to degree* (RTTD), has increased steadily. The median registered time from start to completion of the work, for example, towards engineering doctorates increased from five years in 1962 to six years in 1992. In 1992, it was almost seven years for doctorates in the life sciences, six to seven years in the physical sciences, and seven to eight years for the social sciences – and these periods or *terms of service* numbers have remained almost constant with only a slight tendency to increase (Kuther, 2013). One finding, reported for psychology, is that the time to degree is longer when there are many students per faculty member or many students overall (Striker, 1994). The Office of Scientific and Engineering Personnel (National Research Council) in 1990 tested a five-variable model over eleven fields of science and could find no causal effects to explain the trend (Tuckman et al., 1990; Striker, 1994).

The lengthening of the period of graduate work is accompanied by a second trend. It has become more common for new doctoral graduates in many fields to enter a period of postdoctoral study, to work in temporary research positions, and to take a one-year faculty job before finding a tenure-track or other potentially permanent career-track position. However, *registered time* is the amount of time actually enrolled in graduate school – thus, it might be less than the time elapsed from entry into graduate school and completion of the doctoral work. It is significant that spending relatively more time in doctoral or postdoctoral activities might not be the most effective way to use the talents of the young doctorates.

Some researchers explain the increase in time to degree by pointing to the increasing complexity and quantity of knowledge required for

expertise in a given field. Another possible explanation is the tendency of some faculty to extend the time that the students spend on research projects beyond what is necessary to meet appropriate requirements for a dissertation. In addition, the lack of financial support during the dissertation phase substantially extends time to degree, as do difficulties in topic selection, unrealistic expectations for the amount of work that can be completed in a dissertation and inadequate guidance by advisers. Still other reasons are (1) poor undergraduate preparation, (2) student reluctance to leave the congenial life of academia, and (3) postponement of graduation in a job market where employment is uncertain. There is also the possibility that many professors consider (in a distinctly uncomplimentary manner) that the graduate student is a source of cheap labor to provide research data for the furtherance of the publication career of the professor.

At the graduate level, the *choice of a research adviser is one of the most important decisions a student will make*. The mentor can encourage students to shop around carefully, to talk to present and former advisees, and to gain personal impressions through face-to-face interviews. Students should also be advised to examine the performance of possible mentors: (1) publication record, (2) financial-support base, (3) reputation, (4) success of recent graduates, (5) recognition of student accomplishments such as by co-authorship, (6) laboratory organization, and, most important, (7) willingness to spend time with students. Much of this information can be learned directly from the potential mentor and from the mentor's current and past students.

Finally, a distinguishing aspect of the doctoral degree is the necessity of the degree for employment in academia. Academia is a nontraditional market in its use of tenure and its emphasis on externally funded research, both of which (hopefully) provide stability and insulation from some, though certainly not all, economic incentives that drive the typical other labor markets. Many doctoral graduates who plan an academic career also accept a temporary postdoctoral research appointment following their degree, which provides a valuable period of time for the new doctoral graduates to immerse themselves in research, free from teaching responsibilities, so that they can prove themselves as full-fledged independent researchers.

Perhaps more truthfully and to the point, the post-doctoral period is also a labor market buffer – it is a holding tank (or breathing space) for young researchers during a tight market with few tenure-track academic posts and few jobs in industry but the availability of research money for doctoral programs.

5.3 The Impact of the Professor

Throughout the university life of a student (whether it is the teaching aspect or the research aspect), the behavior, demeanor, and professionalism of the professors will have a major impact of the memories that students take with them into the post-university workplace, be it in academia, government, or industry (Chapter 4). For example, undergraduate (baccalaureate) students are more likely to major in a field if they have an inspiring and caring faculty member in their introduction to the field. And they are equally likely to write off a field based on a single negative experience with a professor.

While some pundits believe that the choice of major area of scholarship is determined by other variable factors – such as the desire for a financially lucrative career – factors such as teaching quality and the behaviors of faculty members (in and out of the classroom) also play a major, sometimes a deciding, role in the choice of a major area of scholarship by the student. Thus, faculty members can influence (positively or negatively) student choice of a field of study. The faculty who are sometimes called the *old grumps* (who are not always old and not always male) can alienate students from entire bodies of knowledge.

Thus, it is extremely important for department chairs (department heads) and deans to recognize who the more skilled teachers are so they can use them to draw students into the choice of specific subject areas. Students may make favorable or unfavorable judgments not just of the professors or their discipline but entire branches of disciplines – for example, a poor professor in any field may lead students to show a lack of preference for any branch of that area of scholarship. Indeed, the caliber and demeanor of the professor in the classroom and the ability of the professor to mentor students is of the utmost importance.

In some universities, there are increasing pressures for university professors to shift the emphasis toward teaching from research and to assist the students in developing critical thinking skills. Merely educating students to parrot facts without understanding the background or derivation of the facts is to be deplored. Understanding the reasons for the derivation and use of a certain equation is more educational than learning the equation by heart without understanding the whys and wherefores. Unfortunately, this pressure (not to parrot equations or facts) is largely ignored by the university where the faculty members (at least some of the faculty members) are able to attract large research grants. In addition, if the number of positions for permanent faculty has decreased in such a university, senior citizen faculty members may be able to continue in their

position past the retirement age, and more part-time faculty members and temporary faculty members (adjunct professors, visiting professors) need to be recruited. All of these trends affect the ability of the university to adhere to the original *true mandate* of the university, which is to teach and ensure that the university can produce baccalaureate graduates with a full and meaningful education.

Obviously, a challenge facing universities with a strong focus on research is to find a balance between the fundamental activities of teaching and research (Matthews, 2007). Within the various disciplines, attempting to find the flexibility to blend the priorities of teaching and research has been (and continues to be) a perennial and seemingly unsolvable problem. The *standing or reputation* of a university directly relates to the research productivity of the faculty, and the competition for grants has led many institutions to place increased emphasis on research at the expense of teaching. Sadly, deemphasizing teaching in favor of research which, in turn may be deemphasized in favor of sports programs (Chapter 4) is not the pathway to the collection of knowledge for learning.

While many faculty members may welcome the move toward deemphasizing teaching in favor of research, the essential mandate of the university – teaching – has been lost. In many universities that are or have been heavily oriented to research to the detriment of teaching, research productivity has been given more weight than teaching effectiveness when deciding tenure or promotion. Students may well shake their heads in wonderment when they find that the quality of teaching is not what they were led to expect during the acclimatization (indoctrination or sales) process.

An additional challenge for the predominantly research-oriented university is the need to address complaints concerning performance of faculty during undergraduate teaching. The faculty member who (1) does not teach, (2) does not attend meetings, and (3) rarely appears on campus is not only an example of unethical behavior towards the students but fails to display any form of loyalty to the student – the paying clients – or to the university, which is the organization paid by the client to provide a service to the clients (teaching the students). Not receiving any assignments from the department head because of his/her actions (or lack of actions) or because s/he (the faculty member is off-campus doing private consulting and/or travel during a semester, or because of complaints by the students is surely a reason to build up a *paper trail* with the goal of changing the attitude of the faculty members and/or terminating his/her *employment*. It is always a pity (even a disgrace) that the respective Board of Trustees (Board of Regents, or whatever the name of the governing body of the university) do not take up such issues and resolve them as an example to all of the

errant faculty who may choose to follow a path of inactivity or personal consulting. Withholding (legally) a pay cheque or telling the errant professor to find a (paying) job in the outside world can be wonderful stimulus and wake-up call to many inactive faculty members. It is not a matter of some action is better than no action but a matter of taking the correct action and exhibiting good governance by the Board of Trustees (Board of Regents) (Salmi and Helms, 2013). Furthermore, if the Board of Trustees makes a wrong decision they (individually and collectively) should be held accountable for that erroneous decision rather than being allowed to withdraw from the decision-making process.

While on the issue of renegade, nonperforming professors, during the formative baccalaureate years the students should be introduced (by one or more of the faculty) during lectures to the concept of teamwork – the concept of people working together cooperatively as a team in order to accomplish team goals and objectives. This must be viewed as a cooperative or a coordinated effort on the part of a group of persons acting together as a team or in the interests of a common or higher cause. The faculty member – often a senior professor sheltering under the umbrella of tenure – doing his or her own thing and not adhering to departmental, collegiate, or university goals and policies obviously does not set a good example of teamwork to the student.

5.4 Professionalism

In simple terms, a *profession* is any occupation that provides a means by which a person with a professional qualification may earn a living. In the sense intended here, and without any disrespect to persons working in trades that are not included in the definition of *profession*, are those forms of work involving advanced educational expertise, self-regulation, and ethical behavior. Furthermore, professionals should play a major role in setting standards for admission to the profession by (1) drafting codes of ethics, (2) enforcing standards of conduct, and (3) representing the profession to others. Professionals should maintain high ethical standards and so bring to their work the recognition traditionally associated with the word *profession* (Lammas and Garcia, 2009; Olgiati, 2010). In spite of the varied definition of the word *professionalism*, there is considerable agreement about defining the characteristic features of a profession. Usually, a professional is a member of a *professional association*, has received recognized training, licensing, and observes a code of ethics. Originally, any regulation of a profession was self-regulation through a professional association.

Besides regulating access to a profession, professional bodies may set examinations of competence and enforce adherence to an ethical code.

Typically, individuals are required by law (sometimes by peer pressure) to be qualified by a local professional body before they are permitted to practice in that profession. In some countries, individuals may not be required by law (or peer pressure) to be qualified by a professional association in order to practice the profession. In such cases, qualification by the professional association is still considered to be a prerequisite to practice as most employers and clients stipulate that the individual must hold such qualifications in order to be hired.

However, professional associations tend to be autonomous, which means they have a high degree of control of their own affairs, and members of the association usually have the right to exercise their individual professional judgment. In such cases, the faculty members may find that by membership in a professional association, they have a measure of protection against liability for professional negligence, but there is no professional association that offers protection to the members who practice the profession in a negligent manner – i.e., there is no form of protection—although there should be— against gross negligence by any member of a professional association.

5.5 Morals and Values

Ethics is one of the pillars of teaching and research (Whitbeck, 1995; Speight and Foote, 2011). It is definitely one of the criteria for evaluating the quality of university education and, despite the range of factors that contribute to ethical or unethical conduct, the central determinants are the personal thoughts and behavior of the faculty, staff, and students, which determines the meaning that an individual attach to his or her position with respect to ethics. Furthermore, the ethical aspects of scientific and engineering research revolve around the responses to (1) the ethically proper way to collect, analyze and report all aspects of a study, and (2) the researcher-respondents' interactions, which is especially true in the social sciences, where surveys of human actions and interactions are accumulated and interpreted (Kitchener and Kitchener, 2009).

A main objective promoting morals and values education for scientists and engineers is to encourage universities to implement academic and other activities related to teaching, research and extension programs embracing values and culture such as: seminars, conferences, workshops and orientation programs for both science and engineering lecturers and

their students. In addition, universities can also produce materials related to morals and values education.

Thus, it is necessary for universities to promote morals and values within the various curricula. However, universities themselves are rife with dishonesty and misconduct (Sykes, 1988) and in many universities students admit to having engaged in academic dishonesty at least once during their college career (McCabe and Trevino, 1993). Academic dishonesty among students takes several forms (Chapter 1) (Martin and Schinzinger, 2005) but any form of misconduct is not specific to universities (Speight and Foote, 2011). In fact, by the time a student reaches the ranks of university students his or her propensity for misconduct may be set. By the time the student enters the university system the trend for misconduct may have been initiated and even set. In spite of the care and attention supposedly showered on students in school, a recent survey showed that cheating in school continues to be rampant. In a survey of thirty thousand students across the United States (Josephson Institute, 2009), the results showed that young people are almost unanimous in saying that ethics and character are important on both a personal level and in business, but they express very cynical attitudes about whether a person can be ethical and succeed. Moreover, an alarming number of students admitted to recently lying, cheating, and stealing. But it is not only the students who are involved in stealing. There was a report of a university dean who was arrested and charged with stealing more than one million dollars from the university, taking \$25,000 from a Saudi prince to organize academic conferences that never happened, and using foreign scholarship students as her personal servants. This case was never resolved because of the unfortunate death of the dean (Rashbaum *et al.*, 2012; Secret and Rashbaum, 2012).

In fact, misconduct in the form of cheating is a phenomenon in middle schools, high schools, and colleges. It includes fraudulently raising student scores on crucial examination or keeping low-performing students out of classrooms and preventing many from showing up for tests (Cizek, 1999; Evans and Craig, 1990a, 1990b; Leveque and Walker, 1970; Schab, 1991; Speight and Foote, 2011; Fernandez, 2012; Yee, 2012). There are, however, reports that student cheating during the high school years appears to be on the decline (Payne, 2012). On another aspect of high school student testing, there has also been a report of parents objecting to high-stakes exams being used to rate the teachers rather than the students (Sangha, 2012).

In 1987, the California Department of Education labeled cheating an *epidemic* after finding that 75 percent of secondary school students reported that they had at some time cheated on school work (Schab, 1991). In addition, from the early 1960s through the 1990s, cheating among students has

increased (Baird, 1980; Schab, 1991) – as if accompanying the tendency for parents to litigate against the school or university when John Junior or Jane Junior is reprimanded for any unsocial or illegal activity. Indeed, university students often report that they cheated more in high school than in college (Baird, 1980). There is also evidence that cheating is more widespread in high school than during middle school (Brandes, 1986; Evans and Craig, 1990b). This is unacceptable at any level of education, whether it be at the pre-high school level, the high school level, or university level. No matter how well the misconduct is justified by well-prepared reasons or excuses, there is no way that it can be rationalized.

Dishonesty in any form, let alone academic dishonesty, is a serious offense. In the world of academia, dishonesty violates all procedures by giving some students an unfair advantage. But it does not stop with the students. Using an unnamed example (from my own experience), there is the professor (the program professor) who develops and organizes, say, an MSc-by-course program. The program professor monitors the progress of the students and, when the final marks are available, decides that some of the students who failed the course should have received a pass mark (the reasons for such a decision are unknown) and the program professor takes it upon himself to *adjust* the marks so that a *fail* mark for the course becomes a *pass* mark. Such actions violate the trust that the program professor has been given and renders dishonest any achievement or recognition, since it is based on cheating.

The culture of honesty must be evident in all universities. Honor codes (also called *codes of ethics*), which describe standards of behavior and punitive actions for those who do not follow the honor code, should be sufficient, if enforced, to curb, for example, cheating (Martin and Schinzinger, 2005). Opportunities to cheat should be mitigated and prevented with firm and disciplinary procedures that are *enforced* and applied to those caught cheating, even if it means expulsion from the university. Some universities try to categorize the type of cheating and modify expulsion with a period of suspension from classes. As fair as it may seem to give the miscreant a second chance, many cheaters started their unethical behavior in high school or even in junior high school and by the time the student attends university the way of educational life is set for that student, and cheating continues (Speight and Foote, 2011).

Academic integrity is much more important than simply guaranteeing that students adhere to rules of test taking and plagiarism avoidance and is linked inextricably to transmitting general ethical values to students (Chapter 1) (Bornstein, 2007). Frequently students perceive what faculty and college administrators say about academic integrity and plagiarism as

unrealistic and generally unnecessary moralizing. This cynical view indicates that cheating is an acceptable way of university life (Callahan, 2004). The ethical scandals that plague academia reflect the behavior of many of the professors, and universities must strive to show that there is great concern that students do not cheat on exams or engage in plagiarism.

A university is a community of students and teachers committed to the pursuit of learning, accumulation of knowledge, the transmission of this knowledge to succeeding generations, and the development of new knowledge. Hence, good students must be lifelong learners. A university combines teaching with research and discovery as well as service to the community.

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6

Integrity in Research

6.1 Introduction

Integrity and trust are the hallmarks of the research process. Being an objective researcher is critical to this process because communicating research data to the academic faculty is central to keeping research alive and it is also the principal manner by which faculty members make and maintain their reputations, get jobs and promotions, and obtain sustained support for research programs.

Research programs are used to transform theories into practice and, simultaneous with this development, there has been some degree of diffusion as researchers explore new lines of enquiry as they attempt to make their contributions to the literature (Chapter 4, Chapter 7) (Smith, 2008). Furthermore, misconduct and other ethical problems in university-based research have been widely discussed and varying opinions are voiced with the result that the significance of such impropriety lies somewhere between minimal and earth-shattering (Steneck, 1984; Swazey *et al.*, 1993; Kemsley, 2008; Broder, 2009; Wade, 2012; Bhattacharjee, 2013). Misconduct in other, nonuniversity laboratories has also been reported (Hogue, 2000; Trager, 2012; Martin, 2013; Stoye, 2014; Bidgood, 2015;

Trager, 2015; Fountain, 2016; Larimer, 2016) but in keeping with the subject matter of this text, the focus will remain on university misconduct.

Unfortunately, *unethical behavior* within universities is alive and continues to plague the minds of those in academia who see such behavior as counterproductive as well as the general public who may become aware of such behavior when it is reported in the popular press (Chapter 1, Chapter 2) (Fleddermann, 2008). There is also the need to determine if *ethics* is alive. It is! But it is the minority (at least we hope a minority) of researchers who are the miscreants and give ethics a bad name because of their flaunting or bending of the truth or, for the want of a better word (if there is a better word) *cheating*.

Furthermore, much of the debate about misconduct has given other researchers and the public a negative impression of academic research which, unfortunately, continues. The new media are often criticized for overemphasizing the issue of misconduct and unethical behavior in academic research, thereby minimizing the level of integrity in research. And yet, if the news media did not report such incidents, they might pass relatively unnoticed *like two ships in the night* with a mere *slap on the wrist* as a means of reprimand and/or punishment for the miscreants.

In academia, as in any other teaching or research-oriented organization, ethical issues should permeate every stage of the research process from the provision of a title to the study of the analysis of the data and reproducibility of the data (Reagan, 1971; NAS, 1992; Rovner, 2007; Bohannon, 2015; Nosek, 2015). There is a range of questions from the disciplines that involve fields of qualitative and quantitative research, especially when questions arise relating to the reproducibility of the data (Carey, 2016). Nevertheless, in research (whatever the discipline) knowledge must be based on observable (and reproducible) phenomena as well as being experimentally verifiable (as a test of validity) by other research personnel working under exactly the *same* (laboratory or field) conditions.

Research of any subject is built on a foundation of trust insofar as all data produced by the research should be an honest and accurate reflection of the outcome of the research and be reproducible. Researchers equally trust that their colleagues have gathered data carefully, have used appropriate analytic and statistical techniques, have reported their results accurately, and have treated the work of other researchers with respect. When this trust is misplaced, integrity is called into question (Branscomb, 1985). At this stage, most universities have a procedure for investigating whether or not integrity has been an issue.

Furthermore, any faculty member (or researcher) who is requested to be a coauthor should ignore the data in next-to-final draft before publication

(after the data have been *massaged* to look presentable) and check the original data. If the professional standards of science are violated, researchers are not just personally affronted; they feel that the base of their profession has been undermined. This would impact the relationship between the university and society (Bertozzi, 2009).

Within the academic research community (or for that matter, in any research community), standards must be applied, which refers to the application of ethical values in the context of research. Examples are openness in sharing research materials, fairness in reviewing grant proposals, respect for one's colleagues and students, and honesty in reporting research results. The most serious violations of standards have come to be known as *scientific misconduct*. The U.S. government defines misconduct as *fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results* (Jayaraman, 2008; Bertozzi, 2009) and this should also include "*peddling hype or myths to the media*" (Roy, 1999) which can lead to fame and/or notoriety as well as additional funding for future programs. Furthermore, all research-oriented institutions (including the universities) that receive federal funds must have policies and procedures in place to investigate and report research misconduct, and anyone who is aware of a potential act of misconduct must follow these policies and procedures.

Some faculty members believe that the few highly publicized cases of research misconduct – generally manifested as falsification, fabrication, or plagiarism – are just the tip of the iceberg. Others suggest that the relatively few known cases indicate that the overall incidence of misconduct is low. However, these cases generally don't cover publication disputes, unless they involve plagiarism (Ritter, 2001). Nevertheless, anyone who violates ethical standards, whether it is through fabrication, falsification, plagiarism or something else, is said to engage in *questionable research practices*. Universities (in the persona of university management and administrators) must act to discourage questionable research practices through a broad range of formal and informal methods. University management and administrators must also accept responsibility for determining which questionable research practices are serious enough to warrant penalties.

Therefore, integrity in research is the application of truth to all activities involved in research. Furthermore, research integrity or research ethics has many facets, of which examples are (1) defining research misconduct, (2) conducting and reporting experiments, (3) protecting research subjects, (4) giving and claiming credit, and, last but by no means least, (5) reporting misconduct (Whitbeck, 1998). In fact, "*integrity in research is about promoting excellence (high quality) in these activities, and this*

positive emphasis on excellence should be kept paramount in thinking about honesty in research" (Martin and Schinzinger, 2005).

There have been attempts to define misconduct in research using both wider and narrower definitions, developed in specific contexts, and for different purposes. For example, if the purpose is to punish wrongdoers, a narrow and legalistic definition is likely to be favored. On the other hand, if the purpose of the definition is to assure high-quality research, in all its dimensions, a wider definition might be adopted which will typically emphasize honesty in conducting and reporting experiments, while also including theft, other misuses of research funds, and sexual harassment among researchers (Martin and Schinzinger, 2005). However, whichever definition is applied, the unethical behavior must not be hidden by verbiage and the miscreants allowed to get away with a slap-on-the-wrist that never sees the light of day. Misconduct is misconduct and it is preferable that any form of misconduct be recognized, whatever forms the definition may take.

Thus, the application of ethics to research activities seeks to ensure that research is conducted with acceptable standards of morality in order to preserve integrity, validity, and reliability of the study (Ryan, 1995; Fleddermann, 2008). While standards for conducting research zero in on the study itself, ethical issues emphasize people. Such issues include concerns about fraud, misconduct, harm to subjects, infringement of rights, conflicts of interest, and misrepresentation of self and others – even the perception of conflict can cause issues of misconduct to arise (Altman, 1997; Hernon and Calvert, 1997; Hogue, 2001; Hamilton, 2002; Armstrong and Burton, 2009; Marcus and Oransky, 2014) – in addition to manipulation of the data (Chapter 8) (Huff, 1954; Gibilisco, 2004). In fact, the most common conflicts of interest are those involving scientific discoveries funded by government grants, licensing of commercial technologies, and outside work by faculty, for example as consultants to industry (Schulz, 2000).

Even though many universities have adopted codes of conduct for research (which are, or should be, constantly under review) performed by staff, consultants, and contactors (Heilprin, 2003; Hileman, 2005), this may not be sufficient to curb the tide of misconduct or even the perception of misconduct because of the general lack of (at least reported) disciplinary actions instituted against any of the perpetrators of misconduct. Recall (Chapter 2) that Caesar (Caius Julius Caesar, the Roman dictator) divorced his second wife Pompeia not because she had done anything wrong but because there was the perception that she had (or might) do something wrong. This gave rise to an adage, *Caesar's wife must be above suspicion*. Thus, it is essential that faculty, staff, and students must be above suspicion in all of their activities.

However, a deep commitment to integrity in research is best achieved by providing sound training in research-related practices and the ethical conduct of all types of research and by creating academic environments that reinforce the high standards addressed in the relevant code of ethics. Ideally, all new faculty members and staff members should be subject to this educational process which should continue through the most senior career stages. No one, no matter how senior the appointment, should be allowed to ignore the education process and, if she or she fails to attend the relevant educational classes (workshops) this should be a topic of conversation in the annual performance review, if the university has such a review process; if not, such a process should be established forthwith. In addition, all faculty members and staff members should bear responsibility for the integrity of their actions as well as the legitimacy of research practices and the investigation and response to cases of alleged research misconduct. Furthermore, the university must accept responsibility for disciplining any errant researchers, and the finding of scientific misconduct by the university can also call into question other publications by offending authors (Ryan, 1995; Anonymous, 2014b).

For the individual researcher, integrity embodies a range of good research practice and conduct (NRCNA, 2002). This includes: (1) intellectual honesty in proposing, performing, and reporting research, (2) accuracy in representing contributions to research proposals and reports, (3) fairness in peer review, (4) collegiality in scientific interactions, including communications and sharing of resources, (5) transparency in conflicts of interest or potential conflicts of interest, (6) protection of human subjects in the conduct of research, (7) humane care of animals in the conduct of research, and (8) adherence to the mutual responsibilities between investigators and their research participants.

The reliability of the research data derives partly from the interactions among faculty on an open and trustworthy basis. By engaging in such social interactions at research meetings and other forums where knowledge is presented and discussed, the researchers must call on their technical understanding of the project and convince a *collection* (or *community* if the work is published in a technical journal) of peers of the correctness of their concepts, which requires a fine understanding of the methods, techniques, and conventions of research (Cassell, 1982). However, and unfortunately, it is at this stage that many researchers decide that the experimental design was not incorrect or the failed hypothesis was not incorrect and yet they remain adamant in explaining the experimental data even though the data are based on faulty research practices, including a faulty series of experiments or, in the case of the social sciences) a faulty section of a population.

If the conduct of research is not monitored closely by academic colleagues, a situation exists where *bending of the truth* (it may not be called *cheating* but that is what it is) and the empirical objectivity as well as the technical integrity of the researchers has been forfeit (Chapter 2). For example, there has been the case of an attorney who was convicted of criminal conduct for sending e-mails impersonating at least one prominent scholar who supposedly agreed with the minority views of his father (a University of Chicago scholar) about the Dead Sea Scrolls (Leland, 2013; Shanks, 2014). There are also cases of scientific misconduct not just by data manipulation but also by downright fraudulent experimentation and cheating (Chapter 2, Chapter 7, Chapter 8) (Perks, 2015).

For example, the experiment that failed becomes the experiment that succeeded because of a data point that has just been *discovered*. The defeated hypothesis becomes the successful hypothesis because the experimental design produced a datum point that the researcher was seeking. The means by which the datum point came about is another issue and is looked upon as good fortune by the supposedly unbiased and totally honorable involved researcher. Or the datum point was discovered in a blinding flash of untruthful inspiration by a co-worker who knew how important such a data point would be. The experiment that failed becomes the experiment that provided crucial proof of a concept.

On the other hand, too many points can be a hindrance to a researcher and lead to hours (or minutes or seconds) of heart rending consideration. The result might be that out of twenty-four shotgun-patterned points on an x-y chart, eighteen points are omitted as outlying data points (often referred to as *flyers*). The result is an x-y relationship on the chart that gives credence, even proof, to the hypothesis and results in wide acceptance of the hypothesis as well as copious honors for the researcher. After the success of such a brilliant hypothesis, there are few if any (perhaps because of funding constraints) who will repeat the work to determine if the data are correct. The hypothesis lives on and it is only after serious issues have been raised at some future time that the hypothesis is reworked. By then the original researcher may have retired from his/her *distinguished career* and his/her reputation is now beyond reproach. Younger researchers who could not make any sense of the hypothesis and report their data are at first criticized and ostracized.

Flyers can be influential or not influential. In other words, they can be far removed and inconsistent with the rest of the data or be far removed but consistent with the rest of the data. In the former case, one can do summarization and analysis of the data both with and without the outliers because the inferences and conclusions are different with and without the outliers.

In the latter case, separate analyses with and without the outliers are similar and not a problem. That is, in the latter case, the outliers have little effect on inferences and conclusions. Nevertheless, and in either case, all outliers must be reported – to do otherwise is scientific fraud. Obviously, when data deletion changes the results of the study or misrepresents the study, the act is unethical (Resnik, 1998, 2000). Deception in data reporting dishonors researchers (from whom the truth is expected). Consequently, investigators who nonchalantly delete data points have probably not thought through their moral obligations nor have they thought of the possible consequences their deception might someday wreak on research participants.

Researchers should apply the same high standards wherever they operate, including situations where collaboration is essential. Collaborators should also have the same high principles as those of the researcher. In fact, for research that is conducted as part of a collaboration, the researchers should raise awareness of their policies at the beginning of the collaboration and include clauses in any collaboration agreement (verbal or preferably written) requiring adherence to the same high standards of ethics. In fact, all collaborators, including the original researcher, should continuously evaluate the risks and benefits of the program at every stage, from initial research through to and beyond any development stages. Most researchers are ethical and approach studies with the best interests of the sponsor. Few would argue for further restrictions, and most appreciate the extent of regulatory latitude that exists within the university system.

Finally, one aspect of questionable behavior relates to the time taken to acquire an advanced (PhD) degree. Undoubtedly, the research component of the doctoral experience is dominant but there are also other components which include a comprehensive knowledge of the current state of knowledge and techniques in a field and an informed approach to career preparation. Because of the recent trend toward large group projects in some disciplines - in which a research topic is divided among a number of students, postdoctoral fellows, and faculty – a PhD candidate can become so focused on a particular technique that there might be little opportunity for independent exploration of related fields or career options. When a graduate student becomes essential to a larger research project, completion of the degree can be unduly (perhaps unnecessarily) delayed.

However, this system is very advantageous for professors/mentors who realize (or even plan) that they have a pair of hands to do the work while they receive the accolades that go with the publication of many research papers. As a result, the student might find that the requirement for getting this work completed becomes prolonged and may take as much as seven years in total. When this happens, one does have to wonder what kind of

ethical behavior is being broadcast to the students, not only in the department but also on campus. Of course, all professors/mentors worth their salt can verbally justify why a PhD is taking six to eight years to complete instead of three to four years! But the ethics of such verbal or written justification must be examined closely to determine what ulterior motives are at play.

On the other hand, the ethical motives of a PhD student who takes nine or more years to complete the work and submit the thesis must also be questioned. Questions to be asked might be: Is the student really up to the work? Is the student concerned about entry into the outside, nonacademic world? Is the student hanging on for a permanent position in academia?

6.2 The Nature and Conduct of Research

Research is an activity that enables academic faculty members to test hypotheses and contribute to knowledge, no matter what the outcome of the research (Shrader-Frechette, 1994; Altman, 1997). Integrity in research is the active adherence to the ethical principles and professional standards essential for the responsible practice of research. These standards include but are not limited to: (1) honesty and fairness in proposing, performing, and reporting research, (2) accuracy and fairness in representing contributions to research proposals and reports, and (3) disclosure of conflicts of interest. While research requires vigorous defense of the researcher's ideas and work, integrity in research means that the data must be examined with objectivity rather than by any preconceived notions or theories. A code of ethics or a code of conduct informs researchers about how to conduct themselves when carrying out their studies and thereafter but individual and/or private interests may intervene and interfere with the attainment of goals.

Research results must be presented in a manner that would avoid future misuse or misinterpretation. Membership in a profession carries with it an implicit commitment to pursue the welfare of the profession. This is partly done by avoiding hasty, unconfirmed statements, incomplete analyses and by speaking out about these in the studies of peers, thus the significance of peer reviews. This is why many journals have stipulations to deal with fraud and may require researchers to place their raw data in a special archive (Shrader-Frechette, 1994). However, different research applications often carry different degrees of risk for the public and, as such, researchers must aspire to high standards of reliability and validity in order to minimize damaging implications.

Research misconduct is significant misbehavior that (1) improperly appropriates the intellectual property or contributions of others, (2) intentionally impedes the progress of research, or (3) risks corrupting the scientific record or compromising the integrity of scientific practices, all of which include submission of a project that is designed to evade the control process of the funding organization (Sattary, 2011). Any category of such behavior is unethical and unacceptable in proposing, conducting, or reporting research, or in reviewing the proposals or research reports of others. In order to correct the record, the offending author(s) may and should have to submit a retraction in which the data and the paper (or report) are withdrawn with a reason given for such withdrawal. Unfortunately, there are costs associated with retraction caused by misconduct in research but this is not to downplay the impact of misconduct, which includes other researchers wasting time trying to build on falsified findings and misdirection of research efforts. However, the biggest cost (which may not be measurable in terms of money) is to the credibility of the research field since it can seriously undermine financial support for research, especially if it takes a prolonged period (years) to decide on a retraction or correction of previously reported results (Hamilton, 2002; Anonymous, 2014a; Marcus and Oransky, 2014; Rodgers, 2014; Anonymous, 2016; Borman, 2016).

Unfortunately, in the various research disciplines, no formal or standardized process exists for reviewing questions about the scientific integrity of individuals and assessing and periodically renewing their professional membership and privileges in the scientific community. Thus, universities bear particular responsibility for maintaining high professional standards (Chapter 4) (Ryan, 1995). In fact, there is a direct relationship between the health of the academic profession and the maintenance of ethical standards. Central to this relationship is a departmental culture which varies within and across campuses. Departmental cultures are characterized by: (1) the willingness of academic faculty to act responsibly at all time, (2) the maintenance of self-regulation and peer review within the boundaries of academic freedom and self-governance, (3) exposure to the requirements of academia beyond the subdiscipline of the researcher, and (4) the willingness of academic faculty to look out for each other.

In the modern world, some academic faculty are not committed to think of the consequences of their actions (Kearney, 1999) – the focus is on personal image. Such occurrences render it possible for any mechanical expression of responsibility to be eroded and even dismissed. The faculty member must be responsible first before one can become or act like a professional, and the demonstration of responsibility cannot be talked into being. For example, when a professor has stolen an idea or concept

and complaints have been made to the university authorities, how many times has the response been “it is only a young professor seeking funding for his project” and the matter has been dismissed by the university management and the board of trustees (Board of regents or board of CYA, as they are often called – the term CYA being open to interpretation by the reader!).

The academic tradition emphasizes intellectual honesty and critical self-discipline with respect to freedom in terms of the scholarship of discovery; the scholarship of integration; the scholarship of application; and the scholarship of teaching (Chapter 4) (Hamilton 2002). However, academic freedom is *a condition of work, designed to enable academics without suffering adverse consequences in their employment* (Tight 1988; Menand, 1996). However, the integrity of the academic staff depends on how well they appreciate, understand and behave in an ethical fashion while enjoying their academic freedom. In some instances, and in a different realm of their operations, universities may engage in unethical practices because of the autonomy that they have been allowed. Issues of ethics generally occur on the boundaries of academic freedom and therefore raise questions about the need for discussion and consensus about the limits of academic freedom and, by extension, whether or not there should be limits to the autonomy of many universities (Neave, 1988; O’Hear, 1988, 1996).

The modern university is an institution for teaching, learning, protection of the culture, contributor to economic growth, and a knowledge factory (Pocklington and Topper, 2002). Professors establish academic tribes and territories and, in such a context, academic freedom is synonymous with academic subjectivity as individuals utilize disciplinary jargon to justify their actions and guard their territories. The university has also been viewed as radical when, in fact, it is most conservative in its conduct and it is also seen as a law unto itself (Kerr, 2001). In addition, the expectations for the responsible conduct of research are complex and not always well defined, and guidance for the responsible conduct of research is not well organized. Some responsible practices are defined through law and university policies that *must be followed*. Others are set out in nonbinding codes and guidelines that *should be followed*. Still other responsible practices are commonly accepted by most researchers but not written down. Instead, they are transmitted informally through mentoring, based on the understandings and values of each mentor. This situation is further complicated by the fact that researchers are not routinely tested on their knowledge of responsible practices or licensed. Moreover, their behavior as researchers is inconsistently monitored and the penalties for irresponsible behavior

vary considerably. Most researchers do care about responsible behavior in research and pay a great deal of attention to best research practices. The fact remains, however, that it can take some effort to find out what these practices are and how to act when the complex rules for responsible practice seem to conflict with one another.

Research misconduct policies provide guidance on responsible conduct in three areas: (1) they establish definitions for misconduct in research, (2) they outline procedures for reporting and investigating misconduct, and (3) they provide protection for whistleblowers – persons who report misconduct – and persons accused of misconduct. Thus, the definitions of misconduct in research and the procedures for handling allegations of misconduct in research form the basis for effective self-regulation in research. Two areas where misconduct is also seen are (1) misrepresentation of credentials and (2) misleading listing of authorship.

Misrepresenting credentials (lying on a résumé) is another, but common, type of deception (Chapter 4). Researchers have been known to forge credentials, which can be either blatant or take subtler forms (Ogden, 1999; Martin and Schinzinger, 2005). Many (some) candidates lie on their résumés – some candidates may embellish a little, while some may embellish a lot, and others just *lie*. Most of the time, that lie is about their education. The key to stop such practices is to check résumés thoroughly – not just by checking the address and telephone number – but by thoroughly checking every line item listed for education and employment. Without assiduously checking the facts and claims, it is impossible to determine who will include untruths on their résumés.

Misleading listing of authorship is another area where deception can be perceived to occur and the order of the names of the authors in many disciplines is usually understood to convey information about the relative contributions of the authors, with the earlier listing indicating greater contributions. Authorship conventions may differ greatly among research groups. In some disciplines the group leader's name is always last, while in others it is always first. In some scientific fields, research supervisors' names rarely appear on papers, while in others the head of a research group is an author on almost every paper associated with the group. Some research groups and journals simply list authors alphabetically. In some disciplines, the listing order is not considered important and alphabetical listing is the order of the day.

Many journals and professional societies have published policies (guidelines) that lay out the conventions for authorship in particular disciplines. In fact, the American Chemical Society has been the leader in developing ethical guidelines for authors, editors, and reviewers (Ritter, 2001).

Generally, such policies state that a person should be listed as the author of a paper only if that person made a direct and substantial intellectual contribution to the design of the research, the interpretation of the data, or the drafting of the paper, although students will find that scientific fields and specific journals vary in their policies. Just providing the laboratory space for a project or furnishing a sample used in the research is not sufficient to be included as an author, though such contributions may be recognized in a footnote or in a separate acknowledgments section. The acknowledgments sections also can be used to thank others who contributed to the work reported by the paper.

On the authors' side, a frank and open discussion of how these guidelines apply within a particular research project – as early in the research process as possible – can reduce later difficulties. Sometimes decisions about authorship cannot be made at the beginning of a project. In such cases, continuing discussion of the allocation of credit generally is preferable to making such decisions at the end of a project. Decisions about authorship can be especially difficult in interdisciplinary collaborations or multigroup projects. Collaborators from different groups or scientific disciplines should be familiar with the conventions in all the fields involved in the collaboration. The best practice is for authorship criteria to be written down and shared among all collaborators.

Finally, there is the illusion that research (particularly scientific research) is self-correcting, but the concept of self-correction is far from perfect (Ferrer and Golyshin, 2016). As retracted articles accumulate, and concerns are voiced more and more strongly about the reproducibility of research findings, many researchers continue to believe that research is inherently self-correcting. It is not immune to fraud and error, but invalid findings are exposed and discarded when other researchers identify flaws or obtain better data.

Thus, the current concept of self-correction is unsatisfactory and does not deal with the issue of misconduct in research. Research in some disciplines may be self-correcting, but this requires the concerted efforts of researchers journals, and (in this context, of this book). The self-correction process lacks transparency and consistency, and many potential conflicts of interest may interfere along the way. To use the old adage of protectionism, *circling the wagons* to the point where a researcher charged with misconduct is cleared of any wrongdoing by a committee of his or her peers may not be a satisfactory outcome to many observers.

The concept of self-correction also omits to consider that (as stated above) there are costs associated with verifying published data (that arise from misconduct in research) (Anonymous, 2014a).

6.3 Collecting Research Data

Ethical issues permeate every stage of the research process, from the provision of a title to the study to the use and analysis of the data. There are a range of ethical issues emerging in the fields of qualitative and quantitative research. This has been and remains so for several reasons: (1) quantitative research is rooted in rationality and objectivity and reflection can be used to correct/evaluate the logic of analyses done, and (2) qualitative approaches to data collection that are more personalized and allow for expressions of values, beliefs, motivations, emotions in sharing of information. In addition to the ethical responsibilities of researchers, respondents also have ethical responsibilities. More often than not respondents do not breach their ethical commitments, spoken or unspoken. Researchers, for several reasons, may or may not adhere to their personal and/or professional ethics.

Because of the diversity and complexity of academic research programs, mistakes and errors are inevitable (Bertozzi, 2009). Nevertheless, researchers have an obligation to their profession and to themselves to be as accurate and as careful as possible. The various disciplines have developed methods and practices designed to minimize the possibility of mistakes, and failing to observe these methods violates the standards of research. Every result must be carefully prepared, submitted to the peer review process, and scrutinized even after publication.

Some examples of common ethical issues in research are: (1) bias in analytical methods, (2) misuse of the data, (3) falsification and fabrication of the data, and (4) plagiarism and theft as well as a host of other issues that arise. (Barnbaum and Byron, 2001).

6.3.1 Bias in Analytical Methods

The *accuracy* of a test is a measure of how close the test result will be to the true value of the property being measured. As such the accuracy can be expressed as the *bias* between the test result and the true value. However, the *absolute accuracy* can only be established if the true value is known (Speight, 2015). In terms of accuracy, bias is a form of self-deception, which is sometimes motivated irrationality but other times it constitutes a more purposeful evasion. For example, researchers suspect an unpleasant reality, perhaps sensing that the data are going against what they want to believe. Then, instead of confronting the data honestly, they purposefully disregard the evidence or downplay its implications. The purpose and intention involved is typically unconscious or less than fully conscious (Martin and Schinzingler, 2005).

In the simplest sense, a convenient method to determine a relationship between two measured properties is to plot one against the other. Such an exercise will provide either a line fit of the points or a spread that may or may not be within the limits of experimental error. The data can then be used to determine the approximate accuracy of one or more points employed in the plot. For example, a point that lies outside the limits of experimental error (a *flyer*) will indicate an issue of accuracy with that test and the need for a repeat determination (Speight, 2015). However, the graphical approach is not appropriate for finding the absolute accuracy between more than two properties. The well-established statistical technique of regression analysis is more pertinent to determining the accuracy of points derived from one property and any number of other properties. There are many instances in which relationships of this sort enable properties to be predicted from other measured properties with as good precision as they can be measured by a single test. It would be possible to examine in this way the relationships between all the specified properties of a product and to establish certain key properties from which the remainder could be predicted, but this would be a tedious task.

The example (cited previously) is the researcher who omits eighteen out of twenty-four points on the basis that only six of the points were true and the remainder (the eighteen points omitted or discarded) were flyers. This is bias in favor of the researcher's theory that he or she must prove to be the correct theory – for whatever reason.

The impact of analytical bias on many decisions is mostly unknown. A large margin of error may be acceptable in some circumstances, whereas other scenarios demand more accurate and precise laboratory measurements. Often, laboratory data are interpreted within the larger context of the project history and physical examination, but the influence of imprecision in laboratory data in relation to the success of the project can be dangerous, if not fatal.

6.3.2 Misuse of the Data

Data misuse occurs when data obtained (through experimentation) is used in the wrong context and may even be data from another researcher that is used without the user's consent. The data can be used for support of an incorrect theory. Another example is when faculty members use data that has been entrusted to them in a manner not intended by the owner of the data. The related issue, *data protection*, is safeguarding data against misuse. Ways in which this is done is by keeping data under lock and key whether it is in a locked safe or on a computer hard-drive where it is protected by encryption, firewalls, and user authentication.

Such systems prevent any access without a key, combination, or password and will record the details (time, terminal, logged in ID) of both successful and unsuccessful access attempts. This provides traceability and so deters casual misuse.

6.3.3 Falsification and Fabrication of Data

Falsification of data is the selective alteration of data collected in the conduct of scientific investigation or the *misrepresentation of uncertainty* during analysis of the data. It is also the intentional act of creating records that do not exist and for which there is no basis in fact with the intent to mislead or deceive. In short, the data are a *pipe dream* that has been conjured up for various reasons, none of which are legitimate!

Falsification also includes the selective omission, deletion, or suppression of conflicting data without scientific or statistical justification and includes such practices as: (1) alteration of data to render a modification of the variances in the data, (2) entry of incorrect dates and experimental procedures in a laboratory notebook or in any other record-keeping device, (3) misrepresentation of the results from statistical analysis, (3) misrepresentation, (4) misrepresentation of the methods of an experiment such as the equipment used to conduct the experiment, (5) the addition of false or misleading statements in the manuscript or published paper, (6) publication of the same research results in multiple papers – this is self-plagiarism, which includes presenting the same set of slides at a series of meetings in which only new one slide is added for each meeting that, literally, adds nothing to the presentation but is included to seemingly add another conclusion and for the author to be invited to other meetings, and (7) providing false statements about the extent of a research study in an abstract submitted for publication and oral presentation at a professional society meeting.

Researchers who manipulate (fabricate or falsify) their data in ways that deceive others (Chapter 8), even if the manipulation seems insignificant at the time, are violating both the basic values and widely accepted professional standards of research. Researchers draw conclusions based on their observations of nature. If data are altered to present a case that is stronger than the data warrant, the researchers mislead their colleagues and potentially impede progress in their field or research. They undermine their own authority and trustworthiness as researchers and also introduce information into the research record that could cause harm to the other researchers.

Because of the critical importance of methods, project reports and manuscripts for publication in reputable journals must include a description

of the procedures used to produce the data, sufficient to permit reviewers and readers of a paper to evaluate not only the validity of the data but also the reliability of the methods used to derive those data. If this information is not available, other researchers may be less likely to accept the data and the conclusions drawn from them. They also may be unable to reproduce accurately the conditions under which the data were derived.

6.3.4 Plagiarism and Theft

Plagiarism is intentionally or negligently submitting the work of others as one's own. It is also claiming credit for someone else's ideas or work without acknowledging it, in contexts where one is morally required to acknowledge it (LaFollette, 1992). Plagiarism is also the theft of intellectual property and is not unlike stealing from a commercial business. A special case of plagiarism is the frowned upon, but not always unacceptable, practice of *self-plagiarism* in which an author will use segments of his or her own published material (e.g., methods section of a scientific paper) in a new publication without reference.

Plagiarism and falsification of data or fabrication of data are the primary means of scientific fraud. Whether data are made up, copied from someone else, or manipulated to achieve some desired end result, it's always fraud. But perhaps the more interesting question concerning fraud is why it happens. Moreover, researchers who believe that they deserve more recognition or who continually crave recognition are more likely to falsify, plagiarize, or manipulate the data in order to report successful results. This has been so since the era of Newton, Dalton, Darwin, and Freud as they sought fame and prestige. Small-scale deviant practices are likely to persist because, despite the canons of research, researchers can always attribute small inconsistencies to unavoidable errors that accompany or infiltrate all research.

On the other hand, and quite often, the reason is money. There were several environmental labs in the 1980s and 1990s whose employees were caught changing the time clock on their GC/MS data systems or changing the baseline on a chromatographic analytical method (processes known colloquially as time traveling and peak shaving). In another case, data were shown to be completely fictitious. A lab received samples and sent out data with no intervening lab procedures. At the behest of the U.S. Environmental Protection Agency and state regulators, federal marshals swooped down on the lab, impounded its data, and took most of the staff to jail (Ryan, 2002).

Whether or not there is a crisis in professional responsibility depends very much on the extent to which individuals were responsible and

disciplined before acquiring professional status. The fact remains that the search for truth, knowledge, and understanding of the world pose powerful ethical demands for the individual who wants to be part of a community of individuals who call themselves researchers (Guba, 1990). Indeed, methodological, analytical, and ethical issues are closely interconnected particularly so because we have to relate with people in doing research, people whose attitudes, values, and perceptions of issues vary.

Whenever conflicts of interest interfere with the conduct of research, it should not be undertaken (Bok, 2006).

6.4 Controls

One of the major questions faced by any university is whether to institute measures to enforce its code of ethics with disciplinary proceedings and sanctions (Chapter 4). Some universities may choose not to engage in enforcement and use the ethics or conduct codes primarily for educational purposes. However, enforcement of the codes allows the university to demonstrate a willingness to hold the faculty and staff accountable for their conduct.

The most effective control is the development, continued revision, and publication of a code of ethics and/or a code of conduct, with the process of development offering ample opportunity for contributions from all sectors of the university. However, ethics and publication standards are not always effectively transmitted from one generation of faculty to the next, or even to current members of the faculty. Hence, any effort to develop standards should be linked to a plan for their dissemination and for the education of those to whom they (will) apply (Iverson *et al.*, 2003). For example, ethics consulting services may help faculty members assess options for responsible conduct. If a university decides to enforce its standards with review and disciplinary procedures, it should be prepared to devote adequate resources to do so effectively. Enforcement procedures should accord due process and ways to initiate a grievance should be commonly known (Chapter 4).

When misconduct allegations are reviewed by a university, the results may not be made public, thereby diminishing the potential deterrent effect. Universities should, therefore, consider making public the outcome of any review of the misconduct by a member, no matter what his or her level in the academic community. Also, in the role as leaders in education, universities have the opportunity to influence research conduct. Codes of ethics should be reviewed to determine whether they appropriately cover publication ethics, a critical element in promoting research integrity. The leadership of the

university should work to ensure the integrity of research. Furthermore, there should be no cover-up or attempted cover-up of misconduct in any of the academic disciplines. Once misconduct by a member of any university has been proven, there should be no show of wrist-slapping. The member responsible for the misconduct should be expelled from the university and it should be made known publically why he or she is no longer welcome as a member of that university (Chapter 4). As an aside, exoneration of misconduct by a committee of the peers of the perpetrator is not always a satisfactory outcome – the committee should be composed of members who will not show bias in any form and may even be from outside of the university. In order to mitigate the potential for misconduct in research (Table 6.1), a checklist that contains a range of questions (Table 6.2) should be constructed that academic faculty can use in research with the accompanying ethical issue (Speight and Foote, 2011):

Finally, integrity in the conduct of research and the dissemination of the results is essential to the scholarly purposes to which a university is

Table 6.1 Typical types of misconduct in research.

Typical research misconduct	Research practice misconduct
Fabrication of data	Using inappropriate (e.g., harmful or dangerous) research methods
Falsification of data	Poor research design
Plagiarism	Experimental, analytical, computational errors
Data-related misconduct	Publication-related misconduct
Not preserving primary data	Claiming undeserved authorship
Bad data management, storage	Denying authorship to contributors
Withholding data	Artificially proliferating publications (the same paper in multiple journals)
	Failure to correct the publication record
Personal misconduct	Financial, and other misconduct
Inappropriate personal behavior	Peer review abuse
Harassment	Misrepresenting credentials or publication record
Insensitivity to social or cultural norms	Misuse of research funds for unauthorized purchases or for personal gain
	Making an unsubstantiated or malicious allegation of misconduct

Table 6.2 A checklist of sample questions that can be used to mitigate the potential for misconduct in research.

How is the laboratory notebook structured and what provisions are there to have the entries signed and dated by a witness? <i>Ethical issue: Should be signed and dated by a witness.</i>
Did the laboratory notebook include changes in the views of the researcher relating to the subject being researched, data, theory, and the method? <i>Ethical issue: Omitting to include such changes.</i>
Are there notations relating to new ideas from the literature? <i>Ethical issue: Failure to acknowledging the sources.</i>
What are the controls over having sufficient information? <i>Ethical issue: Failure to acknowledge the need for further information.</i>
Which methods were used to collect data and apply to date workup? <i>Ethical issue: Using methods that will gave results that are in keeping with, and support, the theory of the researcher.</i>
What are the data requirements for the research? <i>Ethical issue: Acquiring data from other researchers even if it means an invasion of their work (without permission) and without acknowledgement of the source.</i>
What are the limitations of the research? <i>Ethical issue: Deliberately claiming fewer limitations once the theory has been seemingly proven.</i>
How is the research problem defined? <i>Ethical issue: The issue of using a definition that fits the preliminary data rather than the original project definition.</i>
Has the available literature been reviewed extensively and carefully for prior work? <i>Ethical issue: Selective reviewing of preferential papers and omission of other papers that may point the way for further work or refute the researcher's theory.</i>
Is the study original in terms of methods, equipment, data generation, and procedures? <i>Ethical issue: Claiming originality without a clear basis or failure to acknowledge prior work.</i>
Which sampling techniques were used? <i>Ethical issue: Deliberately excluding standard methods of sampling because data acquired by these methods may point unfavorable to the researcher's theory.</i>
Is the researcher willing to seek or consider an alternate theory on the basis of deviant data (e.g., flyers/outliers on an x-y plot of the data)? <i>Ethical issue: Ignoring or deleting any such information that threatens the theory.</i>

dedicated. Unethical practices and fraud can (1) destroy the mutual trust that exists among colleagues, (2) undermine the relationship between faculty and students, (3) have a serious detrimental effect on the careers of associates and subordinates, (4) damage the reputation of the university, and (5) diminish public confidence in the university.

In summary, misconduct in research (whether it occurs in the academic world or in the commercial world) must be examined comprehensively – in any narrow sense – by an unbiased committee so that a basis for strict penalties can be constructed and in a broad sense, to encourage respectable research practices. Vagueness of the philosophical boundary of research misconduct does not undermine the concept of research misconduct, but instead demonstrates the intimate connection, not contradictions, between academic freedom and the various regulations that apply to defining misconduct. By relating *academic freedom* to the university regulations concerning research practices, including misconduct, a positive attitude on the part of faculty members involved in research activities can be encouraged (Haskell, 1996). And speaking of a positive attitude, there is a distinct bias against negative results from research experiments when negative results have as much meaning to the researcher as positive results (Curry, 2016). And since the academic *publish or perish syndrome* tends to focus on positive results, one wonders if the negative results do not remain sequestered for all time. Surely this is a matter of misconduct and it is time to pause and take stock of such issues.

The responsibilities of the faculty researcher are not fulfilled only by individual self-awareness and effort, but require an overall change in the atmosphere and structure of the academic community. With the changing research environment, academic researchers should first recognize the characteristics of the research and diligently manage them. Also, the faculty researcher should try to remain unaffected by financial profit-loss calculations, and in order to prevent scientific misconduct a strictly controlled research process is necessary (Hamilton, 2002).

6.5 Intellectual Property

One aspect that is lacking in institutes of learning is teaching about and adhering to intellectual property rights. In a system where the publish-or-perish syndrome is prevalent, intellectual property rights (of the client or sponsor of the research) are often (1) unknown, (2) ignored, or treated with contempt and disregarded. Intellectual property is a legal field that refers to creations of the mind such as musical, literary, and artistic

works; inventions; and symbols, names, images, and designs used in commerce, including copyrights, trademarks, patents, and related rights. Under intellectual property law, the holder of one of these abstract *properties* has certain exclusive rights to the creative work, commercial symbol, or invention which is covered by it.

Intellectual property rights are typically the exclusive rights of the sponsor of the work over creations of the mind, both (1) artistic and (2) commercial (WIPO, 2000; Moore, 2004). The former is covered by copyright laws, which protect creative works such as books, movies, music, paintings, photographs, and software and gives the copyright holder exclusive right to control reproduction or adaptation of such works for a certain period of time. The second category is collectively known as *industrial properties*, as they are typically created and used for industrial or commercial purposes. A patent may be granted for a new, useful, and nonobvious invention, and gives the patent holder a right to prevent others from practicing the invention without a license from the inventor for a certain period of time. A trademark is a distinctive sign which is used to prevent confusion among products in the marketplace. An industrial design right protects the form of appearance, style or design of an industrial object from infringement. A trade secret is nonpublic information concerning the commercial practices or proprietary knowledge of a business. Public disclosure of trade secrets may sometimes be illegal.

Intellectual property rights give creators exclusive rights to their creations, thereby providing an incentive for the author or inventor to develop and share the information rather than keep it secret. The legal protections granted by intellectual property laws are credited with significant contributions toward economic growth. On the other hand, intellectual property rights are considered by economists to be a form of temporary monopoly enforced by the state (or enforced using the legal mechanisms for redress supported by the state).

Intellectual property rights are usually limited to nonrival goods, that is, goods which can be used or enjoyed by many people simultaneously – the use by one person does not exclude use by another. This is compared to rival goods, such as clothing, which may only be used by one person at a time. For example, any number of people may make use of a mathematical formula simultaneously. Some objections to the term intellectual property are based on the argument that *property* can only properly be applied to rival goods (or that one cannot *own* property of this sort). Since a nonrival good may be used (copied, for example) by many simultaneously (produced at zero marginal cost in economic terms), producers would have no incentive to create such works, a clear loss to a university. Monopolies, by contrast,

also have inefficiencies (producers will charge more and produce less than would be socially desirable).

The establishment of intellectual property rights therefore represents a trade-off, to balance the interest of a university in the creation of nonrival goods (by encouraging their production) with the problems of monopoly power. Since the trade-off and the relevant benefits and costs to the university will depend on many factors that may be specific to each product, the optimum period of time during which the temporary monopoly rights exist is variable by country. Intellectual property in the form of patents protects an invention and the rights of the inventor. Patents provide inventors or those deriving title from them the right to prevent others from making, selling, distributing, importing or using their invention, without license or authorization, for a fixed period, normally twenty years from the application date. Patents are subject to an examination by the Patent Office before grant and to the payment of renewal fees thereafter. In return, the applicant for the patent is required to disclose the invention in the patent "specification" and to define the scope of the patented invention in "claims". Patents normally have to relate to technology. There are three further requirements for an invention to be patentable: novelty (normally over anything disclosed publicly anywhere), inventive step or nonobviousness (the invention would not have been obvious to a person skilled in the art at the time the application for a patent was filed) and industrial applicability. Patent protection is typically limited to the country in which the patent has been granted. Granted patents can be contested in the courts, in patent offices or in validity proceedings as a defense to an allegation of patent infringement.

To be patentable, inventions must be novel. In most countries novelty is destroyed by any public disclosure by any means (oral or written) anywhere. In some countries, including the United States and Japan, such a disclosure can be made without prejudicing a patent application if the patent application is made within three to twelve months of the disclosure (the *grace period*). There are in fact many forms, and potential forms, of grace period. For instance, because the U.S. system is a *first-to-invent* system rather than a *first-to-file* system, an inventor has the possibility of producing evidence that he or she made the invention before a prior publication of somebody else. This right leads to so-called "interference" proceedings, challenging an applicant's right to a patent on the grounds that the subject matter had already been invented. If a grace period were introduced in Europe, it would be necessary to agree on its specific characteristics.

On the other hand, *copyright* grants exclusive rights to creators of original literary, scientific and artistic works, computer programs and (with overlapping database rights) databases. It protects the form of expression

of ideas, but not the ideas, information or concepts expressed, which can be freely available or protected in other ways. Examples of potentially copyright-protected works in the field of science include books, laboratory notebooks, articles, conference papers, teaching materials, and certain databases of information (both electronic and hard copy). The requirement for originality is low – some degree of the author's own work will be sufficient if there is no slavish copying. Copyright in itself does not create a monopoly – there is no infringement if another author independently comes up with an identical work. Infringement is typically by copying the work and/or making an adaptation. Copying need not be exact or whole – it need only be of a substantial part in qualitative terms: if the amount taken is small but nevertheless central to the work, it could still be infringing. The first owner of copyright is the author, but employers generally own the copyright for employees' work done as part of their employment obligations. The *moral rights* of authors also encourage proper attribution and prevent changes to a work that would prejudice the honor or reputation of an author.

Databases – collections of data organized in a systematic way – play an important role in scientific research. It is an increasing role: for example, developments in the last decade have made databases essential for much biomedical research. Databases are of many kinds. They can be traditional encyclopedias, books of data or some teaching materials, through to electronic databases available on the Internet. The access to data and the ability to extract and reutilize those data have always played an important part in the scientific process. As in copyright, digitization and the potential for instant low-cost global communication have opened up tremendous opportunities for the dissemination and use of scientific and technical databases. There has more recently been a proliferation of both public and private databases, which has started to create tensions between free access and economic models. As always in IP law, it is a question of achieving a balance between a sufficient incentive and adequate protection of investment to encourage the creation of new databases which are necessary and useful to researchers, and the rights of scientific users to access those databases on reasonable terms and to advance scientific knowledge.

Guidelines setting forth acceptable standards of behavior in relation to such issues as fabrication or falsification of data, protection of human subjects, confidentiality, accurate reporting of results, and plagiarism have evolved over the years, with many universities embracing guidelines as well as the necessity of developing mechanisms for investigation and enforcement of any such rules and guidelines (Chapter 11).

While scientific societies are paying increased attention to misconduct in research, little is known beyond impressionistic observations about the nature of their role and impact. In general, research on research integrity is a very small specialty within the scholarly traditions of science policy, sociology of science, and ethics and values in science. In recent years, especially with the support of various governmental agencies, the area of misconduct in research is attracting greater interest and visibility of integrity in research and misconduct in science.

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7

Publication and Communication

7.1 Introduction

Publication plays a critical role in the advancement of faculty by communicating knowledge from research to the larger research community; the published material should not be used in any form by faculty or students without the consent and acknowledgement of the original owner of the material (Davis, 1997; Park, 2003; Roig, 2010; Cahn, 2011; Habibzadeh and Shashok, 2011; Rosenzweig and Schnitzer, 2013; Stafford, 2016). The exchange of information through publication is an essential part of the life of many faculty members. It is important that universities take initiatives to preserve the integrity of the process that certifies and communicates research, no matter how arduous the task (Ritter, 2001; Beckett, 2003). Furthermore, publication of papers in peer-reviewed journals is the predominant form of publication (and recognition) for faculty members. However, journals vary enormously in their prestige and importance, and the value of a published article depends on the journal and the readership. In addition, the failure of authors to cite or correctly cite the work of other

scientists, which can lead to improper credit given to authors for discoveries that are not their own, is also a form of misconduct (Schulz, 2007).

Peer review is a general term that is used to describe a process of self-regulation by all university-related professions as a means of evaluation of a paper before publication and involves review by qualified individuals in the relevant field. Peer review methods are employed to maintain standards, improve performance, verify whether the work satisfies the specifications for review, identify any deviations from the standards, and provide suggestions for improvements. However, there have been accusations that peer review is biased towards studies with positive or more eye-catching results and that such studies are published in preference to others (Hamilton, 2002; Notman, 2015).

Publication of research data in the printed proceedings (collection of papers) from a conference often results in a shorter time to print. This follows from the opportunity to describe completed or partly completed work before peer professionals and to receive a more complete review than the type of review that is typical for a journal. At a conference, the audience (composed of academic and nonacademic professionals and students) asks general and specific questions to the presenter that often provide recommendations for further work or a new line of investigation. Overall, this will help the presenter to finalize the document for publication in the proceedings (where the proceedings are published post-conference). On the other hand, there may be questions as to whether or not journal reviewers really pay attention to the salient points of the potential publication or merely look for errors in style and grammar. An answer that readers may relate to is *all of the above*. However, in many academic reviews, statements are made that publication in the proceedings of a prestigious conference is inferior to publication in prestigious journals without realizing or being willing to admit that in relation to data presentation and publication, many conferences are superior to an established journal.

Publication disputes generally fall into four categories: (1) a person is listed as an author but did not have a chance to review or approve the manuscript, (2) a person was promised first authorship when the project was completed, but the principal investigator added the work of someone else, who then became first author, (3) someone else claims they should be first author on the basis of the amount of work they did, and (4) after a researcher had left a lab, the person did not receive credit in an article that includes his or her work (Ritter, 2001).

In order to diminish such problems, the following criteria need to be observed when compiling data for publication: (1) all persons designated as authors should qualify for authorship, and (2) each author should have

participated sufficiently in the work to take public responsibility for the content. Furthermore, authorship credit should be based only on substantial contributions to: (1) either the conception and design or the analysis and interpretation of data; (2) drafting the article or revising it critically for important intellectual content; and (3) final approval of the version to be published. Conditions 1, 2, and 3 must all be met (Speight and Foote, 2011). Other contributors should be listed in an appendix or footnote. Editors may ask authors to describe their contribution(s) and the publisher may also require that all coauthors know and agree on the content of the article.

Publishing is undergoing redefinition as electronic publications increase, and there are both opportunities and pitfalls associated with electronic publishing. The immediacy, impermanence, and global reach of electronic publishing mean that new, expanded audiences can be reached. In addition, digital technology may make it easier to misrepresent data or alter graphic representations. Universities could make a valuable contribution by encouraging cross-disciplinary discussion of these matters among researchers and those involved in publishing. Guidelines for responsible conduct in the electronic communication and electronic publication of research data must be developed and implemented.

Many opportunities and concerns are at play in scholarly publication and communication. These result from capabilities afforded by new technologies, pressures associated with the publish-or-die message that is forced on many faculty members in academia. While the unethical behavior of faculty cannot be blamed on the publish-or-die message, the pressure placed on the shoulders of many individuals by this message may be a contributing factor. Not that anyone found guilty of unethical behavior should be excused because of such a message but it may be time to change the message – if that is at all possible. In fact, the lack of willingness of the (academic or industrial) faculty to change is a key barrier to reducing and perhaps eliminating unethical behavior in publication.

While there are claims that gross misconduct is assumed to be rare, subtler forms of unethical behavior are becoming more common (Ritter, 2001). Misappropriated credit in publications (such as plagiarism), for example, can lead to some of the most contentious conflicts in the academic world, especially among students (Habibzadeh and Shashok, 2011; Klein, 2011). Currently, in academia, publication of research data has become more competitive because universities are becoming more focused on intellectual property and rights of ownership. In addition, research that is sponsored by commercial entities is usually controlled by the management of a commercial organization which determines whether and how results are published, and it is no longer an academic issue.

The initiation of any experiential project that is the most important aspect of the project, whether the project is academic (non-client-sponsored) and destined for publication or private, especially if the results of the project are destined to appear in a report for a client (sponsored project). In either case, plagiarism (the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one's own original work) can be deliberate or inadvertent. In the academic world, plagiarism is a very serious offense that can (should) result in punishments such as a suspension or expulsion (Chapter 11). Apart from plagiarism, falsification and fabrication of data also constitute serious offenses (Chapter 8). Both falsification and fabrication of data affect the credential of the research. *Double publication* is a practice which involves repeat publication, or attempts at repeat publication, of text or data in any form of publicly available media (such as a learned journal) without citation in the later manuscript. All these things, including plagiarism, falsification and fabrication, and double publications, are serious transgression of academic ethics. But such transgression can be curtailed by the assiduous use of the literature by carrying out a thorough literature search. Continuation of the transgressions beyond the literature search (by ignoring the findings of the search) carries the perpetrator into more serious consequences (Sinha *et al.*, 2009).

7.2 The Literature

The literature is a collective term that is used to mean published descriptions of completed and ongoing research and comprises publications (*journals*) that report original empirical and theoretical work in the various disciplines (Walker and Hurt, 1990). Moreover, the bulk of the information is published in the form of technical articles in journals rather than in textbooks. Reviews of topical research area are also included wherever the reviews are published in reputable journals.

One of the first things (often as early as the junior high school level) that young researchers learn is the importance of spending time researching and reading the relevant research in the field. In order to focus a *search of the literature*, keywords are chosen that represent the topic to be searched. There are many resources that can help researchers find information on the topic of interest, such as libraries and the Internet.

Generally, the Internet provides much information and researchers are in constant search for different types of information depending on the researcher's need or the needs of the project. The Internet can be a valuable source that meets that need of the researcher in a short period of time.

The most credible sources on the Internet generally satisfy the need of the researcher and, at the same time, provide assurance to the user that the information is useful and reliable. However, while the resources available on the internet may make it seem as if everything of value can be found there, it is important to point out that valuable resources can be accessed in a library and use of the Internet alone can result in researchers missing valuable information, thereby leading to shortcomings and omissions in the research plan and direction (Cresswell, 2003; Patten, 2005).

It is also essential that periodically (throughout a project) the researcher should perform a new literature search (Fink, 2005; Knopf, 2006). The literature is not static and information on any particular subject changes with time as new data become available. Thus, an incomplete literature search or a literature search that is terminated at the beginning of a project can lead to serious issues as the project develops because of the lack of knowledge from external sources and the need to attempt to match the experimental data to data from the external sources at a later date.

Currently, peer-reviewed journal articles remain the predominant publication type, and have the highest prestige. However, journals vary enormously in their prestige and importance, and the value of a published article depends on the journal. The status of publications in conference proceedings depends on the discipline but should not be looked upon as a second-tier (or even third-tier) form of publication. The published proceedings of various conferences may be the only outlet for some publications.

In all disciplines, advancement depends upon publishing in so-called high-impact journals, most of which are English-language journals. Faculty with poor English writing skills are at a disadvantage when trying to publish in these journals, regardless of the quality of the study itself. Yet many international universities require publication in these high-impact journals by both their students and faculty. One way that some international authors are beginning to overcome this problem is by working with copy editors who are native speakers of English and specialize in editing texts written by authors whose native language is not English and to assist in improving the written quality to a level that high-impact journals will accept.

7.3 The Journals

Researchers are supposed to be honest and accurate in what they report. They are not supposed to make up their data, or adjust it to fit the conclusion they were hoping the data would support. Without this commitment, research becomes creative writing with more graphs and less character

development. Furthermore, because the goal is supposed to be a body of reliable knowledge upon which the whole relevant professional community can draw to build more knowledge, it's especially problematic when particular works in the literature turn out to be dishonest or misleading. Fabrication, falsification, and plagiarism are varieties of dishonesty that members of the professional community look upon as high crimes. Indeed, they are activities that are defined as misconduct and (at least in theory) prosecuted vigorously. Furthermore, it is to be hoped that one consequence of identifying authors who have made dishonest contributions to the professional literature would be that those dishonest contributions would be *removed* from that literature. But whether or not that hope is realized is an empirical question.

Journals occasionally report on notorious research integrity violations, summarizing information from investigations of misconduct, and noting the affected publications. Many other lesser-known cases of fraudulent publications have been identified in official reports of misconduct, yet there is only a small body of research on the nature and scope of the problem, and on the continued use of published articles affected by such misconduct. The standard for being caught is having an official finding of misconduct against the authors or perpetrators of the misconduct. In part, this is because such a finding usually includes consequences connected to publications that may embody the dishonesty toward others.

Not every retraction is the result of a finding at the end of an inquiry into misconduct. But in situations where there has been an inquiry into misconduct and the finding is that there has been misconduct that requires correction of the literature via a correction or a retraction, it is to be hoped that the coauthors of the paper would be subject to the appropriate action. But this is not always the case. Numbers are not always available but many perpetrators of misconduct are exonerated with time (and time is a great healer and memory scrubber) and continue to practice their chosen discipline as if nothing had ever happened.

In the published findings of misconduct in the *NIH Guide for Grants and Contracts* and the ORI Annual Reports for 1991-2001, 102 articles were identified as needing retraction or correction. There were forty-one researchers whose misconduct was tied to the 102 articles, nineteen of them identified as responsible for a single problematic paper and twenty-two responsible for two or more problematic papers. One of those forty-one researchers was responsible for ten articles that were in need of retraction or correction.

Furthermore, of those 102 articles: (1) seventy-nine reported results that were fabricated, falsified, or misrepresented, (2) two contained plagiarism,

(3) sixteen gave inaccurate reports of the methodology the researchers actually used, and (4) five reported data from fabricated experimental subjects. Just over half of the forty-one researchers (responsible for fifty-three of the flagged articles) accepted the findings of misconduct, while five were recorded as disagreeing with the findings or denying responsibility for the misconduct. The other misconduct findings didn't record the response of the respondents to the findings. By the time the findings of misconduct were published, corrigenda (corrections) had already been published for thirty-two of the flagged articles, and sixteen more were *in press*. Retractions or corrigenda needed to be published for another forty-seven of the flagged articles.

This leaves seven of the articles flagged (as reporting results that were fabricated, falsified, or misrepresented, or as containing plagiarism, or as giving inaccurate reports of the methodology the researchers actually used, or as reporting results from fabricated experimental subjects) for which the administrative actions did not specifically call for correction or retraction. However, it's not unreasonable to think that articles flawed in these ways *ought* to be corrected or retracted, in order to protect the reliability of the research literature and the trust faculty researchers need to be able to place in the reports published by their fellow researchers. Potentially, this is a very serious problem.

The thought goes to the means by which the continued citation of research affected by scientific misconduct can be reduced. More prominent labeling in the literature is desirable to alert users to notices of retraction and errata. This could take the form of larger or bold fonts for these notices. Alternatively, or in addition, a prominent placement of the word *retraction* on the first page of such articles would be useful, because once a user downloads an article, any notices related to retraction of the article may be left behind. Some of the problems, in other words, may be due to the vigilance (or lack thereof) displayed by those using the scientific literature, but some of it may come down to the extent to which that scientific literature is accessible to the researchers.

Laboratory directors and principal investigators must check every detail of the work by students or their junior colleagues but the onus is on the director or principal investigator to ensure that the work (Ritter, 2001). Thence, it falls upon the shoulders of universities, journal editors, and reviewers to determine that the directors or principal investigator has submitted a manuscript that is accurate and true.

Weeding out problematic papers from the pool of professional literature that researchers cite may require journal editors, manuscript authors, and even journal readers to take on more responsibility. For example, before

authors submit a manuscript for publication (either initially or after the last set of revisions), they must ensure that none of the sources they cite have been retracted or corrected. Failing to exercise such vigilance could inadvertently render the paper problematic, especially if it depends in part on another problematic paper. Each journal will require that the data are reported in a clear and concise format, and this may be the dominant factor in determining whether the information presented is used or disregarded as worthless, or worse, intentionally misleading. Furthermore, the format of the paper is also subject to certain requirements – there should be an *abstract* (a one-paragraph summary of the work, usually less than a specified number of words) which is intended to serve as a guide for determining if the article is pertinent to potential readers. Following the *abstract*, there is an *introduction* in which previous works relevant to the work in the paper should be presented in the context of previous investigations by citation of relevant documents in the existing literature (ASU, 2015).

Then follows the *experimental* section in which the method and materials are described, after which the data are presented in the *results* section. Interpretation of the meaning of the results is usually addressed in a *discussion* section and the conclusions should be based on previous literature and/or new empirical results, in such a way that any reader with knowledge of the field can follow the argument and confirm that the conclusions are sound. The final section is the *references (literature cited)* section in which the sources cited by the authors are listed in the format required by the journal.

Following the experimental section is the *results and discussion* section in which prior published work is cited. When writing a research paper, citation of published literature as the back-up for statements made and any conclusions is an important aspect of the paper and assists the researchers to (1) *avoid plagiarism*, which is against the student code of conduct and is grounds for rejection of the work, and (2) *assign proper authority* to a statement and give credit to any prior published work. When direct quotations or paraphrases from a published work are used, the source must be cited in the text, before the end of the statement. Any style of literature citation may be used as long as the proper authorities are cited in the text and full references are provided at the end of the paper (typically in a list of *references*).

A thorough literature searches with *all* of the relevant results contained in a reference list at the end of a paper allows acknowledgment of the author(s) of the work on which the current work is based. In addition, the use of citations provides a context for the current research and allows readers to find the original source and learn more about the original work. A well-documented reference list and the in-text citations also enable future

researchers to learn what has already been explored and discovered (ASU, 2015; UConn, 2016).

Similarly, in any report to a client the author (academic consultant) must document any prior work, especially work on which the report is based. Ignoring published work in a little-known or obscure journal (i.e., a journal that is not consulted regularly by researchers in the field) and giving the impression that the work in a paper is new and novel is not the way to proceed! Any prior work should be documented and researchers should be wary of a report that has either few or no references. For example, a report in excess of 250 pages on a topical subject area that has only two references might arouse the suspicions of a client that the work and ideas contained therein may have originated elsewhere. However, if that same report is loaded with citations of sources (which show that some of the information is borrowed and from whom it is borrowed, removes the stigma of plagiarism (and theft) and the client will be all the more impressed. A documented report (one that has source citations in it) informs the client and any readers that the writer (consultant) has performed the necessary literature search and the work is up to date and has been approached in a professional and honest manner.

Furthermore, in any paper submitted to a journal for publication or any report submitted to a client, there are two sources of information: (1) the primary sources and (2) the secondary sources. Both sources are valuable but must be cited in the paper so that credit is given to the authors of either source.

Briefly, a primary source of information or data provides direct or first-hand evidence of published work and provides the original materials on which other research is based and enables researchers to get as close as possible to what the actual (real) data produced as a result of a particular experiment. Often primary sources reflect the individual viewpoint of a researcher and the source presents (1) original thinking, (2) a report on discoveries, or (3) new information to be shared with the readers (other researchers). On the other hand, secondary sources describe, discuss, interpret, comment upon, analyze, evaluate, and summarize information from primary sources. Thus, a secondary source may be one or more steps removed from the original experiment and is written or produced after the fact, often with the benefit of hindsight (which may or not be 20-20). For the most part, a secondary source will collect, organize, and repackage primary source information to increase usability and speed of delivery.

It is to be hoped that scientific journals would recognize their interest in serving their readers by ensuring the scientific quality of the articles they publish. The pre-publication screening (via peer review and editorial

oversight) can do part of the job, but even in situations where there is nothing like misconduct on the part of authors, occasionally honest mistakes are discovered after publication. Some journals even have a policy that would prevent authors who become aware of such mistakes from communicating the relevant information to their fellow researchers who have access to the published work now known to be mistaken, whether through the publication of a correction or a retraction.

However, until the academic community is willing to recognize and practice such vigilance as a duty, it's unlikely that failing to exercise it could itself rise to the level of misconduct.

7.4 Data for Publication

Without formal departmental peer review, the data that appears in print is often the original data that has been submitted as part of a manuscript and may not have been checked for reproducibility in the laboratory. Without it appearing to be an excuse, the journal editor or the reviewers (referees) cannot ascertain the validity of the data unless the subject matter of the manuscript is close to the subject matter of their own work. Thus, checking the data in a submitted manuscript is not always (if ever) possible as it passes through the journal review and acceptance/rejection system.

While the general definition of scientific misconduct includes fabrication of data, falsification of data, and plagiarism (theft of someone else's data), the academic scientific community is charged with considering standards for other practices. In publication practices, that encompasses such matters as authorship credit, duplicate publication, accurate representations of the data presented, and peer review.

Insofar as it must not be used as an excuse for unethical behavior, it is recognized the Internet has changed the way research is performed, particularly when it comes to publication. Manuscripts are now submitted, reviewed and authors notified electronically. But although the efficiency and speed of the peer-review process has increased, a set of attendant issues has arisen (Oxender Burgess, 2004). When evaluating a manuscript, a reviewer no longer has to trek several blocks to the library to scour the printed journals in search of a paragraph or a figure that seemed familiar. All that has to be done now is to type a few keywords into an appropriate search engine and, hey presto, all the relevant articles will appear on the desktop. Or, for the more meticulous, anti-plagiarism software is available for free download.

Other, more draconian misconduct-detection measures are aimed at identifying image manipulation. These are currently being considered and even implemented by some journals. It is all too easy for authors to manipulate images for publication. For example, digital image-processing programs make it a simple matter to remove *nonspecific* bands from the final figure. Since the foundation of good research is accurate, reliable, and reproducible data, then images that are less than perfect must be accepted. If images are manipulated to enhance presentation, the integrity of the enterprise may be compromised. For example, two of the most obvious ways that data distortion can be produced are by altering the relationship between the horizontal and vertical scales and the use of different scales on the left and right hand sides of the graph or along the bottom of the graph.

With the popularity of the Internet as an information source, there are now several tools available to aid in the detection of plagiarism and multiple publications of the same paper within the research literature. In addition to the various software packages, other tools which may be used to detect falsified data include error analysis. Error analysis is based on the principle that experimental measurements generally have a small amount of error, and repeated measurements of the same item will generally result in slight differences in readings. These differences can be analyzed, and follow certain known mathematical and statistical properties. Should a set of data appear to be too faithful to the hypothesis, i.e., the amount of error that would normally be in such measurements is not evident, a conclusion is that the data may have been subject to manipulation (forged). Error analysis alone is typically not sufficient to prove that data has been falsified, but it may provide the supporting evidence necessary to confirm suspicions of misconduct.

Only by creating and maintaining ethical guidelines and educating data graphics designers on the effect poorly designed graphics have on people's perceptions can we ensure quality data presentations. However, it may not be prudent for journal editors to seek out potential misconduct in every submitted manuscript. That would impose an unnecessary confrontational relationship on authors and publishers, even before the process of peer review began. Although journal editors may be responsible for ensuring the integrity of the journal contents, if authors do not police their own actions and do not actively instruct students in proper behavior, someone else will take on this task and the consequences may be unpalatable.

While the unethical behavior of faculty researchers cannot be blamed on the publish-or-die message or on the invent-or-die message, the pressure placed on the shoulders of many individuals by either of these messages may be a contributing factor. Not that anyone found guilty of unethical

behavior should be excused because of such a message, but it may be time to change the message – if that is at all possible.

The young assistant professor who is excused from being reprimanded or punished for unethical behavior because he or she is a young professor seeking funding for a research project is also not a valid excuse for lack of disciplinary action. In fact, one might ask if those exalted academics promoting and accepting such an excuse are not also guilty of unethical behavior because they have condoned the young professor's actions. In fact, the lack of willingness of the (academic or industrial) faculty to change is a key barrier to reducing and perhaps eliminating unethical behavior in academia.

7.5 Peer Reviewers and Their Duties

Peer review is the means by which manuscripts submitted for publication in journals undergo *quality control* in the form of a check on quality, the lack of flaws in the data, and the validity of the conclusions drawn from the data. The lack of peer review is what makes most reports and World Wide Web publications unacceptable as contributions to the literature. The relatively weak peer review often applied to books and chapters in edited books means that their status is doubtful, unless an author's personal standing is so high that his or her prior career provides an effective guarantee of quality. Even then, it is not beyond a reputable faculty member to write a book that is of very low quality both in terms of the writing and the content.

Formal peer review is in flux and likely to change fundamentally owing to the emergence of digital repositories where scholars can post their work as it is submitted to a print-based journal. Though this does not prevent peer review, it permits an unreviewed copy into general circulation. Nevertheless, the peer-review process is central to the perception of quality in a journal that its retention is essentially a *sine qua non* for any method of archival publication, new or old, to be effective and valued (Harley *et al.*, 2007). Peer review is *the* hallmark of quality that results from external and independent valuation. It also functions as an effective means of winnowing the papers that a researcher needs to examine in the course of his or her research.

Peer review was an essential factor when faculty were asked about their perceptions of both standard and newer forms of publication, disadvantages of newer forms of publication, where to publish to make a name for oneself in the field, and, of course, when they were asked about peer review specifically.

There is a strong tendency for many members of the research community to equate electronic-only publication with lack of peer review, despite the fact that there are many examples to the contrary. Because of the very nature of peer review, this factor inhibits publication in electronic-only venues even among those who are aware of the existence of fully peer-reviewed e-journals. Simply put, they know that the individuals reviewing their work for advancement may well not have that awareness.

It will be important to try to separate the issue of peer review for newer, electronic journals from those issues associated with the fact that most such journals are simply new and not yet well established. To some degree, however, peer review and the means of publication and dissemination can be separated. For example, there are authors whose work is peer reviewed and published in prestigious print journals, but who also retain rights to place the article on their own website. The result is that the work appears to be accessed far more often on the website than in the published print journal.

There is a growing tendency to rely on secondary measures associated with peer review. These include perceived journal quality, selectivity, and/or stature; whether papers or keynote lectures for conferences are invited; and the growing reliance on editors of university presses and reviewers for journals to evaluate scholarly work. Even though reviewers for university presses are academic faculty, the editor exerts much more independent judgment than is typical for peer-reviewed journals published by scholarly societies. In some cases, the impact factor may also serve as a gauge of quality, a development that many view as problematic – as long as the impact factor is not a biased measure invented by one publisher for application to the research-oriented journals published by that particular publisher.

For example, what does the impact factor really mean if papers from journals of Publisher A have higher impact factors when judged using the system that originated from Publisher A? This question is skirting the issue of unethical behavior but is not such a system a setup to make publisher A's journals more in demand than the journals of other publishers?

The peer-review process is more complicated for compound disciplines which cross over between major disciplines because many such fields are relatively nascent and therefore result in small, specialized communities of scholarship. Faculty members working in such interdisciplinary fields often prefer to publish within a single traditional discipline because the most highly respected and recognizable outlets reside there; however, divergent expectations (ranging from quantity to methodology to writing style) and standards (especially with regard to quality) among fields often make it difficult for reviewers in standard fields to judge submissions from compound

disciplines. Interdisciplinary publications may address this concern more readily as they become more prestigious. However, in such fields, the utilization and perception of peer review is particularly complicated, given the prominence of student-edited law reviews.

7.5.1 The Department Head

A head of an academic department may be elected by acclamation of his or her peers from one of the departmental faculty (in which case the title may be department chair) or be hired into the position by the university (in which case the title may be department head). In this context and for convenience, the title department head and department chair are used interchangeably as the person who is the *first among equals* in the department.

The role of the department head varies from university to university (typically in the *fine print*) but is often recognized as the most difficult job on any university campus. In general, the head must be both a manager and leader with vision. He or she is responsible for marshalling the energies of the entire department to achieve departmental goals and objectives. As both manager and leader, the head serves as the liaison between the department and the college dean, representing the needs and expectations of each to the other. The head guides the department in planning for the future within parameters of the goals and objectives developed by their college, the office of the provost, and the university.

The head is also responsible for the final decisions at the department level on such matters as (1) operating budget allocations, (2) individual faculty teaching assignments, (3) course offerings, (4) assignment of non-teaching responsibilities within the department, and (5) candidate recommendations for faculty and staff positions plus any other necessary decisions. The head also must deal effectively with personnel issues. For example, in the event a department member does not meet performance expectations or contribute in a positive and collegial manner to the work of the department, the head must work with the dean to determine and implement appropriate corrective action.

The department head must recognize the talent of the department faculty and be committed to working with them as colleagues and motivate the department faculty members to focus on undertakings that contribute to the department, college, and university long-range interests. The head also insures the faculty support collective department and college goals, striving for congruence between these goals and the overall mission and strategic plan of the university. The head must effectively represent the

department to the university community, and bring the necessary priorities of the university to the departmental faculty.

The department head is also responsible for individual departmental faculty evaluations, which should cite examples of the successes or shortfalls of each faculty member in attaining the standards of the department. In addition, the assignments and progress of all tenure-track faculty should be discussed annually with the dean. It is at this time, if not immediately when the news breaks, that the department head can discuss the issue of unethical behavior in any form with any miscreant faculty member. However, an issue that arises is that although the department head is recognized as a leader, it is seldom that he or she is the undisputed authority within the department. Few departments have the line authority (or any form of line authority) seen in the nonacademic world, and the *modus operandi* in academic departments is for the head to reach consensus with the faculty on most decisions that affect the department. Department heads, however, are more than agents of the university administration insofar as they are also the primary spokespersons and advocates for the academic department and, in this role, they act as the guarantors of department quality.

To assure department quality in the areas outside of teaching (i.e., publication), the departmental head should be given the authority to decide on the operation of the department and work with the faculty to prepare strategic plans, as well as annual reports describing faculty, program, and department activities and initiatives. In this latter respect, the head would be well advised to oversee contact with the outside-of-the-university issues and any other effects that might contribute to the department getting a bad name. Such contact includes setting up publication review committees that relate to publication issues and, with the dean, any committees to review claims of unethical behavior and all of the negative issues that relate to publication of plagiarized and/or manipulated data.

However, the department head does have primary responsibility for dealing with personnel problems in the department. If a faculty or staff member does not meet performance expectations or violates department, college, or university policies or procedures, the head will meet with the individual (and any other individuals involved, if appropriate) to discuss the situation. The head should make a written record of that meeting. The head may also initiate such a meeting following complaints from students, fellow faculty members, or department staff. Depending on the gravity of the situation, the head may place a letter of counseling and reprimand in the faculty or staff member's personnel file or move to further corrective actions, in consultation with the dean and using the relevant university regulations. Dealing with unethical behavior would certainly fall under such duties.

7.5.2 The Dean

The dean of an academic unit is the designated leader and administrative officer responsible for the effective and efficient operation of the school within the policies, directions and plans of the university as a whole (Rosser *et al.*, 2003). The dean is expected to establish and maintain a collegial work climate, cooperatively leading the academic unit towards improved productivity and relevancy, ensuring the academic integrity and curricular coherence of all programs embraced within it.

The dean is the public spokesperson for his or her academic unit, internal and external to the university, and shall exercise the authority commensurate with the following responsibilities specifically vested in them by the trustees and/or delegated to them by the administrative officers of the university.

On the other hand, department heads are typically excluded from many decisions made by the dean and vice president(s). These include such decisions as which colleges or departments will receive handsome operating budgets for the academic year and may even include claims of unethical behavior – most university regulations need to be updated on such points. The clincher is that it is understood that the dean may delegate many duties to department heads or chairs, program coordinators, or assistant or associate deans, but is ultimately responsible for the quality of their implementation.

Where applicable within campus policies and procedures, it is the duty of the dean to ensure that faculty, staff, and student grievances are correctly processed and appealed in a timely and appropriate manner. These grievances can include grievances by the faculty, by the staff, by the students against the faculty and/or staff, and whenever any other form of unethical behavior arises and comes to the fore.

Although not specifically addressed in many (if any) job descriptions for a campus dean, the dean will also serve on any ad hoc committees that are called for in the discussion of unethical behavior, unless (of course) it is the dean who has been cited for such behavior!

7.5.3 The Journal Editor

Generally, the editor of a peer-reviewed journal is responsible for deciding which of the articles submitted to the journal should be published, often working in conjunction with the relevant society (for society-owned or sponsored journals). The validation of the work in question and its importance to researchers and readers must always drive such decisions. The

editor may be guided by the policies of the journal's editorial board and constrained by such legal requirements as shall then be in force regarding libel, copyright infringement, and plagiarism. The editor may confer with other editors or reviewers (or society officers) in making this decision.

More specifically, the journal editor (or editor in chief, as the title may indicate) has final decision-making authority on, and is responsible for the appropriate delegation of editorial board responsibilities related to content of the journal, including solicitation and acceptance or rejection of manuscripts; selection of editorial boards and reviewers; and the approach to correspondence with authors, reviewers, and readers. In order to accept these duties and responsibilities, the editor must be skilled in the areas of scholarship covered by the journal. In short, the journal editor has the added responsibility to check the soundness and quality of the content. For this, the editor is required to have the necessary skills and up-to-date knowledge of the area of scholarship covered by the subject matter of the journal.

For example, the author who takes work from a previously unknown paper (say one published in a foreign journal that is little known and little read in the West) should give credit to the original work and not ignore it on the basis of personal likes and dislikes or even on the basis of the personal likes and dislikes of his supervisor/mentor.

An editor who is up to date in his or her own area of scholarship would immediately recognize such omissions. Thus, the assumption (often but not always correct) is that the editor chosen for a journal is the most appropriate scholar – the editor is the *gatekeeper* or *watchdog* for the journal and anything published in the journal *must* pass across the editor's desk and *must* be reviewed by the editor. Authors who submit manuscripts to the journal for possible publication are often swayed by the qualification and knowledge of the editor – the reputation of the editor is a direct influence on the reputation of the journal.

The editor is, in fact, the *quality control officer* for the journal where a check is made on the content (authenticity and relevancy to the topic), language (grammar and content flow) and aesthetics (photos, images, sound, audio and video) of the articles or documents appearing on the specified medium. An editor is required, with the consent of the relevant authors, to change, modify, paraphrase or condense the content in order to enhance its quality and approve or reject the piece based on preset grounds. The job of the editor also involves relationship building and communication with the author. The editor is required to use his creative and human resource skills to maintain a cordial relationship with authors whose article are rejected.

Above all, journal editorship is not a résumé builder! In fact, the success of a journal will depend on the performance of the editor and it is the job of the editor to shepherd the journal through lean times and good times (McHugh, 1998). For those who seek to build a résumé by including journal editorship as a glowing one-liner it is recommended that they seek early retirement.

In addition, being the good shepherd, the other major responsibility of the editor is the administration of the peer-review process.

The peer-review process assists the editor in making editorial decisions and through the editorial communications with the author may also assist the author in improving the paper. The process is an essential component of formal scholarly communication, and lies at the heart of the system – all professionals who wish to contribute to publications should be willing (perhaps even have an obligation) to act as peer reviewers. Any selected reviewer who feels unqualified to review the research reported in a manuscript or knows that its prompt review will be impossible should notify the editor and excuse himself from the review process.

Protecting intellectual property is a primary responsibility of the editor. The editor should know the reviewers well enough so that thoughts that reviewers might plagiarize manuscripts should not arise. Reviewers must not use ideas from or show another person the manuscript they have been asked to review without the explicit permission, via the journal editor, of the author of the manuscript. Advice regarding specific, limited aspects of the manuscript may be sought from colleagues with specific expertise, provided the author's identity and intellectual property remain secure.

The editor must accept it as a hard and fast rule (a rule without exception) that unpublished materials disclosed in a submitted manuscript must not be used in a reviewer's own research without the express written consent of the author. Privileged information or ideas obtained through peer review must be kept confidential and not used for personal advantage. Reviewers should not consider manuscripts in which they have conflicts of interest resulting from competitive, collaborative, or other relationships or connections with any of the authors, companies, or institutions connected to the submitted unpublished papers.

The editor must also maintain reviewing schedules by ensuring that reviewers meet agreed-upon reviewing deadlines. And, in order to maintain good reviewers, the editor should have the means to evaluate performance of editorial review board members and coach when appropriate. Above all, and certainly in the context of the present text, the editor must not be involved in positions where conflicts of interest can arise so that

all decisions are beyond reproach. A conflict of interest may exist when a manuscript under review puts forth a position contrary to the reviewer's published work or when a manuscript author or reviewer has a substantial direct or indirect financial interest in the subject matter of the manuscript. A conflict of interest may also exist when a reviewer knows the author of a manuscript. The editor should ensure that such conflicts do not occur and that he or she is also beyond reproach.

The editor should also ensure that proper acknowledgment of the work of others must always be given. Authors should cite publications that have been influential in determining the nature of the reported work. Information obtained privately, as in conversation, correspondence, or discussion with third parties must not be used or reported without explicit, written permission from the source. Information obtained in the course of confidential services, such as refereeing manuscripts or grant applications, must not be used without the explicit written permission of the author of the work involved in these services.

When an author discovers a significant error or inaccuracy in his or her own published work, it is the author's obligation to promptly notify the journal editor or publisher and cooperate with the editor to retract or correct the paper. If the editor or the publisher learns from a third party that a published work contains a significant error, it is the obligation of the author to promptly retract or correct the paper or provide evidence to the editor of the correctness of the original paper.

An editor should take reasonably responsive measures when ethical complaints have been presented concerning a submitted manuscript or published paper, in conjunction with the publisher. Such measures will generally include contacting the author of the manuscript or paper and giving due consideration of the respective complaint or claims made. Actions taken by the editor may also include further communications to the relevant universities and research institutions and, if the complaint is upheld, the publication of a correction, retraction, expression of concern, or other note, is required. Every reported act of unethical publishing behavior must be investigated, even if it is discovered years after publication.

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8

Data Manipulation

8.1 Introduction

Previous chapters have dealt with ideal situations related to learning and where the student-student, professor-student, and professor-professor relationships are the major driving forces in determining the modes of campus-related human behavior. It is now time to consider the events when such relationships are not ideal and may even (Darth Vader notwithstanding) cross over into the *dark side*!

Although the prime mandate of the university is to teach and educate the students, most universities focus not only on teaching but also have a strong research component which appears as various department-oriented programs. In the simplest and correct sense, *data manipulation* is the process of changing or reorganizing data in an effort to make it easier to read or more organized. For example, a collection of data could be organized in numerical or alphabetical order, whichever would enable the reader to find individual entries more easily. Data manipulation is often used on programs such as Microsoft XL to allow a reader to view the most popular entries as well as the sources. However, in the context of this book, *data manipulation* is the process of taking data (numerical data or electronic

images) and manipulating it in a method not only to be easier read or organized but also to change the meaning of the data in favor of the opinions of the data collector. In addition, the data may be manipulated so that any conclusions arising from the manipulated data are changed in meaning, leading to erroneous conclusions, or are prevented from being released to potentially interested readers (Broder, 2009; Casselman, 2012).

In a kinder sense, the ability to manipulate data (sometimes referred to as *playing with the data*) is a critical capability in data analysis. The technique is used in many situations: searching for patterns or trends in observations or as another preparatory stage for further analysis. Sorting data in some way – in alphabetical order, chronological order, numerical order, or on the basis of complexity – is a form of manipulation. Thus, staying with the concept of a *kinder sense*, manipulating data is that process of re-sorting, rearranging and otherwise moving data, *without* changing the data. This is used both as a preparatory technique – i.e., as a precursor to some other activity – or as a means of exploring the data as an analytical tool in its own right. One of the key characteristics of an authentic and ethical manipulation technique (compared to the technique of data transformation) is that the original data remains unchanged. Reorganizing data may help to identify patterns that would otherwise not be apparent. Data manipulation can be used to answer specific research questions such as sorting the data chronologically to find the first occurrence of an event. The data can also be sorted numerically to identify the highest or lowest values, or to identify the median figure (the middle observation) in a series of observations. Data manipulation can therefore be seen as one of many low-level analysis techniques used on a daily basis to indicate the meaning behind the data. However, it is almost certain that certain patterns will not be visible at first glance. For example, marking an attendance sheet in a classroom will tell at a glance which students were present and which students were absent. But the *first glance* at the data does not indicate any trends that may need to be identified.

This leads into the area of data misuse. In the context of this book, data misuse does not refer to the use of personnel records for the benefit of the misuser. At a time when universities have moved to computerized systems for record storage, unauthorized entry into the record by persons other than those designated as keepers of the records is classed as data misuse. How many readers can remember that famous (infamous) scene from the 1986 movie *Ferris Bueller's Day Off* when Ferris hacked into the school record system to change marks? This is not only misuse of data but an excellent example of fraudulent changing of the data. In this book, the emphasis is not so much on changing records but on other misuses

of data and data manipulation that affect the outcome of faculty research projects.

The focus of data manipulation is typically on the manner in which research data is handled and on interpretation of the manipulated data. Appropriate controls (comparisons) of the data or performance of an experiment are essential in research to determine if the experimental conditions have actually made a difference to the outcome of the experiment. However, there is another control that is frequently omitted in academia and that is related to the general absence of any form of a peer (external or internal) review process.

Recall that the *peer-review* system is a process of self-regulation by all university-related professions as a means of evaluating a manuscript before publication and involves review by qualified individuals in the relevant field (Chapter 7). Peer-review methods are employed to maintain standards, improve performance, and to verify whether the work satisfies the specifications for review, identify any deviations from the standards, and provide suggestions for improvements. In fact, the aim of the peer-review system is to assess credibility of a submitted paper but the system generally incapable of detecting dishonesty. Furthermore, there have been accusations that peer review is biased towards studies with positive or more eye-catching results and that such studies are published in preference to others (Notman, 2015).

For the most part, the professor writes a manuscript for publication in a learned journal or for presentation at a society conference. Once accepted for publication or presentation (and inclusion in the conference proceedings) that manuscript, whether it appears in a journal or in the proceedings of a conference, becomes part of the research record of that discipline. Whether or not the manuscript is reviewed by other faculty before it is sent for inclusion in a journal or for presentation at a conference is the choice of the author. Many such manuscripts are not peer-reviewed, which can lead to publication or presentation of erroneous data and even manipulated data.

8.2 Misuse of Data

The misuse of data is the inappropriate use of data as defined when the data was initially collected and the incidences of data misuse continues or when data manipulation introduces and inserts a falsehood (Zurer, 1994; Jacoby, 2002). This covers a variety of issues such as data alteration, missing out flyers, bell-curve manipulation of the data, as well as the fabrication of data

to complete a data set. This issue can be handled if the original investigators use a series of well-planned control experiments and those persons who are unable to reproduce the data should make sure that the experimental parameters do not vary from those of the original investigator.

There can be the inadvertent misuse of data which is the result of human (researcher) error and flaws in the experimental process but there are also many cases of the deliberate manipulation of the data to present a more favorable experimental outcome (such as missing out the flyers or outliers, which are data points that are not close to the mean) or manipulating the data to show that a theory was correct (Chapter 6). Anytime that the data produced by a research process, or any process for that matter, are not used in the way that was originally intended can be construed as misuse of the data. Thus, inappropriate use of data is the use of data for any purpose other than which the data was initially collected. Data misuse can be governed by laws and/or university policy but even with laws and policies in place the misuse of data continues to grow and perpetrators can be both individuals and, in the current content, universities.

A common method of data misuse occurs when experimental data (manipulated data or nonmanipulated data) are used to undermine or reject studies by other researchers, even though the data might indicate that the studies to be rejected are in order. Research being what it is, this may be considered a legitimate and necessary activity that tests and critiques published work, but such actions can also reflect the they-are-wrong-I-am-right battles between entrenched theoretical perspectives that prevents useful research from being used effectively. On the other hand, misuse of data also occurs when one group of researchers (the opposing group) do not acknowledge that data from another group of researchers exists. In some cases, commercial or political pressures have meant that this research has largely been ignored in terms of producing effective (or ineffective) policies to mitigate effects that do not match the political views of the government. Researchers need to be aware of such issues and should take on a greater responsibility for enabling the translation of research data into any necessary actions. Conversely, researchers need to help shape the research agenda more closely to the pointers offered by the data.

Within the academic system, the misuse of research data may arise for a number of reasons – it may be willful, dishonest, accidental, biased, careless or any combination of these. Research is about removing doubt about theories and inserting certainty by confirming or disproving the theory. Research data should replace questions with answers and greater certainty, while just as often such evidence may raise more questions than are answered. However, on occasion, researchers may claim a degree of

certainty that is not warranted by the data and it is by understanding how research data are misused that the researchers will be able to understand better how the data should be used.

As already noted, in some cases, the misuse may be accidental but in many cases the introduction and assertion of a falsehood is purposeful, for the gain of the perpetrator. When the statistical reason involved is false or misapplied, this constitutes a statistical fallacy. The false statistics trap can be quite damaging to the quest for knowledge. Such misuses can be easy to fall into. Researchers can be confused and fooled by even some simple methods, even if they are careful to check everything. Statistics may be a principle means of debate with opportunities for agreement, but this is true only if the parties first agree to a set of rules. The truly sad case is when the falsehood is introduced to a researcher by a program (financial) sponsor and the researcher is forced to accept the falsehood or lose the program funding. However, no researcher should be forced into any form of misconduct and it is the researcher's ethics that should prevent this from happening. In such cases when condoning falsehoods are the order of the day, researchers – if they are worth their weight in ethical gold – must report this to higher authority and make sure that there is the necessary documentation to support their claim!

At a time when the rate of publication of research data is increasing, the time-lag from laboratory experiments or field experiments to acceptance for publication in a journal is decreasing and the pressures to publish mount with the increased chance of duplicated research and competitiveness. The old adage of *publish or perish* is ever more pertinent and it is not surprising that sloppiness, plagiarism and even fraud rear their ugly heads and misconduct becomes the easy route to fame (and notoriety) in the twenty-first century (Martinson *et al.*, 2005). In fact, within certain fields there are estimates that up to 20 percent of accepted papers contain some questionable data, a rate that has not decreased since the journal instituted an editorial data-screening process and data manipulation has moved to digital imaging, where advances in software technology allow researchers to manipulate their data as never before. However, there is a *line in the sand* between acceptable enhancements and scientific misconduct which can lead to image falsification (Rossner and Yamada, 2004; Pearson, 2005).

Recall that *falsification* (Chapter 6) is manipulating research materials, images, data, equipment, or processes and includes changing or omitting data or results in such a way that the research is not accurately represented – a researcher might falsify data to make it fit with the desired end result of a study. On the other hand, *fabrication* (Chapter 6) is the act

of making up research data and results, and recording or reporting these data as a fit to the desired end result of a study.

Certain instances of the reporting of fraudulent data can be easy to detect. For example, a journal paper reviewer might know for a fact that a particular laboratory does not have the facilities to conduct the research that was published. Or the data from the control experiments might be too good to be true. In either situation, an investigation should be conducted to determine if an act of fraud was committed. Digital image enhancement is an acceptable practice but an honest relationship between the original data and the resulting image must be maintained to avoid creating unrepresentative data. If a figure has been significantly manipulated, the author should note the nature of the enhancements in the figure legend or in the Experimental section of the paper. On the other hand, an unintentional error or differences of opinion are not included in misconduct. It is essential for the researcher to understand what is involved in the conduct of data management (including data collection, retention, analysis, and reporting) in accordance with the honest and responsible conduct of research.

Furthermore, the Internet has offered (without laying any blame on the Internet) an attractive means for university students to practice or to become involved in the misuse or manipulation of data. Although considerable academic interest has focused on serious cyber-crimes, more commonplace Internet misuses (e.g., misrepresentation of self, unauthorized downloading, online plagiarism, and other cyber-cheating manifestations) have received less attention (Selwyn, 2008). While such transgressions may be of minor legal importance, they merit closer scrutiny by the teaching professors since the Internet is a conducive environment for misbehavior and any assignment papers or work where such misuse or manipulation is detected should be marked down accordingly. The potential (and, perhaps, reality) for a correlation between the propensity to misbehave in online and offline contexts should be recognized. Once this type of misbehavior has been successful and undetected, the tendency for (or reality of) misuse and manipulation of data will continue.

The misuse of data can include the loss and subsequent misuse of data such as theft and losses through human mistakes and process flaws, but there are also many cases of the deliberate targeting of (1) the outcome of examinations as well as (2) research data. In the former case, this can give a student a *passing grade* when the true outcome should have been a *failing grade*. In the latter case, the outcome can be errors that take considerable effort to correct and may even lead to serious accidents in the laboratory and in practice.

8.2.1 Examinations and Pass Rate

An example of misconduct is the misuse of statistics in the analysis of examination results by the superposition of the bell curve over the data. This is also a serious misuse of the grading system (Cahn, 2011). It may often be referred to as *data dredging*, which is an abuse of data mining. In this method, a pass mark is not assigned. The examination results are placed on a bell curve on the basis that a number of students will fail and a number will gain excellent marks. The remainder of the students are *typical students* or *average students*. In reality, many of the students in a class may not have attained a realistic examination pass mark but, according to the bell curve, have statistically passed the examination and are, therefore, low-quality students who have attained the level of a high-quality degree.

In data dredging, large compilations of data are examined in order to find a correlation, without any predefined choice of a hypothesis to be tested. Since the required confidence interval to establish a relationship between two parameters is usually chosen to be 95 percent (meaning that there is a 95 percent chance that the relationship observed is not due to random chance), there is thus a 5 percent chance of finding a correlation between any two sets of completely random variables. Given that data-dredging efforts typically examine large datasets with many variables, and hence even larger numbers of pairs of variables, spurious but apparently statistically significant results are almost certain to be found by any such study.

Data dredging (sometimes referred to as *data mining*) is a valid way of *finding* a possible hypothesis but that hypothesis *must* then be tested with data not used in the original dredging. The misuse comes in when that hypothesis is stated as fact without further validation. A hypothesis cannot be legitimately tested using the same data that first suggested that hypothesis. In data dredging, all a professor has to do to promote excellence in teaching is to use the bell curve to demonstrate that his or her students have a high pass rate. In this vein of mark manipulation, it was reported that Loyola Law School in Los Angeles arbitrarily raised the grade of every student by one level, retroactively (Mistal, 2010). The reason for the manipulation of the grades was that the university wanted to make the students more competitive in a difficult job market and was reacting to easier grading standards elsewhere. On the positive side, there is no evidence or comment that the university, in this grade mark manipulation, changed a failing grade to a passing grade.

Another way to make examination results and student performance to appear better than they really are – therefore to make the professor look

much a much better teacher – is to precede the examination by a *mock examination* in which the questions are presented to the student in the same form as the final examination question so that the students know the *desired answer*.

The multichoice answer question is another perversion of student and professor performance. Even the sleepest students in class with a modicum of common sense can select the correct answer to the examination question. Let us imagine that the examination involves twenty questions with a possible 120 answers (six answers to choose from per question) and the pass mark is 50 percent. Taking mathematics one step further, twenty correct answers is 100 percent and ten correct answers is a pass mark. This means that the students must pick (or guess) the correct answer 8.3 percent of the time. This form of examination gives the professor an easy marking task when using a template but what if each answer required some discussion by the student? the professor not only has to understand the subject that he or she is teaching but also has to work at grading the exam papers!

8.2.2 Research Data

Data manipulation in research (informally called *fudging the data*) includes selective reporting data (publication) and even simply making up false data. Examples of selective reporting abound. The easiest and most common examples involve choosing a group of results that follow a pattern consistent with the preferred hypothesis while ignoring other results or *data runs* that contradict the hypothesis. In general, the validity of research data results that cannot be reproduced by other investigators must be questioned. However, if there is a vendetta between two groups of researchers, the validity of the group repeating the work and claiming that the data are not reproducible must be questioned.

Data manipulation is a serious issue insofar as outliers, missing data and non-normality can all adversely affect the validity of statistical analysis. It is appropriate to study the data and repair real problems before analysis begins. In any scatter diagram there will be some points more or less detached from the main part of the cloud: these points (outliers) should be rejected *only* for cause and after a thorough investigation. In fact, misrepresentation of the data funding may arise for a number of reasons. It may be willful, dishonest, accidental, partisan, political, ignorant, biased, and careless or any combination of these. Sometimes researchers may claim a degree of certainty that is not warranted by the evidence. It is through understanding how research is misused that people will be able to understand better how it should be used. Common ways in which research

findings are misrepresented are explored under the following subheadings: (1) flawed research, (2) using findings out of context, (3) stretching findings, (4) distorting findings, and (5) rejecting or ignoring findings.

8.2.2.1 *Flawed Research*

The design of the research program is the key to establishing the decision-making processes, the conceptual structure of investigation, and methods of analysis used to address the central research problem of a study. Taking the time to develop a thorough research design helps researchers to organize their thoughts and avoid misleading or incomplete conclusions. Therefore, if any aspect of the research design is flawed or underdeveloped (Table 8.1), the quality and reliability of the final results as well as the overall value of the work will be diminished.

Table 8.1 Common issues to avoid when designing a research study.

Lack of Specificity	Investigative aspects of the study in overly-broad generalities.
Poor Definition	No statement of the intended investigation.
Lack of Theoretical Framework	No explicit set of basic postulates or assumptions related to the research problem.
Poor Method	The design does not include a well-developed plan data generation, collection, and analysis.
Significance	No clear articulation of why the study is important and how it contributes to the larger body of literature about the topic being investigated.
Past Research	No summary description of prior research offered. Failure to link the results of prior research to the research that is about to be undertaken.
Limitations of the Study	No clear description of any limitations, the reasons for the limitations and the impact of the limitations.
Poor Vocabulary	Use of too much jargon and specialized language (technical or pseudo-technical terminology) which is unfamiliar to the reader/reviewer/client.
Contribution to the Field	Failure to place the current work within the context of prior research. No clear description of how the work will contribute to or challenge existing assumptions or findings.

Thus, if a piece of research has not been designed or carried out in a professional and ethical manner, this will impact the quality of the findings. Understanding the principles in research design and delivery will help the researchers assess their research findings. Although not all will be relevant in every case, there are several issues that should be considered: (1) Are the research aims properly explained? (2) Is the methodology clearly set out? (3) Is the literature review relevant and up to date? (4) Is there information on sampling and sample sizes and how the samples were selected? (5) Is there information on response rates? (6) Was there checking of accuracy of data returns? (7) Is there adequate information about how data was processed? (8) Is there a rationale given for the analysis methods and statistical tests chosen? (9) Are the conclusions and interpretations justified by the evidence?

For example, a group of researchers might perform experiments to elucidate the structure of a complex molecule using a series of different reagents and a partially but not well defined starting material in a solvent. But the outcome is always questionable unless the researchers repeat the experiments in the absence of the partially but not well defined starting material to determine if the reactants and the solvent have any effect on the nature of the product. Lo and behold, the reaction product isolated from an experiment in the absence of the starting material is the same as the product isolated from an experiment performed in the presence of the starting material!

8.2.2.2 *Stretching Data*

Stretching data is the opposite of ignoring important data (see below). Researchers can produce cautiously optimistic or positive results that are then *stretched* or *talked up* to give them a significance that is not warranted by the evidence. This can happen for a variety of reasons, not always intentional and not always unintentional!

A common occurrence is that the results obtained from small sample sizes are generalized to larger sample sizes than the evidence supports. For example, interviewing three sets of careers, workers and users involved in an older person's respite scheme for careers might identify the detail of those three individual cases, but to then use this sample to report on what works or does not work about the scheme as a whole would be bad practice. This is not to say that small samples are necessarily unreliable but that care has to be taken in drawing wider conclusions, particularly in the social care arena where individuals and their circumstances are so varied.

8.2.2.3 *Distorting Data*

Incorrect handling of research data, whether advertent or inadvertent, and conflicts of interest by researchers are unnecessarily alarming the public and threatening to destroy trust in research data (Speight and Foote, 2011). Such errors must be addressed and corrected before irreversible harm is done.

Failure to take any corrective action can lead to further (incorrect) work reaffirming the incorrect data, which can lead to unnecessary awarding of grants by gullible or equally nefarious program managers for related projects to produce equally incorrect data that can be used for future nefarious purposes (Speight and Foote, 2011). The conclusions from such work are then submitted to the media who are not researchers in the academic sense and can only base the resulting story on what they have been told. And then (surprise, surprise) the media are blamed for false reporting!

8.2.2.4 *Rejecting or Ignoring Data*

A common technique, much beloved of researchers themselves, is to undermine or reject research studies by the deployment of contradictory findings. While this may be a legitimate and necessary activity that properly tests and critiques research, it can also reflect academic nit-picking or battles between entrenched theoretical perspectives that prevent useful research being used to effect action or social policy. For practitioners it is the problem of balancing complex realities against the necessity of making decisions in the real world.

An example of ignored findings is crucial when formulating any theory. For example, the theory of global climate change is often in the news and has proponents and opponents, although in the 1970s there were scientists who proposed that the Earth was cooling (Douglas, 1975; Gwynne, 1975). Whichever side of the discussion is the correct one, it is important for any researcher (just as it is for any professor mentoring graduate students in this area of research) to acknowledge all of the facts. It is also important to recognize and accept that the Earth is in an interglacial period and during this time is expected to undergo slow warming. In fact, scientific data demonstrating warming temperatures can be valid but there are disagreements insofar as the data do not support many claims about dangerous global warming, overpopulation, declining energy resources, deforestation, species loss, and other supposed consequences of global warming that are subject to the accuracy and reliability of the methods by which the data were acquired and interpreted (Lomborg, 2001, 2007; Oreskes and Conway, 2010; Bell, 2011; Burnett, 2015; 2016a, 2016b; Happer, 2016).

Many university classes are now incorporating the concept of global climate change into the curriculum. But how many of the professors give details about the other effects that could influence climate change rather than postulating that it is all due to the presence of man and his effects (anthropogenic effects) on the Earth. Do the professors give details of glacial periods and the interglacial period? By way of explanation, an interglacial period is a geological interval of warmer global average temperature lasting thousands of years that separates consecutive glacial periods. The historical records show many periods of warming and cooling, many of them so ancient that it is unlikely man even had the technological capacity at the time to be responsible for them. And there is evidence that global temperature swings are caused by sun spots, changes in the electromagnetic activity of the sun because of variations in the intensity of solar wind, and the power of El Niño, which suppresses the cold upswelling in the Pacific Ocean. These issues should also be taken into account by researchers who need to recognize that *the only constant is change*.

With theory as an example, professors may teach the theory to the students from their own perspective and may even engage in intimidation as well as expect total acquiescence from the students (Hamilton, 2002; Cahn, 2011) instead of creative and individual thinking. Every professor should be scrupulous in ensuring that no student is taught from the point of any bias and there should be no bias against any student who has different opinions from the professor.

8.2.3 False Claims

Many of the issues related to data manipulation can be categorized under the title of *false claims* and although one particular article focuses on medical science (Ioannidis, 2011) there are some deep insights for any field of research. In fact, false and exaggerated results in peer-reviewed scientific studies have reached higher proportions in recent years.

The number of investigators, in terms of the number of experiments, observations, and analyses they produce, have increased exponentially in many academic disciplines but adequate safeguards against bias are lacking. Research is fragmented, competition is fierce, and emphasis is often given to single studies instead of the overall field of studies. And then more research time and money has to be expended in pursuit of the truth. Conflicts of interest abound and they influence the outcome of many studies with the desired result being decided before experimentation or research commences. Even for academia, success often hinges on the publication of

positive findings; no one wants to read about the experiments that failed, which may be just as (if not more) important than the positive results. In addition, the publication of positive data in a high-profile journal can have a distorting effect on research funding and academic careers. Industry tailors research agendas to suit its needs, and this also shapes academic research priorities and funding from government agencies.

The crisis should not shake confidence in the research method since the ability to prove a theory to be false continues to be a necessity of research. The fault is with the method used to generate the data and the means by which the information is disseminated. This can be achieved by insisting on reliable validation of any report or other form of publication, by which the data released, in which there is a claim of new and/or innovative finding. Replication of research results is a crucial part of the scientific method. Unfortunately, many disciplines pay little attention to the need for replication and positive reinforcement of research finding and if carried out such attention is often sparing and haphazard and experiments may be difficult, if not impossible, to replicate (Ball, 2011; Naik, 2011). In addition, publication should show that a satisfactory number of analyses has been conducted, which would tend to minimize the tendency for false positives or false negatives. Other examples of false claims include: (1) comparing apples and oranges, (2) apples and kumquats, (3) using the wrong average regression toward the mean. In addition, the adage *garbage in, garbage out* is very true and the method of data evaluation may not be relevant to the issue under study.

In order to ensure that research data can be verified, detailed experimental protocols must be registered before starting the research, and full results and data must be disclosed when the research has been completed. Unfortunately, to many researchers this would have the odious implication of *big brother is watching you*, but without a form of checking, research data are often reported selectively to emphasize the most exciting parts of the data, especially when other workers do not have access to the method or the raw data and are not in a position to replicate the studies.

8.2.4 Use of Mathematical Models

A mathematical model is a description of a system using mathematical concepts and language and is usually composed of relationships and variables. Mathematical models are of great importance in many disciplines and theories are often expressed using mathematical models. Mathematical modeling problems are often classified into a black-box model or a white-box model, according to how much a priori information

on the system is available. A black-box model is a system of which there is no a priori information available. A white-box model (also called glass box or clear box) is a system where all necessary information is available. Practically all systems are somewhere between the black-box and white-box models, so this concept is useful only as an intuitive guide for deciding which approach to take.

A crucial part of the modeling process is the evaluation of whether or not a given mathematical model describes a system accurately and must involve several different types of evaluation. Usually the easiest part of model evaluation is checking whether a model fits experimental measurements or other empirical data. In models with parameters, a common approach to test this fit is to split the data into two disjoint subsets: training data and verification data. An accurate model will closely match the verification data even though these data were not used to set the model's parameters.

Assessing the scope of a model, that is, determining what situations the model is applicable to, can be less straightforward. If the model was constructed based on a set of data, one must determine for which systems or situations the known data is a "typical" set of data. Since the purpose of modeling is to increase the understanding of a situation, the validity of a model rests not only on its fit to empirical observations, but also on its ability to extrapolate to situations or data beyond those originally described in the model, it can be argued that a model is worthless unless it provides some insight which goes beyond what is already known from direct investigation of the phenomenon being studied.

8.2.5 Collapsing Data

At some stage of a complex data-generating research project, there may be the need to manipulate the original data to make it more understandable. Data interpretation after the completion of a complex experiment or after the completion of a series of experiments can be daunting, to say the least. It is at this point that the researcher may turn to the use of statistics to resolve the complex collection of data. However, even the use of the well-trodden path of statistical analysis can be fraught with danger.

On the upside, statistics may provide the answer provided that the data distribution has not been manipulated. Nevertheless, by performing a statistical test, answers to the meaning of the data as well as the need for further experimentation can be assessed. The common statistical tests used by researchers produce a number called the p value, which is the probability, under the assumption of no effect or no difference (the null hypothesis),

of obtaining a result equal to or more extreme than what was actually observed. The p value depends on the size of the character of the data and it is not a measure of how right the investigator is or how significant the difference between experiments might be.

On the downside, a side that is not often recognized by researchers in their application of statistical analyses to data interpretation, there is no mathematical tool that will show the researcher if his or her hypothesis is true. Statistics will show if the experimental data are consistent with the hypothesis but if the data are sparse or unclear (because of poor experimental planning), any conclusions derived from the data (no matter how well statistical analysis is applied) will be uncertain.

Any claims that statistical analysis has been applied to the work and confirms that hypothesis are not necessarily valid claims. And, moreover, statistics should not be bailed for misinterpretation of the data. The experimental planning is, more than likely, at fault and the researchers may not have recognized or are unwilling to recognize faulty experimental planning.

The watchword when statistics are used to prove a hypothesis is to be extremely cautious and to make a fact-check of the data and a thorough check of any data manipulation methods that have been applied to the data (Huff, 1954; Steele, 2005).

8.2.6 Use of Statistics

The use of statistics is often invoked as the correct produce to use when data need to be organized into a meaningful experiment outcome. In fact, statistics are supposed to make a multitude of data easier to understand but when used in a misleading fashion can confuse the casual (and even serious) observer into concluding something other than what the data show (Campbell, 1974; Spierer *et al.*, 1998; Moore and McCabe, 2003; Gibilisco, 2004; Moore and Notz, 2006). That is, a *misuse of statistics* occurs when a statistical argument asserts a falsehood. In some cases, the misuse may be accidental while on other cases, it is purposeful and for the gain of the person who has generated the data. This latter aspect reaffirms the need for control experiments.

Also, it is well to remember that statistics usually produce probabilities and that any conclusions drawn from the data are provisional and generally need experimental proof. Furthermore, without an understanding of the purpose and limitations of statistical tools, even the most well-intentioned researcher can easily fall into the trap of misusing statistics to support a conclusion that is not valid. Both descriptive and inferential statistics are open to misuse if one is not careful. However, an understanding

of what various statistical tools can and cannot do, what assumptions need to be met when using them, and how to appropriately interpret the results of statistical tests can enable one to learn what questions to ask when presented with statistical findings, become a more skilled user of statistical information, and be less prone to succumb to the trap of misused statistics.

In some instances, the misuse of statistics has been caused by the lack of awareness of the kinds of problems that may be encountered in research or by the overall, carelessness or lack of caution by others (by accepting that use of statistics will provide the correct answer to a problem) and review of the data. On the other hand, the misuse of statistics may be deliberate. Whilst carefully designed, peer-reviewed and repeatable research does provide a strong foundation for proving or disproving a theory, poorly planned research or selective (biased) use and presentation of the data results can have serious consequences. Typically, the kinds of problems that may be encountered when statistics are employed to summarize (some would say *interpret*) research data include: (1) use of inadequate or nonrepresentative data, (2) inadequate reasoning on the basis of the data, and (3) misleading visualization of the data, typically by using an x-y graph in which the ordinate and abscissa are scales to show a favorable (but inaccurate) display of the data.

8.2.6.1 *Use of Inadequate or Nonrepresentative Data*

The use of inadequate or nonrepresentative data is a common reason for statistical analysis not being within the acceptable standards of use. Problems typically relate to inadequacies in sampling, i.e., in the initial design of the data collection mode of the work as well as the selection process or the extraction process for obtaining the data. This results in the sample, from which inferences about the population are made, being biased or simply inadequate. In a more detailed description, there are several issues that can lead to problems in the use of statistics: (1) datasets and sample size, (2) clustered sampling, (3) self-selection and prescreening, (4) data exclusion, and (5) deliberate bias.

There are many situations where *datasets and the sample size* analyzed is too small to address the questions being posed, or is not large enough for use with the proposed statistical technique, or is used in a misleading fashion. Smaller sample sizes are also more prone to bias from missing data and nonresponses in surveys and similar research exercises. It is also important for the researcher to be aware that small samples tend to be much more variable in *relative* terms than large samples, which can result in errors in reasoning.

The issue of *clustered sampling* relates to the collection of data in a manner that is known in advance to be biased, but is not subsequently adjusted for this bias. Examples include the deliberate decision to over-use the desired data because of the presence of flyers – data points that are outside of the levels of experimental difference or are not a fit with the researcher's hypothesis. If all of the experimental data are not included in the final analysis and the data are not subsequently weight-adjusted (or *declustered*) the results will, more than likely, show a bias towards the data that have been used in the analysis.

Self-selection and prescreening is a widespread problem in data sampling and the subsequent reporting of the data, which is a form of exclusion of data. In fact, *data exclusion* is perhaps the most common form of the adulteration of experimental data. The research design may inadvertently of deliberately exclude certain groups or datasets. This may be due to poor experimental design with the result that some data are less easy to collect than others. On the other hand, the researcher may decide (without just cause) to ignore the flyers (also called *outliers*) – data points that fall outside of the researcher's hypothesis. This is also related to a researcher having a particular research focus which can result in inadvertent use of techniques or survey questions that influence the outcome of the research and the generation of unbiased data which, in turn, lead to weak or incorrect reasoning and any conclusions drawn from the data.

Deliberate bias is an important and serious area of misuse and is evident when the researcher by judicious selection, combination, arrangement and/or reporting of data (which may have been extremely carefully collected). Examples include: (1) deliberate omission of data that does not fit the preconceptions of the researcher, (2) the conclusions that the researcher is seeking, (3) omission or adjustment of data, which may be acceptable practice in some instances, but should always be made explicit as, for example, the exclusion of outliers (flyers) on the grounds that they may appear to be recording errors.

8.2.6.2 *Inadequate Reasoning on the Basis of the Data*

Drawing conclusions from research data is always a complex process and often subject to debate. The confidence that can be placed in conclusions will depend, in part, on the nature and quality of the data collected and analyzed, and the quality of the reasoning applied to the interpretation of the findings. Certain types of reasoning may appear entirely plausible but on closer examination can be seen as fundamentally flawed.

For example, *correlation versus causation*. It is easy to assume that because there is a perhaps highly significant relationship between two variables, that one *causes* the other. This may occur in many ways and can be quite subtle (obvious examples are much easier to detect). The inferences drawn may be valid, and the observations can provide very useful pointers for research, but the data may only provide very tenuous support for the claims made. In addition, *misunderstanding of the nature of randomness and chance* can lead to incorrect judgments or conclusions. A simple example is misjudging the effect of sample size.

8.2.6.3 *Misleading Visualization of the Data*

Research requires the application of a reliable method by which data are collected, analyzed, and conclusions are drawn based on the data. Hypothesis testing and the concomitant use of statistical tools is the way that any discipline is advanced and theories are validated or changed. However, the presentation of graphs, charts, or numbers derived from formulas alone (that are secret or mysterious and known or understood by only a few people) is not enough to prove whether or not a hypothesis is correct. Unless the limitations of such statistical tools and how to interpret them are understood, it can be easy for even the most well-intentioned person to misuse statistics to support a conclusion that is not valid. It is in such instances that charts or graphs become the operative means of presenting a hypothesis in an understandable manner.

To be meaningful (and not to be confused with a hidden meaning) a statistical graph or chart should indicate: (1) what the scales are, (2) whether the scales start at zero or an alternate value, and (3) how it was calculated, in particular exactly the dataset upon which the graph is based. Without all of these elements the information presented should be viewed with caution. Line graphs and histograms that simply show the neighborhood of the top of the diagram are generally misleading. Similar issues may arise if some of the data points are not included or if data prior to or after the plotted sequence is not shown but would place the information in a more meaningful and complete context.

Similar issues apply to all forms of visualization, indeed increasingly so as automatic creation of charts, diagrams, classified maps and 3D representations become increasingly widespread. Of particular concern is the issue of comparability. Visualizations that may be used to compare data from different experimental sources, datasets, times, and locations, must be directly comparable in both design and scaling, otherwise comparison is almost impossible.

As an example of the misuse of data, a student-researcher attempted to perform a statistical analysis of the responses to a questionnaire that formed the basis of his or her thesis. At the end of the work, and as the thesis evolved, there was sufficient evidence to show that the sampling method was inadequate, there were no finite conclusions, and the work was of little or no value. One might expect that the student-researcher would either (1) have to repeat the work using a larger sample of the population, (2) redesign the questionnaire, (2) have the thesis rejected. On this basis, it might be expected that the original thesis would be deemed unsatisfactory and the advanced degree not awarded. This was not the case.

8.3 Misuse of Research Funds

Misuse of data also includes the misuse or misrepresentation of the use of the research funds in which a true and accurate accounting of the use of the money is not available or is *lost in the system*. Before continuing further on this issue, it is first necessary understand the manner in which research funding is dispersed within academia.

Research funding is of key importance for conducting scientific research and research grant money to pay for the acquisition of chemicals, product analysis, procurement of research samples, purchase and repair of laboratory instruments, purchase of research supplies, and publication of research reports, which are categorized under the *direct costs of doing research*. In addition, there are also the *indirect costs of doing research*, which include all of the expenses necessary to support using an active research laboratory to perform experiments, and there can be no doubt that the indirect expenses are needed for the conduct of experiments in research laboratories in academia. The fiscal support used for indirect expenses is determined by periodic negotiations between the university receiving a research grant award and the funding agency. The *total indirect costs* awarded by the funding agency are calculated at an agreed percentage of the *total direct costs* awarded by a research grant (typically on the order of 35–75 percent of the direct costs). The approved rates for indirect cost awards vary considerably between different institutions such as the location of the university, the size of the university, labor costs, number of faculty, and the number of other employees.

Usually, only faculty members having a research laboratory are required to pay for indirect expenses via their research grants. Faculty members researching in other areas of scholarly endeavor mostly are not required to pay for the indirect costs of their investigations. In all such cases, their

indirect expenses must be paid by some other institutional funds, and presumably are seen as simply representing the routine costs of university business. In addition, indirect costs for faculty offices, teaching activities in lecture and laboratory classrooms are typically paid by the university as a normal operating expense. It is only faculty scientists conducting research in laboratories who are required to pay for the indirect costs of their experimental investigations. Universities need to exercise very careful management of their accounting systems and be transparent when it comes to use of money received from a funding agency (Higdon, 2015; Mooney, 2016) – it is not unknown for a faculty member to file a suit against a university for misuse of funds (Haughney, 2013).

One aspect relates to the manner in which a university controls disbursement of research funds. For example, in one case, the National Science Foundation awarded the funds to a university to support high-energy particle physics research (NSF, 2015). Federal prosecutors stated that the university repeatedly approved advances and other payments to accounts at the organization without proper justification. The university has since made changes to the manner by which such funds are monitored and has also instituted the proper financial controls (NSF, 2015).

In another case (Leung, 2013; Hwai, 2013), twenty-two professors at some of Taiwan's top universities – including the prestigious National Taiwan University – have been charged with using false receipts to claim reimbursements out of research funds. The indicted professors are among three hundred academics and researchers investigated by the Taipei Investigation Bureau after prosecutors were advised in June 2011 that an associate professor at National Changhua University of Education had used fake receipts to claim reimbursements from the university. The prosecutor's office charged the professors with using false receipts from two scientific instrument companies, and also for benefiting from rigged tenders, according to official documents. But with so many academics being charged, some of them with substantial reputations – and the highest number from National Taiwan University – the Education Ministry and research funding bodies, including Academia Sinica and Taiwan's National Science Council (NSC), are appealing to the Ministry of Justice for leniency on the basis that the corruption charges would deal a serious blow to academic morale! At the time of writing (2016), there has been no further publication of the status of this case (or these cases), and the fate of the accused professors is unknown.

In yet another case, a professor used a \$1-million science grant as a piggy bank to finance personal travels and his private business. The money was supposed to pay for the professor and his graduate students to explore

innovative scientific ideas. However, the professor expensed trips to science conferences he did not attend, rented apartments for extended stays outside the country, loaned business associates money, and bought gear that had nothing to do with his research (Munro, 2014).

Obviously, there is a need for universities to establish and *enforce* clear policies and processes for considering and punishing financial misconduct wherever and whenever the issue emerges. Such policies should provide clear advice and guidance to faculty researchers as well as actively monitor the financial progress of research, especially where potential risks are identified. This may entail, for example, having mechanisms to call on expert advice or to convene expert groups (this might include individuals with scientific, biosafety, security and ethics expertise who usually form an academic oversight committee) to assess the financial risks and benefits associated with all research projects. The mechanism for preventing financial mismanagement should also include provision for the appropriate training and education to all faculty members and having policies in place to ensure staff and students can raise legitimate concerns without fear of reprisals. There should also be a clear statement about the punishment and penalties for anyone found guilty of the financial mismanagement of research funds.

Finally, the formulation of such programs (mechanisms) should involve faculty members and staff members from relevant disciplines and representatives of professional societies, funding agencies, regulatory bodies, and other key stakeholders at a national and international level. These meetings should be open and transparent, and provide for wider campus input and engagement as far as possible. It is particularly important for the academic community to maintain an active dialogue with funding agencies to ensure that their requirements and concerns are addressed.

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9

Harassment: Sexual and Otherwise

9.1 Introduction

Harassment is unwelcome conduct (such as behavior as well as the spoken and written word) that is based on race, color, religion, sex (including pregnancy), national origin, age (forty or older), disability or genetic information (Brownstein, 1994; Shakeshaft, 2004; Hill and Silva, 2005). Harassment becomes unlawful where (1) enduring the offensive conduct becomes a condition of continued employment, or (2) the conduct is severe or pervasive enough to create a work environment that a reasonable person would consider intimidating, hostile, or abusive. This is also true of situations where age discrimination is operative (Olson, 2016).

Briefly, age discrimination involves treating someone (an applicant or employee) less favorably because of his or her age (US EEOC, 2106). Furthermore, and in the context of this chapter, it is unlawful to harass a person because of his or her age. The harasser can be the victim's supervisor, a supervisor in another area, a co-worker, or someone who is not an

employee of the employer, such as a client or customer. Anti-discrimination laws also prohibit harassment against individuals in retaliation for filing a discrimination charge, testifying, or participating in any way in an investigation, proceeding, or lawsuit under these laws, or opposing employment practices that they reasonably believe discriminate against individuals.

Sexual harassment is a form of sex discrimination that is prohibited under the law. This federal legislation holds that no person in the United States shall, on the basis of sex, be excluded from participation in, denied the benefits of, or subjected to discrimination under any education program or activity receiving federal financial assistance. In the university, if harassment of any kind, particularly sexual harassment, occurs, the university is not exempt from the law. From the any relevant law which deals with harassment in the workplace, a change of the word *employer* to *university administrator* and from *employee* to *student* covers the same issues of harassment that occur on a campus or at any site (such as a fraternity house, a sorority house, an off-campus dormitory, or other university-controlled or university-related site) where the university has control or management responsibility.

Harassment on the basis of sex is a violation of the Civil Rights Act of 1964 (Title VII, §703), and sexual harassment in any form should not be tolerated at the university, but it does occur (Cantor *et al.*, 2015; Spangler, 2015) and approximately one in ten female students have experienced sexual assault involving penetration, by force or incapacitation, while in college (Kinkade, 2015). Title IX of the Education Amendments of 1972 also prohibits sex discrimination in any education program or activity. One type of sex discrimination is sexual harassment, which includes the various forms of sexual violence that occur, even in schools (Shakeshaft, 2004; Bailey, 2011) as well as claims that male students posted nude photographs of women on a Facebook page (Maher, 2015). (One assumes that female students could also engage in such behavior.)

Academic freedom, creativity, professional achievement, and personal development flourish in a healthy environment. Such an environment must be one in which all employees and students can pursue their work free from coercion, intimidation, and exploitation. Harassment is not in keeping with the mission of the university, or any institute of higher education, and it is the responsibility of the university to assure that such actions do not occur. If they do occur the university must take action insofar as violations of this policy should result in disciplinary action up to and including expulsion or termination, which can take the form of a resignation (Freeh, 2012; Pérez-Peña, 2014s, 2014b; Schweber, 2014; Zernike, 2014; Anderson and Deutsch, 2015; Overbye, 2015; Rojas, 2015). There is also the issue of

whether or not a university president can be held liable to the extent that he or she could go to jail (Sokolove, 2015).

It behooves all universities to have in place a policy that defines any form of misconduct, including sexual misconduct. The purpose of creating a sexual misconduct policy is to provide a single, easily accessible and user-friendly document for faculty, staff, and students, as well as others affected by sexual misconduct to find information regarding the rules and procedures of the university, including the rights of students and the obligations of the university and all employees. The policy should address all details of the issues and should cover every college and department within the university. There should be no exemptions for lack of adherence to the policy and a checklist should outline all aspects of the policy (for example, please consult <https://www.notalone.gov/assets/checklist-for-campus-sexual-misconduct-policies.pdf>; accessed March 10, 2016).

Sexual harassment on campus can take any one or more of several forms (Cantor *et al.*, 2015; Spangler, 2015): such as: unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when: (1) submission to such contact is made either explicitly or implicitly a term or condition of an individual's employment or education, (2) submission or rejection of such conduct by an individual is used as the basis for employment or educational decisions affecting the individual, (3) such conduct has the purpose or effect of substantially interfering with an individual's welfare, academic or work performance, or creating an intimidating, hostile, or demeaning learning or work environment (Hill and Silva, 2005). There may be different attitudes toward sexual harassment insofar as there may be subtle nuances that reflect the sex of the perpetrator, victim, and participant, as well as the degree of physical contact involved (Gordon *et al.*, 2005). Some observers might claim that the attention of the perpetrator to the victim is *merely* innocent flirting but the real issue is whether or not innocent flirting actually exists and is tolerated by the university. Moreover, when sexual harassment or sexual misconduct occurs, placing the emphasis on the victim, and whether the victim did or did not suffer abuse or harm is not the appropriate focus. The proper emphasis must not be on the student, but on the teacher (or professor), who is solely responsible for his or her professional conduct (Shakeshaft, 2004).

In addition, the physical aspects of sexual harassment include: (1) subtle persistent pressure for sexual activity, (2) unnecessary touching, pinching, and/or brushing against a person, (3) sexual coercion or assault, (4) demanding sexual favors with implied or overt threats concerning work or academic decision or preferential treatment, (5) unwelcome verbal/

expressive behavior of a sexual nature such as jokes, sounds, obscene phone calls, demeaning graphic portrayals, and (6) stalking, cyberstalking, and failure to accept the termination of a consensual relationship with repeated overtures or other aberrant or negative behavior. On the other hand, *sexual violence* refers to the physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent and includes rape, sexual battery, and sexual coercion.

Under Title IX, it is unlawful to engage in sexually harassing conduct toward a student and recognizes two general forms of sexual harassment: (1) *quid pro quo* and (2) hostile environment. *Quid pro quo* sexual harassment occurs when a student must submit to unwelcome sexual conduct in exchange for receiving a grade or similar opportunity in the academic environment. *Hostile environment* sexual harassment entails unwelcome sexual conduct that unreasonably interferes with a student's work performance or creates an intimidating, hostile, or offensive academic setting.

Under the laws of many countries, no employee, student or campus visitor may: (1) make unwelcome sexual advances to a student, (2) make unwelcome requests for sexual favors, regardless of whether or not such requests are accompanied by promises or threats to the academic relationship, (3) engage in verbal or physical conduct of a sexual nature with a student that may threaten or insinuate that the student's submission to, or rejection of, sexual advances will influence the student's grades, participation in or access to academic programs, class standing or other educational opportunities, (4) engage in conduct of a sexual nature that has the purpose or effect of substantially interfering with a student's ability to learn or participate in a class, or creates an intimidating, hostile or offensive academic environment, and (5) commit any act of sexual assault or public sexual indecency against a student, or continue to express sexual interest in a student after being informed that the interest is unwelcome. Under Title IX, a variety of behaviors might constitute sexual harassment as prohibited under Title IX. Sexually degrading words to describe a student, sexually aggressive language or jokes, or commentary about the physical appearance (or bodily attributes) of a student; all might be considered sexual harassment on campus.

Federal and state courts have determined that a university may be liable for monetary damages to a student who is the victim of sexual harassment by an employee of the university. Under Title IX, however, a university may also be responsible for the conduct of more than just the employees. The law requires that students comply with the university policies against sexual harassment. In fact, if the university does not take seriously a victim's complaint of sexual assault and the claim is mishandled there is the

distinct possibility that the university can also be held liable (Schlossberg, 2014), especially when the university knew about a prior incident in which the accused was found guilty of violent misconduct (Luther and Solomon, 2015; New, 2015).

Upon learning of allegations of sexual harassment from the alleged victim, members of the university administration, deans, directors, department chairs, and other officers of the university shall report the allegations to the Office of Employee Relations and Compliance within five working days. (A supervisor, manager, administrator, or faculty member who disregards or fails to report allegations of sexual harassment by a student is in violation of SDSU policy). The university must ensure that procedures appropriate to university complaints are followed and the procedures must be governed by law, labor agreements, and university policy.

Yet, in spite of this, harassment on university campuses is almost a way of life and occurs all too regularly. A majority of students are either being harassed on their university campuses or have witnessed another student being harassed on university campus. Harassment limits a student's ability to benefit from education and causes the student to be unable to concentrate in the classroom and also prevents attendance in class and/or social activities.

9.2 Title IX

On June 23, 1972, Title IX of the Education Amendments of 1972, 20 U.S.C. Â§1681 et seq., was signed into law as a comprehensive federal law that prohibits discrimination on the basis of sex in any federally funded education program or activity. The principal objective of Title IX is to avoid the use of federal money to support sex discrimination in education programs and to provide individual citizens effective protection against those practices. Title IX applies, with a few specific exceptions, to all aspects of federally funded education programs or activities. In addition to traditional educational institutions such as elementary and secondary schools, colleges, and (most important in the context of this book) universities, Title IX also applies to any education or training program operated by a recipient of federal financial assistance. The Department of Education has issued regulations on the requirements of Title IX, 34 C.F.R. § 106.1 et seq. The Title IX common rule published on August 30, 2000, covers education program providers and recipients that are funded by other federal agencies.

The Supreme Court of the United States and the United States Department of Education have given Title IX a broad scope that covers

sexual harassment and sexual violence. Moreover, under Title IX, a university is legally required to respond and remedy and end to a hostile educational environment – failure to do so is a violation of the Title IX that means a university could risk losing any (and all) federal funding. In short, Title IX dictates that no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance.

The Title IX legislation covers all educational activities, and complaints under Title IX alleging sex discrimination in all aspects of academic life. It also applies to nonsport activities such as the university band and clubs. The following paragraphs present to the reader general descriptions of the meaning of Title IX and the methods by which Title IX is enforced.

Thus, within the bounds of Title IX, a university must ensure that the campus is free of sex discrimination and must take immediate action to address any sex discrimination, sexual harassment or sexual violence on campus. In addition, if a university (the administrators, the faculty, or the staff) knows or reasonably should know about discrimination, harassment or violence that is creating a *hostile environment* for any student, it must act to eliminate it, remedy the harm caused, and take the necessary actions to prevent any recurrence. The university should not discourage survivors of sexual harassment, sexual assault, or sexual violence from continuing their education, such as telling the survivors to *take time off* or forcing the survivors to resign from a team (sports team or academic team), club, or class. The student has the right to remain on the campus and have access to every educational program and opportunity that is available.

Moreover, a university must have an established procedure for handling complaints of sex discrimination, sexual harassment, and sexual violence and, in fact, every university must have a Title IX coordinator who manages the complaints. The contact information for the Title IX coordinator should be publicly accessible to the faculty, staff, and students and should also be available on the university website. In addition, if a student files a complaint, the university must promptly and efficiently investigate the complaint regardless of whether or not the student reports the incident to local law enforcement. Any investigation by a law enforcement agency should not be impeded by the university investigation, although the investigation by the law enforcement agency may delay the university investigation, especially when gathering evidence.

A university may not wait for the conclusion of a criminal proceeding and should conclude its own investigation within an appropriate time frame (the 2011 Office for Civil Rights Title IX guidance proposes sixty

days as an appropriate time frame). The university should use a *preponderance of the evidence* standard to determine the outcome of a complaint and the appropriate disciplinary action (punishment) should result if the incident is more likely than not that discrimination, harassment, and/or if violence occurred. The final decision should be provided in writing to the victim and to the accused person, both of whom have the right to appeal the decision.

The university must take immediate action to ensure that a victim can continue his or her education free of ongoing sex discrimination, sexual harassment or sexual violence. Along with issuing a no contact directive to the accused person, a university must ensure that any reasonable changes to the victim's housing, class schedule, sports schedule, campus job, or extracurricular activity, and club membership are made to ensure that the victim can continue his or her education free from ongoing sex discrimination, sexual harassment, or sexual violence. These arrangements can be prior to submission of a formal complaint or prior to the onset of an investigation, hearing, or before a final decision is made regarding the complaint. Additionally, these accommodations should not overburden complainant-victims or limit the educational opportunities of the victim of accused person. However, a university can require that the accused person should change some of his or her university activities or classes to ensure there is not an ongoing hostile educational environment.

A university must not retaliate against someone filing a complaint and must keep a victim safe from other retaliatory harassment or other harassing behavior. A university must address complaints of sex discrimination, sexual harassment and sexual violence and, as part of this obligation, the university can issue a no-contact directive or make other accommodations to ensure the accused person or a third party does not retaliate for any complaint. The university may not take adverse action against the complainant-victim and any such retaliation can, and should be, reported in a formal Title IX complaint to the United States Department of Education since it is the victim's right not to suffer any hostile educational environment.

When necessary for personal safety, a university can issue a no-contact directive to prevent an accused person from directly or indirectly contacting or interacting with the victim. The campus security personnel or local police officers can, and should, enforce such directives. While a no-contact directive is not a court-issued restraining order, a university should provide the victim with information on how to obtain such an order and facilitate that process if the victim chooses to pursue that course of action.

In cases of sexual violence, the university is prohibited from encouraging or allowing mediation (rather than a formal hearing) of the

complaint. The 2011 Title IX Guidance clearly prohibits a university from allowing mediation between an accused student and a complainant-victim in cases where sexual violence is involved. However, the university may offer such an alternative process for other types of complaints, such as sexual harassment. It is the choice of the victim who can and should seek a disciplinary hearing if he or she desires such a formal process. Universities are discouraged from allowing the accused person to question the victim during a hearing. If a university allows such questioning to occur, the victim has the right to an attorney or other legal advocate to help him or her through the process, and/or the victim may choose to file a Title IX complaint with the United States Department of Education about the hearing process.

A university should not make or ask the victim to pay the costs of certain accommodations that are required in order to continue his or her education after experiencing violence. If the victim needs counseling, tutoring, changes to campus housing, or other remedies in order to continue his or her education, the university should provide these at no cost to the victim. Similarly, the victim should not suffer the financial burden of mistakes on the part of the university. If the university fails to take prompt and effective steps to eliminate the violence and prevent its recurrence, the university may be required to reimburse the victim for lost tuition and any related expenses.

In 2014, guidelines were issued by the United States Department of Education stating that transgender students are protected from sex-based discrimination under Title IX and instructed schools and universities to treat transgender students consistent with their gender identity in single-sex classes, so that a student who identifies as a transgender boy is allowed entry to a boys-only class, and a student who identifies as a transgender girl is allowed entry to a girls-only class. The memo states in part that “*all students, including transgender students and students who do not conform to sex stereotypes, are protected from sex-based discrimination under Title IX. Under Title IX, a recipient generally must treat transgender students consistent with their gender identity in all aspects of the planning, implementation, enrollment, operation, and evaluation of single-sex classes.*”

There is a widely held misconception that university athletics are the major component of academic life governed by Title IX. Other areas that fall within the scope of Title IX include: (1) benefits and leave, (2) course offerings and access, (3) counseling services, (4) hiring, retention, promotion of employees, and (5) recruitment, admissions, financial aid and scholarships. In fact, the overwhelming

majority of Title IX lawsuits historically filed against universities do not involve sports but focus on discrimination in education and employment. However, universities and their athletic departments are just as susceptible to these lawsuits as they are to claims of gender inequality in sports. Just recently, a number of high-profile lawsuits filed against universities have variously alleged discrimination in the termination of female coaches, athletic directors, and athletic staff (<http://winthropintelligence.com/2012/10/29/what-athletic-directors-need-to-know-a-title-vii-title-ix-primer/>; accessed March 16, 2016). Title IX has created parity in athletics, as well as other educational opportunities and experiences for men and women. Title IX does not require schools to cut men's athletic programs. Each school determines how it will comply with Title IX regulations. Furthermore, before Title IX the primary physical activities for girls were cheerleading and square-dancing. There were virtually no university scholarships for female athletes and the female athletes received less than 5 percent (usually on the order of 2 percent) of overall athletic budgets (<http://www.titleix.info/10-Key-Areas-of-Title-IX/Athletics.aspx>; accessed March 16, 2016).

Section 8B2.1.(b)(5)(B) of the United States Sentencing Commission's Federal Sentencing Guidelines states "*the organization shall take reasonable steps – to evaluate periodically the effectiveness of the organization's compliance and ethics program.*" Should a university be involved in a criminal proceeding, the extent to which the university took steps to ensure that their compliance and ethics program was effective would be considered during the sentencing phase. In addition, federal laws such as the Title IX of the Education Amendments of 1972, Title VII and the Ted Stevens Olympic and Amateur Sports Act have heightened administrative responsibility related to obligations to prevent sexual harassment and abuse. Such misconduct (Chapter 9) may occur inside or outside the classroom or gymnasium and may also involve activities engaged in by teams or individuals on university property or during off-campus trips of student groups. In the case of Title IX, if the school or college has control of either the place or the actors, it is required to address sexual harassment, violence, and abuse in off-campus settings.

Since Title IX came into law, there has been substantial growth in the number of women who participate in sports, receive scholarships, and benefit from increased budgets. Studies also link sports participation to reduced incidences of breast cancer and osteoporosis later in life. These health benefits for women and society alone should be reason to maintain Title IX as an effective law (<http://www.titleix.info/10-Key-Areas-of-Title-IX/Athletics.aspx>; accessed March 16, 2016).

9.3 Harassment Situations

A harassment situation is one in which there is verbal abuse or physical conduct that denigrates or shows hostility or aversion toward an individual because of that person's (or that person's relatives', friends', or associates') race, skin color, religion, gender, national origin, age, or disability, and that: (1) has the purpose or effect of creating an intimidating, hostile, or offensive work environment, (2) has the purpose or effect of unreasonably interfering with the individual's work performance, and (3) otherwise adversely affects the opportunities for the individual's employment or for the student to graduate.

Thus, harassing conduct includes epithets, slurs, negative stereotyping, or threatening, intimidating, or hostile acts that relate to race, color, religion, gender, sexual preference, national origin, age, or disability (including jokes or pranks that are hostile or demeaning with regard to race, color, religion, gender, national origin, age, or disability). Such conduct also includes written or graphic material that denigrates or shows hostility or aversion toward an individual or group because of race, color, religion, gender, national origin, age, or disability and that is displayed on walls, bulletin boards, or other locations on campus or circulated in the campus. Thus, harassment can be in the form of petty slights, annoyances, and isolated incidents (unless extremely serious) will not rise to the level of illegality. Unfortunately, the world is full of annoying people (Beck, 2014) but to be unlawful, the conduct must create a work environment that would be intimidating, hostile, or offensive to reasonable people.

Offensive conduct may include, but is not limited to, offensive jokes, slurs, epithets or name calling, physical assaults or threats, intimidation, ridicule or mockery, insults or put-downs, offensive objects or pictures, and interference with work performance. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature (Lewin, 2014; Pérez-Peña, 2014b). Harassment can occur in a variety of forms and does not have to be of a sexual nature, however, and can include offensive remarks about a person's sex. For example, it is illegal to harass a woman by making offensive comments about women in general. Both victim and the harasser can be either a woman or a man, and the victim and harasser can be the same sex.

Ongoing issues such as (1) the atmosphere towards female faculty in the classroom, (2) the structure of academic programs, and (3) poor faculty attitudes often emphasize the prevalent nineteenth-century attitude that science and engineering are highly competitive, masculine domains.

While many universities seem to be committed to increasing the number of women pursuing science and engineering, the programs still focus on male-dominated curricula rather than curricula that are attractive to female students. Verbal manipulation (wordsmithery) prevails over structural change in the curricula – ask any academic faculty member what he or she thinks about a certain subject (in this case, the curriculum) and the result could well be a thirty-minute (or longer) monolog or diatribe (in this case not a *learned discussion* but an *unlearned discussion*) in which nothing is said, no point is made, and no decision is reached. The result is that gender divisions in university faculty tend to remain fairly static (Morgan, 2000; Hathaway *et al.*, 2001).

The quest for power also comes to the forefront of a relationship in what is termed *gender harassment* – a form of *hostile environmental harassment* (Sekreta, 2006). A solution to preventing gender harassment is to focus on systemic means of discouraging such bias. Perhaps this is finally taking root and showing some progress. One very pleasing improvement in student experience relates to the recognition that harassment and discrimination on the basis of gender is illegal in any form (Conefrey, 2001; Leach, 2013). Harassment in the form of intellectual harassment or gender harassment has decreased over the decades because the charges for such behavior, when they move outside of the university, by any university official have moved beyond a lip-service reprimand and a mere slap on the wrist to being classed as criminal activities.

There is also the matter of gender discrimination that can cause low retention of female scientists and engineers (Chapter 7). For example, a recent survey by the Institution of Chemical Engineers (UK) (IChemE, 2013) has raised concern over the loss of skilled women from chemical engineering with the note that the profession continues to be male dominated. However, new and developing research has identified some of the key factors and indicators that could help predict and prevent those women most at risk of leaving the engineering profession. Similarly, in the United Kingdom, just one in six (16%) of the engineering undergraduates is female. In the United States, less than one in five (18%) of the engineering graduates are female. The number of women leaving the engineering profession is also concerning with some estimates suggesting over half of female engineers are opting for alternative careers or other lifestyle choices. In the United States, it is estimated that as few as one in ten (11%) of the people currently working in engineering are women.

Thus, harassment can occur in a variety of circumstances, including, but not limited to: (1) the harasser can be the victim's supervisor, a supervisor in another area, an agent of the employer, a coworker, or a nonemployee,

(2) the victim does not have to be the person harassed, but can be anyone affected by the offensive conduct.

Thus, the university has a situation where there is an effort to determine if some conduct that has taken place is actually harassing conduct, the university can use the *reasonable person standard* to determine if the conduct was hostile. For example, if a reasonable person in the same or similar circumstances would find the conduct intimidating, hostile, or abusive, then it is, more than likely, harassment and further investigation is necessary. In addition, the *reasonable person standard* includes consideration of the perspective of persons of the same race, color, religion, gender, national origin, age, or disability as the harassment victim. For example, if a female student or faculty member or staff member complains of harassment, the university must make sure that in applying this reasonable person standard test the perspective of a female and not the perspective of a male is taken into consideration. If, in the perspective of another female, the conduct is harassing, then there is a strong case for deeper investigation of the conduct as harassing conduct. Moreover, while harassing conduct must be *objectively* viewed as creating a hostile academic environment to be unlawful, the subjective perception of the particular harassed employee is still significant. If the employee does not perceive the work environment to be hostile because of that conduct, the conduct is not unlawful harassment.

Attraction between faculty and staff can be a private matter between the individuals so long as it does not cross the boundary between welcome conduct and harassment. However, such attraction does not always start in the university but may have commenced in high school where a female teacher may have had sexual relationships with male students or a male teacher may have had sexual relations with female students (Zernike, 2014). There is also the effect of various forms of hazing of junior athletes by senior athletes and this may start in high school (Pérez-Peña, R. 2014a; Schweber, 2014) as well as sexual assaults on female students by male students on a high school campus (Rojas, 2015). Further along this road, there are also claims that images of nude female students as well as photos that allegedly depicted hazing (and drug sales) were posted on a private Facebook page (Maher, 2015). The issues then become: (1) will patterns of misconduct set in high school continue to university? (2) has there been the institution of in-place policies and protocols to prevent such happenings in the future, and last but by no means least, (3) the effect of such occurrences on the student(s) and how this will affect their educational performance in the future.

Most universities have policies and procedures that prohibit such contact between faculty and student that if they were not already in place have

been put into place recently to clarify what type of behavior is acceptable and what is not (Donnelly, 2015; Southall and Lewin, 2015). These policies should clarify earlier policies on a ban on professors having a romantic relationship with undergraduate students, which can lead to accusations between the persons involved and further problems for the university (Bazelon, 2015). To determine whether sexual conduct in the academic world amounts to sexual harassment, distinctions must be made between sexual advances that are: (1) invited advances, in which conduct is welcome and harassment has not occurred but could cause difficulties is, or when, an on-campus romance terminates, (2) uninvited advances, which may be welcome but, again, while there is no harassment, the potential for harassment could exist if a relationship between two individuals breaks up, (3) offensive but tolerated advances but just because a person does not make a complaint does not mean that harassment is not occurring, and (4) objectionable and refused advances, which can be defined as harassment and should be handled accordingly.

In addition, sexual favoritism can give rise to complaints of sexual harassment. If a person (such as a faculty or staff member) is granted a promotion or a student is given a passing grade in return for sexual favors, other male and female coworkers or students can allege sexual harassment by showing that they were denied an equal opportunity for promotion because of the improper sexual conduct. This cannot and must not be construed as the deprived persons (faculty members or staff members or students) stating that they should have been given the same opportunities to be on the receiving end of sexual harassment for promotion or passing grades!

Finally, there are forms of harassment that are gender-based but are nonsexual in nature. Gender-based harassment is harassment that would not have occurred but for the sex of the victim. This form of harassment lacks sexually explicit content but is directed at one gender and motivated by animus or hidden thoughts and feelings against that gender, whether female or male.

9.4 Effect on the Victim

The effects of sexual harassment vary from person to person and are dependent on the duration and severity of the harassing behavior. Thus, individuals can suffer through a number of psychological effects ranging from irritation and frustration to anxiety, stress, and terror (Table 9.1). Individuals may fear retaliation and victim blaming. In any university,

Table 9.1 Some of the effects a victim may experience after filing a complaint.*

General:	Anxiety, frustration, depression, sleeplessness and/or nightmares, difficulty concentrating, headaches, fatigue, shame and or guilt, feeling powerless, helpless or out of control, feeling angry towards the harasser, loss of confidence and self-esteem, withdrawal and isolation, suicidal thoughts or attempts. Increased absenteeism to avoid harassment.
Retaliation:	From the harasser, or colleagues/friends of the harasser. Revenge along with more sexual harassment, and can involve stalking the complainant.
Education:	Tendency to drop courses, or change academic plans. Impact grade performance.
Scrutiny	The victim's personal life is held up for public scrutiny. The victim becomes the accused and his or her style of dress, lifestyle, and private life may come under attack. Humiliated by scrutiny and gossip. Publicly sexualized. Defamation of character and reputation.
Stress	Effect on relationships with spouses or partners. Can result in the demise of a relationship. Effect on peer relationships and relationships with colleagues. Increased absenteeism.
The Future	Impact on references/recommendations. Loss of career.

*These effects can, but only rarely, occur for the perpetrator. <http://www.northwestern.edu/womenscenter/issues-information/sexual-harassment/effects-sexual-harassment.html>; accessed March 16, 2016.

there can be concern by the victim about coming forward and making a complaint because of the effects on career and academic pursuits. There can also be a form of retaliation and backlash, not only on the university campus but also on the specific discipline or career path of the victim.

The victim of any form of on-campus sexual harassment may be gender neutral insofar as the malaise is not only felt by women but also by men who are a witness to it or a victim of sexual harassment. While men on women sexual encounters are more typical, women on men and same sex numbers are rising. Either way, inappropriate sexual comments or behavior have consequences for all persons on campus. Whatever happens, the effect of harassment on the victims is varied but the effect of sexual harassment on

the (female or male) victim can (and usually does) cause severe physical and/or mental trauma (Fox, 2014; Bogdanich, 2014). As a start, a person when entering a campus as an employee or as a student should seek information about rights and the fulfillment of roles and responsibilities. The best way to start is to become familiar with the campus rules and regulations as well as any specific policies dealing with harassment or respectful workplace environment.

As a victim, before making an outside claim to a government or law representative, the person should follow the university communication channels. Also, prior to making an internal or external complaint, the victim should document the scene with a clear record of the event. The documented evidence should include dates, times, and (other than the assailant) any other persons present and the victim should make copies of all documents and keep the copy (or copies) in a safe place.

Depending on the situation and any social or educational connection with the assailant, and whether it is a light touch, a raunchy joke, or a salty/suggestive e-mail, sexual harassment should be stopped. This can occur by the victim asking or demanding that the assailant cease and desist in the use of offensive words or actions. If the perpetrator does not cease and desist, the victim should be firm by telling the assailant that such words and/or actions are unacceptable, and the victim might add that if the assailant continues with such words or actions, it will be reported. It is also an option that the victim might determine if the assailant has engaged in such actions on prior occasions.

The effect of sexual harassment can vary depending on the individuality of the recipient and the severity and duration of the harassment. In some cases, victims may not wish to talk about the problem in definitive terms (especially if rape is involved) such as identifying the assailant or assailants, fearing that they may not be believed and be the subject of behind-the-hand gossip and even ridicule. When that happens, the university is not always able to take any actions because the assailant remains unknown and the event is undocumented. However, if the victim can realize that the assailant can do the same to others, it often acts as a stimulant for the victim to report the incident in full.

Often, sexual harassment incidents fall into the category of the merely annoying and are dismissed by the victim as being the actions of a *silly man* or *silly woman*. On the other hand, harassment may lead to temporary or prolonged stress and/or depression depending on the recipient's psychological abilities to cope and the type of harassment, and the social support or lack thereof for the recipient. Psychologists and social workers report that severe or chronic sexual harassment can have the same psychological

effects as rape or sexual assault, in addition to the burden that the act puts on the accuser (Koss, 1987; Pérez-Peña and Bogdanich, 2014). In all of this commentary, it is essential that the reports of sexual assault in the news media must be accurate and not subject to embellishment and any form of falsification (Somaiya, 2014).

Victims who do not submit to harassment may also experience various forms of retaliation, including isolation and bullying, and it is always hurtful if the university does not handle a claim of sexual assault for one reason or another, or applies different criteria to different cases, especially if the case is not thoroughly investigated before being dropped and the victim is claimed to be uncooperative (Pérez-Peña, 2014b; Pérez-Peña and Bogdanich, 2014; Tracy, 2014). In addition, some universities require that there be affirmative assent rather than passive acquiescence to the sex act. In fact, California was the first state to pass a law obliging every university to have a consent policy in place or lose state financial aid (Lovett, 2014; Pérez-Peña and Lovett, 2014). In other states, if such laws are not in place in other states, there are moves to require that universities overhaul the in-house rules pertaining to sexual assault (Kaminer, 2014). However, not all overhauled policies and protocols are acceptable to the faculty on the basis that they might be flawed and skewed against the accused while student groups are disturbed by such comments by the faculty (Bidgood and Lewin, 2014). The documentary film *The Hunting Ground* (CCP, 2015) deals with rape on campus from the point of view of the victims with several victims giving their individual stories, and a group of them even appeared on the 2016 Academy Awards program that aired on the ABC network on Sunday February 28, 2016. However, the veracity of the film has been disputed and it has been claimed that it is distorted, specifically when it comes to the manner in which certain sexual assault cases were handled by the respective universities (Cieply and Barnes, 2015; Buckley, 2015). No doubt the victims would disagree with the faculty.

Whatever the decision taken by the victim, there must be actions by the university to respect the privacy and the dignity of the victim. Any matters related to the incident should be discussed in private and the victim may agree to such conversations being recorded. The victim has the right to agree or disagree with such actions. For a variety of reasons, including lack of privacy and the tendency to be considered as the aggressor or dictum, many victims do not tell anyone about their experiences with sexual harassment. General reasons for not reporting sexual harassment include: (1) fear of embarrassment, (2) guilt about their own behavior, (3) skepticism that anyone can or will help, and (4) not knowing whom to contact at the university. A student may confide in a friend – female students

are more likely to talk to someone about their experiences than are male students, but only a minority of the affected students report incidents of sexual harassment to a university employee (Hill and Silva, 2005).

Other than to say it is unwanted sexual behavior, university students do not appear to have a common standard for defining sexual harassment. Moreover, college students are reluctant to talk about sexual harassment openly and honestly and are more apt to joke or disregard the issue despite their private concerns. This reticence to engage in a serious dialogue about the issue may contribute to the prevalence of sexual harassment on campus, as students interpret one another's silence as complicity. At the very least it is an indication that college students do not have a common understanding of where to draw the line (Hill and Silva, 2005).

9.5 Effect on the University

The university is automatically liable for harassment by a faculty member, a staff member, or even another student. If the harassment results in a hostile environment, the university may be able to avoid liability only if the administrators can prove that: (1) there was a reasonable and *bona fide* attempt to prevent and promptly correct the harassing behavior, and (2) the person being harassed unreasonably failed to take advantage of any preventive or corrective opportunities provided by the university. In addition, the university can (or, likely will) be held liable for harassment by faculty, staff, or students over whom the university has control, if the university knew, or *should have* known, about the harassment and failed to take prompt and appropriate corrective action. The university should also take steps to ensure that independent contractors or visitors to the campus behave appropriately according to university rules and regulations.

In the current context, harassment of any kind has no place on any campus. A university is also subject to state and federal antidiscrimination laws and has a legal obligation to provide an environment that is free from intimidation, insult, or ridicule based on race, color, religion, gender, or national origin. Any university must be concerned with preventing harassment because the university and the administrators can be sued in state or federal court. Therefore, the university must take the necessary steps to prevent and deal with sexual harassment and other types of harassment on the campus because the university can be held liable for any acts of harassment that affect faculty, staff, and students and may even be held liable for harassment by contractors, suppliers, and others who regularly do business with the university. This latter liability, as with any form of liability, is

dependent upon the harassment situation and whether or not the university has the appropriate antiharassment rules and regulations in place. It is also a case of whether the rules and regulations are enforced as the *modus operandi* and whether or not a claim of sexual assault is mishandled by the university (Pérez-Peña and Lovett, 2013; Schlossberg, 2014).

Prevention is the best approach to eliminate harassment, and university administrators are encouraged to take appropriate steps to prevent and correct unlawful harassment. They should clearly communicate to faculty, staff, and students that unwelcome harassing conduct will not be tolerated. They can do this by establishing an effective complaint or grievance process, providing antiharassment training to their managers and employees, and taking immediate and appropriate action when a student or a member of the faculty or staff files a verbal or written complaint. The university must create an environment in which faculty, staff, and students feel free to raise concerns and are confident that those concerns will be addressed. The university administration should also inform the harasser directly that the conduct is unwelcome and must stop.

Policies governing sexual harassment have been at the center of many heated campus debates in recent years. Sexual harassment still remains a contentious issue, particularly on college and university campuses. Furthermore, universities should have policies in place so that procedures can be debated free from pressures arising from a specific incident. Moreover, the policies that are in place are not just for the record or to show that we (the university administrators) are *doing something* about the issue. Without enforcement, the policies are a mere showpiece and of no value to anyone.

In summary, the university must recognize that harassment complaints are a serious matter, and the following points must be considered to appropriately address any claim of harassment: (1) every complaint must be taken seriously, (2) every complaint must be investigated objectively and without any thought or attempt of prejudgment and there should be no credibility judgments based on the reputation of the person complaining or the person accused of harassment, (3) there must be no assumptions that the person making the complaint is being oversensitive, and the university should take all steps to be involved in the resolution of any such issues and should not allow the parties involved to resolve the issues among themselves. Furthermore, not all persons will label unwelcome conduct as harassment. A person might complain, for example, about unprofessional conduct or inappropriate behavior, which should be defined and described specifically by the complainant. But any person has the legal right at any time to raise the issue of harassment (sexual or otherwise) without fear of reprisal.

In summary, the effects of sexual harassment (especially when rape is involved) can be serious and long-lasting for the victim and for the university (Hill and Silva, 2005). Sexual harassment can (1) damage the emotional and academic well-being of any student or any campus victim, (2) provoke and increase conflict among students or victims, and (3) contribute to a learning (or working) environment that is hostile, to say the least. For a university, sexual harassment can be financially costly and cause serious damage the reputation of the university. In addition, there is also the danger that a perpetrator of sexual harassment (whether a faculty member, staff member, or student) may, if not charged and convicted and ordered to undergo treatment, continue to take the same attitudes about sexual harassment into future workplaces.

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10

The Sporting Megalopolis

10.1 Introduction

University sports and *university athletics* are, in the context of this book, terms that are used to encompass the nonprofessional university-level competitive sports and games that require physical skill as well as the various training methods that prepare university athletes for competitive performance (Thelin and Edwards, 2016). There are some examples where success in a major intercollegiate athletic program, particularly a National Collegiate Athletic Association (NCAA) Division I national championship, can (but not always) translate into millions of dollars and immense pride for the players, coaches, alumni, fans, and university. Such success can also (but not always) be a determinative factor in the decision by a highly recruited high school student-athlete to attend or not to attend a university. In this intensely competitive environment, temptations to cheat, exploit, circumvent the rules, or engage in other forms of misconduct are always present not only for student-athletes but also for university personnel.

As a result of the highly competitive recruiting programs, there are those observers who would argue that intercollegiate athletics is akin to

an *arms race* because of the rank-dependent nature of sports, and that the money spent on athletic programs should be used to directly influence the academic mission of the school instead (Pope and Pope, 2009). However, other observers suggest that because schools receive a variety of indirect benefits generated by athletic programs, such as student body unity, increased student body diversity, increased alumni donations, and increased applications, athletics may act more as a complement to a school's academic mission than a substitute for it. Until recently, evidence for the indirect benefits of the exposure provided by successful athletic programs was based more on anecdote than empirical research. Yet the empirical work on the impact of sports success on the quantity and quality of incoming students is surprisingly limited and there have been only a small number of studies that have attempted to provide empirical evidence on the topic (Coughlin and Erekson, 1984; McCormick and Tinsley, 1987; Bremmer and Kesselring, 1993; Mixon, 1995; Pope and Pope, 2009). But first, a brief comment on the history of sports in the universities to set the stage for the current emphasis on university sports.

The occurrence of sports activities in one form or another in the older European universities goes back at least two hundred years, but prior to 1850, sports programs (and, hence, sports teams) played at best only a marginal role in university life. As the university system evolved, students increasingly devised their own elaborate (and often brutal) intramural contests (*class rushes*), which usually involved some variation of rugby and which provided an excuse for the annual ritualistic and violent hazing of the incoming freshman by the sophomore class.

Briefly, hazing is the practice of rituals and other activities involving harassment, abuse, or humiliation used as a way of initiating a person into a group. Hazing is seen in many different types of educational groups, including sports teams, schools, and fraternities and sororities, as well as military units. The initiation rites can range from relatively benign pranks, to protracted patterns of behavior that rise to the level of abuse or criminal misconduct. Hazing is often prohibited by law and may comprise either physical abuse or psychological abuse and may also include nudity and/or sexually based offensive behavior (see for further details: <https://en.wikipedia.org/wiki/Hazing>; accessed March 17, 2016).

In an attempt to curb these violent student traditions, university administrators (supposedly) took a decisive turn toward sanctioned and refereed events in which a team representing one institution competed against its counterpart from another. Despite the increase in organization, administrators initially were not eager, generally speaking, to embrace such contests, which they viewed as inappropriate distractions from serious

scholarly work. But the turn was largely unsuccessful since hazing in one form or another still continues in many universities and other organizations and the consequences can be serious (Ambrose, 1996; Ebbert, 2004; Anderson, 2015; Anonymous, 2016). Furthermore, any benefits of an initiate having to go through a hazing ritual in which a group of older students (some would call them *ruffians*, whether male or female) should certainly be questioned (Kamau, 2013).

As long as sexual harassment (Chapter 9) continues to be a concern on university campuses, policies and grievance procedures must be fine-tuned to prevent such harassment. Accordingly, athletics departments should consider conducting annual training on the subject using actual cases from the athletics world. Staff and students who are trained in a way that permits men and women to ask questions without being judged, to voice opinions, to work through difficult hypothetical situations, to discuss policies and the reasons behind them, and to work through potential penalties for violations are better equipped to make informed decisions.

Meanwhile, in the United States, Yale University created the first organized sports club in 1843 when the boat club (rowing club) was organized. This was followed in 1844 when Harvard University created a similar club – in both cases the proximity to major rivers was undoubtedly a spur to the formation of the club. Following from this and the inevitable human reaction of *mine is better than yours*, in 1852 the rowing team from Yale competed against the rowing team from Harvard at Lake Winnepesaukee (New Hampshire). The event was the beginning of intercollegiate competition in the United States and triggered the creation of numerous university athletic organizations. As a result, other university sports teams took up the idea of intercollegiate competition and included sports such as baseball (1859), football (1869), soccer (1869), track and field (1873), and rugby (1874). The tradition has continued but the emphasis on certain sports has increased while the emphasis on other sports has decreased. Nevertheless, the tradition of intercollegiate sports competitions has grown considerably, probably beyond the wildest dreams of the first protagonists!

In the early days of intercollegiate sports activities, in the early 1840s, student-athletes contributed actively to all phases of administration and control and were (1) involved in the sporting process, (2) made athletic procedures and regulations for universities, and (3) also played an important role in determining which sporting events would and would not occur on university campuses. In the modern world of academia, such involvement on the part of the student athletes would be, to say the least, unusual if not impossible. Only remnants of student participation in athlete

administration are typically the programs that do not make the top tier of university sports programs, i.e., sometimes these programs are referred to as *club programs* and receive little or no funding from the university administration.

Throughout the United States and many other countries, university student athletes are required to attend classes, have certain criteria for academic success, and complete specific requirements to earn a degree. Furthermore, it has been recognized that when academic and athletic departments have conflicting aims, problems can (and do) arise that affect the entire university. For example, university sports teams aspire to be national champions while the respective universities seek national rankings. However, the means by which coaches and faculty achieve national reputations can create conflict for student athletes attempting to exist in both environments (Land *et al.*, 2015). Although both aspire to excel, the different measures of excellence for faculty members and for sports coaches (and their athletes) often results in a forced compromise by those who are placed in both settings. This policy, while attempted by a large number of colleges, is not always successful. Thus, university administrators have the challenge of balancing university values while maximizing the revenues generated by the various athletic departments, which do not always (in spite of claims to the contrary) show a profit (see below) (Berkowitz *et al.*, 2013; Ridpath, 2014a, 2014b). In many cases, financial losses have led to the elimination of nonrevenue (i.e., non-profit-making) sports programs as the only way to balance the budgets of the preferred athletic programs. As a result of the demotion of nonrevenue programs to the so-called *club team* level, these programs receive no financial support from the university and are self-supported by the athletes in the club teams. It is unusual to hear or read of the elimination of a preferred sports program, especially when the program is subsidized by other nonsports programs or by money from student fees, university support, or state support and it is somewhat disconcerting to see significant growth in athletic spending while academic programs are being cut (Lee, 2011; Luzer, 2011; Rate, 2011; Berkowitz *et al.*, 2013; Kiley, 2013; Ridpath, 2014a, 2014b). Education versus athletics: it is a matter of priorities (Luzer, 2011).

In the United States, university athletics is a two-tiered system: (1) the *first tier* includes the sports that are sanctioned by one of the collegiate sport governing bodies, such as: the National Collegiate Athletic Association (NCAA), the National Association of Intercollegiate Athletics (NAIA) and the National Junior College Athletic Association (NJCAA); additionally, the first tier sports are characterized by selective participation, since only the elite athletes in their sport are able to participate; (2) the *second*

tier includes all intramural and recreational sports clubs, which are available to a larger portion of the student body. In the United States, the top tier university sports programs are popular both on a regional level and at the national level – these sports may even compete with professional championships for prime broadcast and print coverage, and for the top athletes. The average university will play at least twenty different sports and offer a wide variety of intramural sports as well.

The principles for intercollegiate athletics include gender equity, sportsmanship and ethical conduct, sound academic standards, nondiscrimination, diversity within governance, rules compliance, amateurism, competitive equity, recruiting, eligibility, financial aid, playing and practice seasons, postseason competition and contests sponsored by nonuniversity organizations, and the economy of athletic program operations. Title IX of the Education Amendments of 1972 (Chapter 9) also prohibits sex discrimination in any education program or activity, especially (in the context of this chapter) in sports activities. One type of sex discrimination is sexual harassment (Chapter 9), which includes all forms of sexual violence and gender victimization that can (and do) occur on campus and even in schools (Shakeshaft, 2004; Bailey, 2011; Maher, 2015).

In theory, the assimilation of competitive sport into university life was done in order to improve discipline, health, and appetite while keeping students away from illicit activities when not in the classroom. University sports programs were also used to build bonds of respect and admiration between professors and students and to instill into the students the determination to win but with a healthy respect for rules and established authority (Warwick, 2003). One might add: How times have changed!

Since the beginning of intercollegiate sports, the role of athletics within higher education has been a topic of heated debate (Pope and Pope, 2009). Whether to invest funds into building a new football stadium or to improve a school's library can cause major disagreements. Lately the debate has become especially contentious as a result of widely publicized scandals involving student athletes and coaches and because of the increasing amount of resources schools must invest to remain competitive in today's intercollegiate athletic environment.

Currently there is also considerable debate about the role and the effects of sports programs on university education – to some extent in high schools but mainly in the universities (Clotfelter, 2011; Macur and Schweber, 2012) – with claims that athletic misconduct is on the rise along with on-campus cheating (Brandfield-Harvey, 2015; Russo, 2015) and that university sports programs have succumbed to commercialization (Slack, 2004). In addition, there is also the fear that the assignment of money to such

programs will cause a deficiency in the quality of education and, therefore, there will be gaps in the education and in the knowledge of the more scholastically inclined students at the high school level and particularly at the university level. In fact, it is feared that at some universities, the sports programs fare better (in terms of financial support) than the majority of the education programs (Berkowitz *et al.*, 2013; Ridpath, 2014a, 2014b).

The issue of money assigned to sports versus money for education is an often-debated topic in many universities and in newspapers. The focus is on the money spent on football, coaches, television contracts, and stadiums and there is a continual worry about an imbalance between the expense of university sports programs and the challenge of funding academic learning enterprise. This leads to a cost-conscious evaluation of the role of sports in university life, to the point where a university may have to rethink the need for university sports programs, especially in the light of the high salaries paid to some coaches and the issues that arise when question of conduct or misconduct occur, including alcohol abuse (Clotfelter, 2011; Anonymous, 2013a; Anonymous, 2013b; Eder, 2013; Berkowitz, 2014; Strauss and Schonbrun, 2014; Tracy and Rohan, 2014).

On the other hand, most of the statements to define or identity the amounts of money spent on sports criticize the opponents of sports programs by stating that they use extreme examples, spectacularly paid coaches of whom we may have only a dozen or so out of the hundreds of university sports personnel, super-sized stadiums and sports department budgets when most sports programs operate on a more modest scale. The targets are attractive because the celebrity status of big-time football and basketball (1) fill pages of newspapers and specialty magazines, (2) appear endlessly on multiple television channels, and (3) enjoy the attention of rabid fans.

The defenders of sports programs note that a university sports program is a complicated enterprise that serves many interests at universities – public and private universities, large and small. Sports in the universities are a pervasive part (some might say *an invasive part*) of American culture, and like other high-profile activities (such as finance, real estate, or banking), there are bad actors, people of questionable integrity, and errors of commission and omission that attract justifiable or unjustifiable outrage and response (Bretag, 2013). However, neither of these views can offer support or detract from university sports programs. It is possible to see the advantages of the competitive world of university from a better perspective if intercollegiate athletics is considered in the various parts, including the engagement of students, the lives of student-athletes (both celebrity performers and regular participants), the involvement of alumni and public, and the financial consequences of sustaining these programs.

Very few of the NCAA Division I public university athletic departments generated enough money on their own to cover their expenses (Berkowitz *et al.*, 2013). Another study presents data to confirm the opinion that the cost of on-campus athletic programs is often justified on the grounds that athletic success attracts students and raises donations. Testing this claim has proven difficult because success is not randomly assigned, but a recent study has found that winning reduces acceptance rates and increases donations, applications, academic reputation, in-state enrollment, and incoming SAT scores (Anderson, 2012). The data imply that large increases in team performance can have economically significant effects, particularly in the area of athletic donations and student enrollment, with the emphasis on alumni donations (Brooker and Klastorin, 1981; Baade and Sundberg, 1996; Meer and Rosen, 2009).

In spite of the various donations, and at a time of budget restraints, many university athletics departments are continuing to receive subsidies in the form of student fees, university support, or state support (Berkowitz *et al.*, 2013; Ridpath, 2014a, 2014b). The costs of maintaining an intercollegiate athletics program at the Division I for-profit level are high and there are continued vigorous attempts to hire big-name coaches. On top of this, there are travel and recruiting budgets, along with scholarships which few universities can afford (without subsidizing the costs by use of other income) unless money flows unto the university (in addition to alumni donations) from TV contracts, sponsorships, and boosters. There have also been recent challenges to the myth that the athletic program is a significant indicator of the worth, profile, or marketability of the university but this is not always true (Table 10.1) (Sperber, 2015).

There may be tangible and intangible benefits for a major NCAA Division I university. but there is always the question as to whether or not the university will realize a profit, which does vary from year to year (Ridpath, 2014a, 2014b). In summary, most universities, even the sports powerhouse, require institutional subsidies to balance the books and fund their programs (Ridpath, 2014a, 2014b). Thus, for almost every university, sports are a money-losing proposition and only a big-time university sports megalopolis has a chance of generating enough net revenue to cover not only its own costs but those of the lesser-popular (Suggs, 2012). Then the question arises: Is the financial subsidy for the athletics program being taken from educational programs? Put another way, the question might be: Is the original mandate of the university (to teach and impart knowledge to the students) being short-changed?

Money (through donations and student enrollment and its assignment to various programs) in universities is always important, especially if the

Table 10.1 The five myths of university sports programs (Sperber, 2015).

<i>Myth 1: College sports provide enormous profits for schools.</i> In fact, most schools lose money on their sports operations,
<i>Myth 2: Title IX has allowed women to participate equally in college sports.</i> Title IX created higher salaries for the coaches of women's programs — which resulted in attracting men to those positions.
<i>Myth 3: Multimillion-dollar coaching salaries help teams win.</i> The coaching arms race does not pay off. New hires often produce poorer records than the coaches they replace — in short, they are paid more for losing more games.
<i>Myth 4. Sports generate great publicity for schools.</i> When scandals occur on or off the field, the media arrive on campus — and the bad public relations costs schools dearly.
<i>Myth 5. College sports bring in alumni donations.</i> Winning can have a positive effect on alumni giving but the economy and news stories about an alma mater most strongly influence giving among young alumni; the highest percentage of alumni who donate money are filled with schools that do not play big-time football or basketball.

opposing claim that very few universities subsidize athletics from student fees and general university revenue is true. Sports expenses are funded from earned revenue (tickets, television, sales, gifts and similar revenue generated by the athletic activity itself), and from university revenue available for any purpose (student fees and university funds). This revenue is a subsidy for an enterprise that, in the best of all possible worlds, should earn its own way in much the same fashion as other university nonacademic enterprises such as food services, bookstores, parking, and housing.

On the other hand, using the university library as the example, the library is (or should be) a stable, standard, and continuing enterprise central to meeting the needs of the educational programs of the university. The libraries in universities vary in size and complexity and are maintained to support the instructional and research programs. They help to compete for the best students and faculty as well for the external funding that makes research at this level possible, and which requires strong libraries for success. The size of the libraries reflects a commitment to the academic enterprise, while the sports subsidy for the sports program reflects a commitment to the nonacademic competitiveness of athletics. The subsidy also represents a commitment by the university that could have (or should have) been allocated to academic educational enterprises but is, instead,

used to pay part of the cost of the intercollegiate athletic program, a non-academic (even a noneducational) enterprise.

The impact of university sports on the academic enterprise also varies widely from those universities where the sports programs require no subsidy (and therefore have no detrimental impact on the academic enterprise) to those sports programs where the subsidy may be as much as the total library budget (Clotfelter, 2011). The impact of such a subsidy for university sports is an indication that the sports teams do not compete well enough to earn sufficient revenue from attendance, television, sponsorships, alumni and donors, and must spend university money to stay within the competitive context of the sports division in which the university team is placed. While talk of curtailing expenditures on sports is common and enthusiastic among many faculty and some outside commentators, the constituencies for university sports among alumni, trustees, elected officials, and fans are passionate at unbelievable levels. Trustees, alumni, and elected officials, in addition to fans of all kinds, want their sports regardless of the subsidy required at the expense of the academic enterprise.

Overall, the success of university sports teams seems to have a heterogeneous impact on various subgroups of the incoming student population. For example, students that played sports in high school are more likely to be influenced by sports success than their peers. This provides a much broader picture of the impact of sports success on the composition of the incoming student body. These results significantly extend the existing literature and provide important insights about the impact of sports success on college choice. However, it is increasingly clear that sports success does have an impact on the incoming freshman classes. It is also clear that this impact is often short-lived, and that it differs by student type. This may reflect differences in the ability of various student subgroups to acquire quality information that would affect school choice, or it may simply reflect preferences for high-quality athletics. In fact, key findings include: (1) football and basketball success significantly increases the quantity of applications to a school, with estimates ranging from 2 percent to 8 percent for the top twenty football schools and the top sixteen basketball schools each year, (2) applications rates to private schools increase after sports success and the rates are two to four times higher than public schools, (3) the extra applications received are composed of both low and high SAT scoring students, thus providing potential for schools to improve their admission outcomes, and (4) schools appear to exploit these increases (Pope and Pope, 2009).

Finally, to support the sports activity most universities have high-quality sports facilities – and the facilities are being continually improved with the passage of time. There is almost certain to be a sports center with at least a

sports hall and other dry sports facilities including a fitness gym with modern cardio-vascular and resistance machines, one or more exercise studios, and facilities such as squash courts. Many universities also have a pool and specialist facilities such as climbing walls. Outdoors, there are grassed fields (pitches) for different sports – generally of a very high quality – at least one floodlit artificial turf field (pitch) and possibly an athletics track and/or a boat house (if rowing is a university sport). Some universities also own or have access to outdoor centers for activities such as water sports, climbing and hill walking. A few have their own golf course, but many have come to an arrangement with one or more local clubs which allow students to use their courses at a reduced charge.

There are two sides to every coin (no monetary pun intended) – on the side of those in favor of university sports, the advocates note that winning teams stimulate private donations to the successful schools – often the donations might be listed in terms of the dollar amounts but the manner in which the money is to be used is not always disclosed. Systematic empirical evidence generally supports this, although the educational effects of the donations appear to be small, and result primarily from the appearance of football teams in postseason bowl games. There are similar stories of individual universities attracting more applications following athletic achievements, although in this case, the empirical evidence is questionable and there appears to be little effect on the academic credentials of classes enrolled subsequent to the athletic achievements. Although there has been much less attention focused on the effects of intercollegiate sports on the athletes themselves and other students, there appears to be a considerable number of conflicting implications for the intellectual atmosphere and achievements of university students from adopting a big-time sports program and the attendant culture.

If athletic success does boost donations and attract more and better-credentialed applicants to the successful universities, there must be answers to issues related to the origin of the students and whether or not the allocation of the resources is efficient and equitable. Until such concerns are addressed, it is impossible to decide if the indirect effects of university athletics are desirable or undesirable by looking at just one side of a reallocation of resources.

On the positive side (there really is a positive side), sports programs provide a range of benefits to campus life such as exercise for students as well as publicity for the university but there are still questions about any benefits arising from sports programs (Getz and Siegfried, 2010; Reynolds, 2014). In addition, universities take pride in knowing that their sports departments help boost the local economy. However, in reality, to many

observers, the net social welfare and equity implications of any indirect effects of sports activities on the universities that host top-tier teams remains unknown. Issues such as (1) the direct or indirect economic value of intercollegiate athletic competition and (2) the cost of maintaining the football stadium, which seems to be one of the largest (if not the largest) structure on campus, as well as (3) the cost of maintaining all sports facilities during the off-season(s) remain to be answered satisfactorily. However, it would be interesting to note the number of the members of any university board of trustees (or board of regents) who would be willing to *serve* (on the board) if it was not for meetings being called at a time for the members to be treated to a freebee weekend with attendance at the relevant game accompanied by food and drink provided in the president's box or private lounge in the stadium. This is not good governance in any form whatsoever; in fact, it is bad governance (Salmi and Helms, 2013).

In conclusion, there are many opinions that are for and against the prominent position of sports in the university education systems. While empirical evidence may appear to support the concept of university sports, the effects appear to be small, and result primarily from the appearance of, say, football teams in postseason bowl games or the appearance of basketball teams in the so-called *March Madness*. However, there appears to be little effect on the academic credentials of classes enrolled subsequent to the athletic achievements. Although there has been much less attention focused on the effects of intercollegiate sports on the athletes themselves and other students, there appear to be a number of conflicting implications for the intellectual atmosphere and achievements of university students from adopting a big-time sports program and its attendant culture (Getz and Siegfried, 2010).

Whether or not the effects of university athletics are desirable or undesirable, looking at just one side of a reallocation of resources is not the correct method of evaluating sports programs as the results can be biased to favor one side or the other of the discussion. It is possible that these effects outlined above could be sufficiently large and undesirable to outweigh any surplus created by the direct entertainment value of intercollegiate athletic competition.

10.2 Why University Sports?

For many individuals, university athletics is the most visible face of higher education – TV during the week, TV at weekend, newspaper all week. The male football and basketball attract widespread news media coverage,

endorsement agreements, and multimillion-dollar coaching contracts, leaving most spectators with the impression that college sports programs are a lucrative business. However, to understand the role ethics (and good conduct) plays in sport and competition, it is important to make a distinction between (1) sportsmanship and (2) gamesmanship.

Sportsmanship is considered to be, and often is, providing the term is used correctly, the correct order of behavior for athletes in all sports, but not all universities watch over the off-the-field (or off-the-court) behavior of their athletes (McIntire and Bogdanich, 2014). Under a sportsmanship model, healthy competition is seen as a means of cultivating personal honor, virtue, and character and it contributes to a community of respect and trust between competitors. The goal in sportsmanship is not simply to win, but to pursue victory with honor by giving one's best effort. Part of sportsmanship is offering genuine words of congratulations to the winning athletes (team members) from the defeated athletes (team members). Leaving the field (or arena or site where the competition took place) in a fit of temper or emotional silliness without congratulating the winner (or winning team) is not sportsmanship. Also, being a gracious winner is one thing, being a sore loser is another. Sportsmanship also refers to being a *good winner* as well as being a *good loser* and both the winner and loser should show courtesy towards one another in a sports competition.

On the other hand, gamesmanship is built on the principle that winning is everything and athletes and coaches may be encouraged to bend the rules wherever possible in order to gain a competitive advantage over an opponent, and to pay less attention to the safety and welfare of the competition. Some of the key tenants of gamesmanship are: (1) winning is everything, (2) it is only cheating if you get caught, (3) it is the job of the referee to catch wrongdoing, and the athletes and coaches have no inherent responsibility to follow the rules, and (4) the ends always justify the means. Some examples of gamesmanship are: (1) faking a foul or injury, (2) attempting to get a head start in a race, (3) tampering with equipment, such as corking a baseball bat in order to hit the ball farther, (4) covert personal fouls, such as grabbing or punching a player underwater during a water polo match, (5) inflicting pain on an opponent with the intention of knocking him or her out of the game, (6) use of performance-enhancing drugs, (6) taunting or intimidating an opponent, and (6) a coach lying about the academic grades of an athlete's grades in order to maintain the eligibility of the athlete to participate in the sport. For example, there are claims of top-flight athletes taking no-show courses and earning passing grades in order to maintain academic eligibility to compete on the sports team(s) or a coach improperly contacting a professor in an effort to preserve a key player's

eligibility (Lyall, 2014; Terlep, 2014; Tracy, 2015). All of these examples place greater emphasis on the outcome of the game than on the manner in which the game is played. Furthermore, there is the athlete who objects to having to attend classes since “classes are pointless” that also contributes to the misguidance of sports within the university (Tracy and Rohan, 2014). One has to wonder if the mandate of the university is ever explained to, or understood by, athletes.

Ethics in sport requires four key virtues: (1) fairness, (2) integrity, (3) responsibility, and (4) respect not only of the athletes but also of the university administrators and faculty.

10.2.1 Fairness

In general terms, fairness means that athletes and coaches must follow established rules and guidelines of their respective sport. Teams (or athletes) that seek an unfair competitive advantage over their opponent violate the integrity of the sport. Athletes and coaches are not discriminated against or excluded from participating in a sport based on their race, gender, or sexual orientation. In addition, referees (umpires) must apply the rules equally to both teams and cannot show bias or personal interest in the outcome.

Similar to fairness, any athlete who seeks to gain an advantage over his or her opponent by means of a skill that the game itself was not designed to test demonstrates a lack of personal integrity and violates the integrity of the game. For example, when a player fakes being injured or fouled in a soccer game, he or she is not acting in a sportsmanlike manner because the game of soccer is not designed to measure the ability of a participant to play poorly. Faking is a way of intentionally deceiving an official into making a bad call, which only hurts the credibility of the officiating and ultimately undermines the integrity of the game or, for that matter, any sport.

10.2.2 Responsibility

In order to uphold the concept of sportsmanship, participants and coaches are required to take (and accept) responsibility for their performance, as well as their actions on the field. This includes their emotions.

In all sports, and this is especially true in university sports where funding depends upon the ability of the participants to win, many of the participants and the coaches will make excuses as to why they lost the game. The most popular excuse is to blame the officiating, after all (and this is

asked sarcastically), does not every player, coach, and fans of the losing team know that the officials are incompetent and/or biased due to a variety of physical and mental disabilities? The honorable thing to do instead is to accept that the officials have been trained and that they are performing according to the training and in the best interests of the sport. It is up to the participants (the players and the coaches of the losing team) to question what they could have done better (nonsportsmanship activities excluded) to bring about a win.

In addition, it is the responsibility of the players and coaches to be up to date on the rules and regulations governing the sport. Responsibility demands that players and coaches conduct themselves in an honorable way off the field, as well as on it. The players and coaches must recognize that the officials in many sports have to requalify every year (prior to the opening of the season) and they are always up to date on the rules and regulations governing the sport.

10.2.3 Respect

The concept of sportsmanship is based on the idea that sport both demonstrates and encourages character development, which then influences the moral character of the broader community. Also, competition in any sport can have an effect on our personal moral and ethical behavior outside of the competition and even outside of the competition (Schweber *et al.*, 2014). As part of the required behavior, (1) all athletes should show respect for teammates, opponents, coaches, and officials, (2) all coaches should show respect for their players, opponents, and officials, (3) all fans and spectators should show respect for other fans, as well as both teams and officials. Rioting and fighting between the home fans and those of the visiting team (as has happened after many soccer games, to mention examples) is not showing respect for others.

In addition, following the concept of gamesmanship, which follows the principle that winning is everything, is not a sign of respect for the other participants and the coaches. To show respect for the opponents or other players, participants, and coaches there must be no attempt to bend the rules in order to gain a competitive advantage over an opponent, and attention to the safety and welfare of the competition must be followed at all costs.

There have been arguments in favor of allowing sports participants and coaches to follow different ethical pathways because *sports are special* (they bring money to the university). This approach follows the tenet that that sport and competition are set apart from real life, and occupy a realm

where ethics and moral codes do not apply. In addition, the reason for such belief is often proposed (as an excuse for unsportsmanlike behavior) that sports serve as an outlet for human primal aggression and the need for recognition gained through the conquering of an opponent. In this view, such behavior is erroneously regarded as a virtue.

10.3 Athletes and Scholarships

For the purposes of this text, an athlete is a person who is trained or skilled in exercises, sports, or games requiring physical strength, agility, or stamina. A person on an athletic scholarship has used his or her prowess at a sport to obtain entry to a university. In fact, every year thousands of athletes are evaluated by universities in the United States (and other countries) using sports as a path to a university education.

In the United States, athletic scholarships are largely regulated by the National Collegiate Athletic Association (NCAA). Some universities permitted by the NCAA to award athletic scholarships nevertheless prohibit them among their students. An example is the Ivy League universities and the three service academies (Army, Navy, and Air Force), which are effectively exempt from NCAA scholarship limits because all students at those schools, whether or not they are varsity athletes, receive full scholarships from the service branch that operates the academy.

For academic misconduct or impropriety to become an NCAA violation at least one of three factors must be involved: (1) involvement by members of an institution or athletic department staff, (2) an athlete is treated differently than the general student population, and (3) academic misconduct led to an award of credit that allowed an athlete to compete when he or she would have otherwise been ineligible (Russo, 2015). Furthermore, by NCAA rules, universities that engage in misconduct may be stripped of the ability to award a certain number of athletic scholarships. The ultimate penalty is the suspension of an entire athletic program from participation for a set period of time.

In addition to the regulations imposed by the NCAA on the university, the rules governing the provision of athletic scholarship and financial aid are also exhaustive. Financial aid that has not been provided by the university will render the athlete ineligible, unless the aid is received from a guardian or dependent, it has been awarded for reasons separate from the individual's athletic ability, or it has been provided by a recognized and continuing program that may or may not recognize athletic ability as a major. There is also a limit to the amount of money that may be awarded

through an athletic scholarship. Specifically, it must not exceed the cost of the individual's education otherwise it is considered to be a wage or salary, the receipt of which will violate the amateur status of the athlete.

Academic eligibility, in addition to the other requirements mentioned, has been a longstanding issue in the history of university sports. One of the recommendations is that for students to be eligible they must obtain a 2.0 high school grade point average (GPA) and score either a 700 on the scholastic aptitude test (SAT) or a 15 on the American college testing (ACT) program. Once high school senior students are deemed eligible to receive an athletic scholarship for their participation on a sports team, they must then follow a number of explicit steps in order to participate at the collegiate level. In particular, the NCAA mandates that they sign a National College Letter of Intent (NLI), which is effectively an agreement that binds the student-athletes to the university in which they have chosen to enroll.

10.4 To be Paid or Not to be Paid

There are mixed opinions as to whether or not university athletes should be paid over and above the tuition fees that a scholarship might cover. The proponents of payment argue that the athletes should be paid for their services because they qualify as employees based on the amount of time and work they put in every week. However, according to the National Labor Relations Board in Chicago, an *employee* is a person who (1) is under contract of hire to (2) perform services for another, (3) subject to the employer's control, and (4) in return for payment. Thus, by these standards, athletes, such as football players, can be considered employees based on the time commitment it takes to be on the team. There's a demanding time commitment, a strict schedule, limited vacation breaks, and no real off-season. And there is a certain amount of control over their lives, as athletics has a strong influence in living requirements, outside employment, and social media activity.

However, the phrase *student-athlete* describes university-level athletes as athletes who receive a university education that is paid for by the university in the form of an athletic scholarship. The athletes are being paid to be student-athletes through scholarships that are awarded in correlation with the abilities of the athlete as determined by the coaching staff. In addition, university athletes need to recognize the university opportunity as a privilege that many young people are never given. Being a university athlete is a privilege, not an occupation.

10.5 Passing Grades of Athletes

Student athletes in universities are expected to meet or exceed the requirements in order to participate in sports. Many universities enforce strict rules for their student athletes, which are sometimes referred to as the *no pass, no play* rules. For example, a university may require a passing grade in every class while another university might require a 2.0 GPA in every class or a C average in every class.

Student athletes generally face six distinctive challenges: (1) balancing athletic and academic responsibilities, (2) balancing social activities with athletic responsibilities, (3) balancing athletic success or failure with emotional stability, (4) balancing physical health and injury with the need to continue competing, (5) balancing the demands of relationships with entities such as coaches, teammates, parents and friends and (6) addressing the termination of a university athletic career. Thus university athletes are expected to put a great deal of time into their studies and in their chosen sport. In summary, this can cause student athletes to face high levels of stress related to their performance both in their sport and in the classroom (Kissinger and Daniel, 2009).

Because sports programs are part of the fabric of the university, student-athletes must be committed to academic achievement and the pursuit of a degree and must meet academic standards throughout their careers on campus to remain eligible to participate in intercollegiate athletics.

Intercollegiate sports are divided into Division I, Division II, and Division III, with Division I being considered the highest level of play, i.e., the most competitive level, and while there are a number of important differentiations between division levels, a very influential fact is the availability of scholarship money (Bentley, 2016). Therefore, the most talented athletes are recruited to play at the Division I level and while universities competing within the NCAA's Division I and II levels can offer prospective students athletic scholarships (which may be combined with other forms of scholarship or aid, such as for academic merit), Division III universities do not and cannot offer scholarship money to prospective students who wish to participate in athletics. Student-athletes at Division III universities can still receive scholarship money for other reasons, such as academic performance or artistic talent. Typically, Division III students play for the love of the game, rather than any financial incentive.

In Division I, student-athletes must complete 40 percent of the coursework required for a degree by the end of their second year. They must complete 60 percent by the end of their third year and 80 percent by the end of their fourth year. Student-athletes are allowed five years to graduate while

receiving athletically related financial aid. All Division I student-athletes must earn at least six credit hours each term to be eligible for the following term and must meet minimum grade-point average requirements that are related to an institution's own GPA standards for graduation.

In Division II, student-athletes must complete twenty-four hours of degree credit each academic year to remain eligible for competition. At least eighteen of those hours must be earned between the start of fall classes and spring commencement at a student-athlete's institution (six hours may be earned in the summer). All Division II student-athletes also must earn at least six credit hours each full-time term to be eligible for the following term. In addition, Division II student-athletes must earn a 1.8 cumulative grade-point average after earning twenty-four hours, a 1.9 cumulative grade-point average after earning forty-eight hours and a 2.0 cumulative grade-point average after earning seventy-two hours to remain eligible. Student-athletes are given ten semesters of full-time enrollment in which to use their four seasons of competition, provided they maintain academic eligibility. While there are no minimum national standards for establishing or maintaining eligibility in Division III, student-athletes in that division must be in good academic standing and make satisfactory progress toward a degree as determined by the institution but must be enrolled in at least twelve semester or quarter hours, regardless of the definition of *full time* by the university.

In addition, universities in all divisions must determine and certify the academic eligibility of each student-athlete who represents the school on the field of play and the university is responsible for withholding academically ineligible student-athletes from competition. Waivers are available for many of these rules, including progress-toward-degree standards. Student-athletes who are declared academically ineligible must use the student-athlete reinstatement process to be restored to competition.

Finally, although not strictly an academic passing grade, university athletes are expected to exhibit admirable conduct on and off campus, which may be equated to a passing grade in behavior. After all, the reputation of the university is on the line when student athletes are accused of misconduct. In any case of claimed misconduct of an athlete on campus or off campus, the university administrators along with the coach must make an administrative determination about whether the individual's conduct has damaged the reputation of the university.

The police and courts have a separate obligation to determine whether a state or federal law has been violated. University administrators do not always have the same stringent obligations as the police and court systems who must prove their contentions *beyond a reasonable doubt* in order to find an individual guilty of violation of state or federal criminal laws. The

administrators may take action using the lower standard common to civil wrongs – that damage is being done to the reputation of the university. This administrative or civil law standard is *preponderance of evidence*, which is the determination by the university that the individual is more likely (more than 50 percent sure) to have engaged in the alleged misconduct than not. Removing playing privileges, suspension or termination of employment or similar administrative responses to policy violations are based on this administrative standard.

10.6 Sports After the University

The goal of many university athletes is a lucrative contract with a notable professional sports team. But, the data indicate that only a small minority (<2%) of these athletes obtain professional contracts leaving the majority to undergo some serious life reevaluation (Belkin, 2016).

The probability of a university athlete competing in his or her chosen sport on a professional after university varies from low to extremely low (NCAA, 2016b). In addition, if student athletes do not obtain the necessary grades in university and are not paying attention in class or to their schoolwork, the question of the quality of the degree that the athlete obtains comes into play. In fact, many scholarships are taken away because athletes cannot meet the GPA requirement, leaving the would-be professional athlete without any qualifications for a professional job after university life is over. Thus, the university athlete must have a realistic perception of the future.

While the fresh-faced athlete on the university campus looks forward to four years of participating in his or her favorite sport (usually courtesy of a sports scholarship), and then continuing afterwards, the reality is that those thoughts and wishes are unlikely to come true. There are over 400,000 NCAA athletes and, for the majority, graduation is as far as sport will carry them (NCAA, 2016b). The warm glow that the initial receipt of the scholarship gave the young athlete ill recede into the dark recesses of the would-be athlete's mind and only emerge when requested at a coffee club meeting or social meeting of the *boys' club* or *girls' club*. They are now former athletes, their sporting exploits for the most part, forgotten. And providing these former athletes have not dodged (cut) classes and focused their attention to obtaining that desired degree, there will be other paths that these forgotten athletes can choose.

And there are other issues for these former athletes to handle. If the young person is lucky, after four years of university sports and graduation

with a marketable degree (which leads the young person to a decently salaried job), the penalty may be bearable – the aches and pains can be mitigated by the prescribed medication but some cannot (Layden, 2012). The memories (aside from the persistent pain) and what was shared with teammates during the four years (or more) of university sports are reduced to old trophies in an aging display cabinet or memories of the trophies that were sold (or pawned) to purchase food or medication.

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11

Enforcement of Codes of Ethics

11.1 Introduction

There are many examples of unethical behavior or misconduct in academia (Jackson, 1981; Hileman, 1997; Resnik, 1998; Hileman, 2005; Martin and Schinzinger, 2005; Fleddermann, 2008). Many faculty members, staff, and students find that discovering unethical behavior among coworkers actually tests their own values and ethical principles. After all, unethical behavior that is not illegal frequently falls in a grey area between right and wrong that makes it difficult to decide what to do when it is encountered. Nevertheless, enforcement of the code of ethics is necessary and a university must demonstrate a willingness to hold the faculty, staff, and students accountable for their conduct. Ideally, prevention of misconduct is the best method of protection and upholding the reputation of the university. The behavior of established faculty members, for instance, is a significant aspect of staff and student behavior.

Meaningful enforcement of the code of ethics is key to mitigate occurrences of misconduct on any campus. Without enforcement the code is of little (if any value) and the university will be perceived as a nonenforcing organization where any behavior is acceptable. However,

the language used in a code of ethics must be understandable, lacking loopholes, and it must promote honesty and ethical principles that are in keeping with the goals of the university (Chapter 4, Chapter 5) (Strain *et al.*, 2009). Unless the definitions in a code of ethics are sufficiently specific, they can be interpreted for convenience on an as-needed basis. On the other hand, if the definitions in a code of ethics are too specific, the membership or the employees will exploit loopholes and engage in behavior that technically follows the letter of the code, but not necessarily its spirit.

Faculty members, staff members, and students should be discouraged from depending solely on individual conscience when choosing *to-do-or-not-to-do*. The language of any code of ethics must be interpreted in light of what it is reasonable to suppose the authors of the code intended.

While some observers believe that the few highly publicized cases of research misconduct – generally defined as falsification, fabrication of data, plagiarism, cheating, and the various forms of harassment – are just the tip of the iceberg of misconduct, others suggest that the reported cases indicate that the overall incidence of misconduct is low (Ritter, 2001). However, in spite of the recent and continuing institution of various campus laws against misconduct on campus, there are claims that athletic misconduct is on the rise along with on-campus cheating (Brandfield-Harvey, 2015; Russo, 2015). Whether such behavior is in the majority or in the minority, it does occur and universities must take steps to mitigate misconduct so that it is eliminated. Nevertheless, on the basis of current reports (as outlined in previous chapters), the various forms of misconduct continue to be reported within the various university systems (Hamilton, 2002; ACE, 2007; Cahn, 2011).

Indeed, the manner in which the general climate of misconduct on campus is addressed can have an impact on the problem (Chapter 4). Breaches of any code of ethics cannot (and should not) be dismissed without investigation. To dismiss misconduct without investigation or to punish serious misconduct with a *slap-on-the-wrist* form of punishment only serves to damage the reputation of the university leading to claims of *cover up*. Indeed, there is the need for a conscious and deliberate effort by *all* campus personnel to *keep their noses clean* and to create an educational climate that discourages any form of misconduct by faculty, staff, and, by association, students (Hamilton, 2002; Cahn, 2011; Prohaska, 2012). Recall that to accomplish this, a university must (1) have a clear and understandable policy on misconduct, (2) make sure the code policy is discussed and understood, and last but certainly not least (3) be willing to enforce the provision of the code in meaningful ways (Chapter 2).

Furthermore, it defeats the object of the enforcement exercise if each department and each college within a university handle dishonesty differently, even while there is an overarching university regulation outlining punishments and other actions (Mast, 2016). Additionally, in some universities, misconduct that may be considered as cheating in one class may not be considered as cheating in another class, or the rules about cheating may vary between assignments even within a single course. For example, while some faculty members may allow a paper from one course to be the building block for a new paper, other faculty members might label such behavior as cheating in the form of self-plagiarism. Furthermore, collaboration between students is a particularly gray area especially when, in some universities and university colleges, the concept of collaborative learning has been introduced to mimic working in the commercial world where projects are rarely completed successfully by individuals in isolation. Effective as it may be in some instances, collaboration can confuse students about what is ethically acceptable – the default response to such considerations is: if in doubt, follow the code of ethics.

Finally, the news media are often criticized for reporting cheating and misconduct in universities (Chang, 2002) and, the news media notwithstanding, it is noteworthy that societies are also reporting incidences of misconduct (Speight and Foote, 2011; Speight, 2015). Indeed, if the news media or the societies did not report such behavior, one might wonder if the universities would report any form of misconduct to its fullest extent (Nitsch *et al.*, 2005).

11.2 Following a Code of Ethics

A code of ethics is important in many respects but, above all, it sets the *tone* of the culture of the university (Chapter 2) (Brien, 1998; Adams *et al.*, 2001; Hileman, 2005; Davies *et al.*, 2009; Yahr *et al.*, 2009).

11.2.1 Disregard for Teaching and Research Programs

An indication of the seriousness with which a university takes teaching can be revealed in the treatment of teaching faculty in tenure cases. It is measured by whether the university puts out a meaningful level of resources which allow teachers to improve their instruction and whether the faculty make a lot of use of those resources. Awarding tenure on the basis of longevity rather than performance (as is sometimes the case) means that nonperformers who have been the happy recipients of tenure cannot

go anywhere else – their personnel records are certainly not of the stellar category – and do not wish to go anywhere else so they remain at their *home base*. The opportunities for maximum advancement of such faculty have been attained when they have reached the rank of full professor, but they must not be allowed to settle in for a comfortable life of semi-retirement or retirement while being paid for a job *not well done* or, in some cases, *not done at all*.

As already noted (Chapter 4), some universities (some observers would use the term *many universities*) are burdened with at least one senior faculty member (if not several or many senior faculty members) who displays flagrant disregard for teaching duties, research duties, mentoring duties, attending meetings, and even appearing at his or her office on campus. Yet this person is virtually untouchable because of tenure. There has been the observation (Cahn, 2011) that most tenured faculty who have lapsed into apparent professional incompetence were marginal case when their original tenure status was being considered. The golden rule should be *when in doubt, say 'no'*. In addition, it would be wise to request faculty members (who are members of the tenure committee) to explain their votes to discourage dereliction of duty and any prejudicial thoughts on the part of those faculty members (Cahn, 2011).

Throughout the university, the need is for faculty members in all university departments to look objectively at their colleagues and determine which of their colleagues fit this mold and what course of corrective action should be taken.

Corrective action usually should follow an annual (or semi-annual) evaluation, but the subject of faculty evaluation has been a sore point for many years (if not many decades) and is certainly worthy of further discussion here at the risk of raising the ire of many teachers/professors – as it has a direct bearing on the future of the education system (Marx, 1990). However, it is not the purpose of this section to deal with hours worked as there are several publications that relate to this issue and should be consulted for further information (OECD, 2012, and references cited therein).

11.2.2 Conflict of Interest

Many faculty members and university administrators contend that consulting work and other interactions with industry and other groups are enhancements to the professional reputation and career of a professor. If questioned, the response will be related to the concept of academic freedom under which banner many academic faculty members seek refuge.

While the concepts of academic freedom and tenure are notable and well meaning, the misuse of the concepts is to be deplored.

University administrators cannot ignore conflicts of interest and must manage and resolve those conflicts that will harm the university (Schulz, 2000; Euben, 2004). In order to accomplish this, the code should set forth the process for its administration, including mechanisms to disclose and document any potential conflicts of interest and any methods to obtain waivers from any particular policy or provision. The code should also provide meaningful guidance to assist faculty, staff, and students in evaluating specific circumstances, with the standard for behavior being: if all the facts and circumstances regarding the matter were made public, the student, faculty member, and staff member should be pleased to be associated with the activity. Furthermore, tenure should not be allowed to be used as a shield from the repercussions that may follow any form of misconduct but should be looked upon as a badge of honor to be respected and the issue of tenure treated with dignity (Bruni, 2014). In fact, there is also the thought that tenure should be abolished and faculty and staff members retained on the basis of annual evaluations. After all, are not the students retained on the basis of performance, such as passing examinations and other forms of activity that contribute to the grade-point average (GPA)?

There have also been questions about classroom professors recommending textbooks (of which they are authors or coauthors) as required reading as class textbooks. In order to be consistent with any conflict-of-interest policies, the professor should know how to select appropriate textbooks (not necessarily books written by him or her with the hidden innuendo *buy my book and pass*) and teaching for all levels of the subject area (Chapter 5). It is a practice in some universities that some classes are not allowed to adopt texts written by the professor teaching that class, which removes the stigma or perception of a conflict of interest. However, it may be that the book chosen for the class (written or not by the professor teaching the class) should be the most appropriate book for the class (Cahn, 2011). The university should have a clear and unambiguous policy for the acceptance or rejection of such books.

11.2.3 Data Manipulation

One area that needs much attention is the area known as data manipulation or misuse of data (Chapter 8). Universities can mitigate this type of misconduct by having any manuscript reviewed by knowledgeable internal and external reviewers before submission to a journal for publication, where the manuscript will be reviewed again under the watchful eyes of the

journal editor. Within the university, the reviewers could be selected at the request of the department head/chair who should be knowledgeable in that field of endeavor. This type of system would remove the *I-do-not-require-reviewers-for-my-work* attitude of the author.

Journal editors and reviewers of papers submitted to the journal also have a role in disclosing information about the integrity of the papers. The authors should protect the integrity of their work by assuring that manipulation of data (i.e., changing data, intentionally modifying data, or omitting data) has not occurred and that there has been no manipulating of data images so that the original data are not presented or are misrepresented. The *golden rules* for the authors are: (1) never tamper with or change data, (2) keep meticulous records of the experimental data, (3) records of raw data should be accessible in case an editor asks for them, even after the paper has been published, and (4) understand the publisher's policies on data before a paper is submitted to the journal or publication medium. Furthermore, in the case of data images, if an author needs to adjust an image to enhance clarity, he or she should know what are considered to be acceptable changes before submitting the paper. Moreover, even if the image manipulations are considered acceptable, the editor should be made aware of any such changes prior to submission of the paper. Finally, data images used to support the paper against the original image data should be reviewed to ensure that nothing has been altered. When fraud is assessed, these points will be taken into account. However, if fraud is found to occur, some journals do not publish any note of retraction of the paper, sometimes because they require that all the authors agree with the retraction. Whatever the case, some action must be taken (Relman, 1989). But it is unfortunate that this is not always the case and a cover-up (advertent or inadvertent) may be the *modus operandi* of the university involved.

Published retractions and publicity play a valuable role in cleaning retracted papers off the literature. In fact, the less public coverage a retracted paper receives, the more likely it is to continue to be cited. For example, in one case, a professor (while developing a theory) did not check the credibility of the experimental work of his students and coworkers and was informed that the experimental work was not only flawed but incorrect – the coworkers and students had not performed any control experiments to collect and assess the base data. Nevertheless, the professor continued to cite this paper as evidence for his theory until it was pointed out in another paper (by other workers) that the credibility of his earlier work was non-existent. The professor even tried one more time to cite his earlier work as evidence for his theory but the journal editor had the wherewithal to use

one of the two opposing workers as a reviewer. The reviewer pointed out using direct and straight-to-the-point comments the fallacy of the work, and since then the professor appears to have ceased and desisted in his quest to use his earlier (flawed) work as evidence for his equally flawed theory. Obviously, this professor was not concerned about the culture of his research school and was promoting dishonesty to his coworkers and students. The university, of course, was apprised of the details but refused to act in any manner.

The best way to ensure that research data are verified (not manipulated and not misused) would be to check any experimental protocols with knowledgeable colleagues before starting the research and disclose full results and data when the research has been completed. Unfortunately, for too many researchers this would have the odious implication of *big brother is watching you* (Chapter 8). Without a form of checking, research data may be reported selectively to emphasize the most exciting parts of the data, especially when and other workers do not have access to the method or the raw data and are not in a position to replicate the studies (Chapter 8).

Journals and funding agencies need to strongly (perhaps forcefully) encourage full public availability of all data and analytical methods for each published paper or report. It would be of great value if the researchers were willing to acknowledge any limitations of the data or any inherent flaws in the experimental design as well as disclosure of the potential for any conflicts of interest.

11.2.4 The White Lie

Faculty members have different views regarding what is ethical and what is unethical. Yet, there should be no question if the code of ethics is understood and followed. If the code of ethics is not understood, shame on the faculty members, staff members, and students. Also, more shame on the administrators for not publicizing the code of ethics widely on campus and making sure that the code is written and presented to all campus participants in university life. There is nothing wrong in requesting that all faculty and staff sign a contract that includes reading and understanding the code of ethics as well as understanding the penalties for any action that is classed as misconduct under the code of ethics. It is quite possible, however, that some faculty will claim that such a request or demand is an infringement of academic freedom! In respect of student behavior, students could be given a copy of the code of ethics with the registration package with a description of the penalties for infringement of the code.

Briefly, a *white lie* is, by a misused and misinformed definition, an unimportant lie (especially one told to be tactful or polite). However, in truth, it is a lie (also called prevarication, falsehood) and is a type of deception in the form of an untruthful statement, especially with the intention to deceive others, often with the further intention to maintain a secret or reputation, protect someone's feelings or to avoid a punishment or repercussion. In short, it is a deliberate, untrue statement which (supposedly) does no harm or is intended to produce a favorable result for the originator of the white lie.

When faculty and staff members discover colleagues doing something that they know is wrong by the university standards, their own sense of what is right and what is wrong instantly comes into question. To make this decision easier, many universities have adopted several techniques that allow for the management of unethical activities. The first step is to create a policy, in writing, that is read and agreed to (signed by) each faculty member and staff member. This erases most feelings of ambiguity when it comes to deciding what to do after witnessing an unethical behavior. The second step is to give a clear outline of what is expected of the person who has discovered the unethical behavior. It should include the person who should be contacted, and how to go about doing it. With clear instructions, there will be less hesitation in reporting unethical activities, and then they can be dealt with quickly and relatively easily, before they develop into overwhelming issues.

11.2.5 Costs to the Student

The costs to the student of misconduct on campus, whether or not the student is directly involved in the misconduct, is high in terms of fiscal costs, mental costs and physical costs. If the university has to pay off an errant faculty member or staff member or fiscally settle a case because of student misconduct it can be costly. This money has to come from somewhere. A private university may have a sufficiently high cash base to pay such a settlement. A state university will not have the cash base, the fiscal profile being monitored by the various state committees and state (as well as federal) politicians, all of whom have (or should have) an interest in ensuring that the university is successful.

In terms of tuition fees, an item that is often omitted from books of this type, the means by which fees for students for attending a university must be transparent and understandable by the student, the parents, and any scholarship-awarding organizations or disgruntlement may be the result (Lewin, 2015). It is in this area that the staff members can play an

important role and assure all concerned that the fee structure has been determined logically and without any form of bias.

In fact, the dismissal of a nonproductive faculty or staff member to reduce costs is very rare in university operations. Yet, what does the university do with the senior faculty member who is tenure-protected but who (1) does not attend meetings, (2) does not teach, (3) is an incompetent teacher, (4) does not do research, (5) does not mentor any students, or (6) all of the aforementioned categories? What does the university do with the senior staff member who is protected by long service (or some other form of protection and who is generally inefficient, incompetent, and unhelpful? I once posed this question to a dean and the response was simple and to the point: We will find something (for him or her) – we do not have layoffs.

In addition, it is well for all faculty and staff to remember that the students are the paying clients (whoever pays the fees) and the student (and parents or guardian) have the right to expect a good education based on lectures and guidance from competent professors.

In summary, without students and fees, there are no revenues, leaving the faculty and staff to lecture and manipulate numbers in the fiscal darkness (Chapter 3). It would be as well for the faculty and staff to remember that the students (clients) should be treated with a courteous demeanor and with respect. There are too many times when this is not the case.

11.3 Reporting Misconduct

There is a growing consensus that researchers have a responsibility to report misconduct by other researchers when the misconduct is serious and when they are in a position to document it. Yet typically there are strong pressures – from supervisors, colleagues, and others – not to report misconduct, and hence most instances fall into the category of whistleblowing. Measures to protect individuals who responsibly report research misconduct are being implemented at research facilities, and the concept of research misconduct now applies to punitive measures taken against these individuals (Von Hippel and Chalk, 1979; Bok, 1980; Sprague, 1989). However, there often remains the stigma against a person who reports a colleague of misconduct (Martin and Schinzingler, 2005). According to the codes of ethics of many universities, faculty, staff, and students are (should be) compelled to *blow the whistle* on activities or events that harm these values and also have the right to disclose wrongdoing within their university and expect to see appropriate action taken.

11.3.1 Mechanisms for Reporting Misconduct

The collection of laws means that victims of retaliation need to be alert to the laws at issue to determine the deadlines and means for making proper complaints. Some deadlines are as short as ten days while it may be up to 180 days to make complaints to OSHA. Victims of retaliation against union organizing and other concerted activities to improve working conditions have six months to make complaints to the National Labor Relations Board (NLRB). Private sector employees have either 180 or 300 days to make complaints to the federal Equal Employment Opportunity Commission (depending on whether their state has a deferral agency) for discrimination claims on the basis of race, gender, age, national origin, or religion. Those who face retaliation for seeking minimum wages or overtime have either two or three years to file a civil lawsuit, depending on whether the court finds the violation was *willful*.

Those who report a false claim against the federal government, and suffer adverse employment actions as a result, may have up to six years (depending on state law) to file a civil suit for remedies under the U.S. False Claims Act (FCA). Under this act, the *original source* for the report may be entitled to a percentage of what the government recovers from the offenders. However, the *original source* must also be the first to file a federal civil complaint for recovery of the federal funds fraudulently obtained, and must avoid publicizing the claim of fraud until the U.S. Department of Justice decides whether to prosecute the claim itself. Such lawsuits must be filed under seal, using special procedures to keep the claim from becoming public until the federal government makes its decision on direct prosecution.

11.3.2 Whistleblowers

A *whistleblower* is a person who raises a concern about wrongdoing (in the context of this book) occurring in a university or body of people, and usually this person would be from that same university. The revealed misconduct may be classified in many ways; for example, a violation of a law, rule, regulation and/or a direct threat to public interest, such as fraud, health/safety violations, and corruption. Whistleblowers may make their allegations internally (for example, to other people within the university) or externally (to regulators, law enforcement agencies, to the media or to groups concerned with such issues).

Most whistleblowers are *internal whistleblowers*, who report misconduct to a fellow employee or an administrator within the university. Internal

whistleblowing occurs when an employee goes over the head of an immediate supervisor to report a problem to a higher level of management. Or, all levels of management are bypassed, and the employee goes directly to the president of the board of trustees. Whatever the means by which it is done, the whistleblowing is kept within the university. *External whistleblowers*, however, report misconduct to outside persons or entities. In these cases, depending on the information's severity and nature, whistleblowers may report the misconduct to lawyers, the media, law enforcement or watchdog agencies, or other local, state, or federal agencies.

Anonymous whistleblowing occurs when the employee who is reporting misconduct refuses to divulge his or her name when making accusations. These accusations might take the form of anonymous memos to upper management or in the form of anonymous phone calls to the police. The employee might also talk to the news media but refuse to let his or her name be used as the source of the allegations of wrongdoing. On the other hand, *acknowledged whistleblowing* occurs when the employee puts his or her name behind the accusations (thereby leading to the subcategories of *internal whistleblowing* and *external whistleblowing*) and is willing to withstand the scrutiny brought on by the accusations. It is *not* acceptable to blow the whistle in the hopes of future gains, such as promotion, or any form of public recognition, or financial gain.

It is probable that many faculty members do not even consider blowing the whistle, not only because of fear of retaliation, but also because of fear of losing their relationships at work and outside work. Because the majority of cases are very low-profile and receive little or no media attention and because whistleblowers who do report significant misconduct are usually put in some form of danger or persecution, the idea of seeking fame and glory may be much less than commonly believed.

11.3.3 Persecution of Whistleblowers

Persecution of whistleblowers has become a serious issue in many parts of the world. Although whistleblowers are often protected under law from employer retaliation, there have been many cases where punishment for whistleblowing has occurred, such as termination, suspension, demotion, wage garnishment, and/or mistreatment by other employees. For example, in the United States, most whistleblower protection laws provide for limited *make whole* remedies or damages for employment losses if whistleblower retaliation is proven. However, many whistleblowers report there exists a widespread *shoot the messenger* mentality by corporations or government agencies accused of misconduct and in some cases whistleblowers

have been subjected to criminal prosecution in reprisal for reporting wrongdoing.

Should a university desire to resolve the whistleblowing issue, the ways to solve it include (1) a strong and clear commitment to ethical behavior, (2) open lines of communication within the university, which gives access to the university administration by any student, faculty, or staff members who feel there is a need to present their concerns, (3) and above all (4) willingness on the part of the university administration to admit mistakes, publicly if necessary (Martin and Schinzinger, 2005).

11.4 Enforcing a Code of Ethics

As long as harassment in its various forms (Chapter 9) continues to be a concern on university campuses, policies and grievance procedures must be fine-tuned to prevent harassment. Accordingly, universities should conduct annual training on the subject using actual cases from the university world (Chapter 10). Staff and students who are trained in a way that permits men and women to ask questions without being judged, to voice opinions, to work through difficult hypothetical situations, to discuss policies and the reasons behind them, and to work through potential penalties for violations are better equipped to make informed decisions in this area.

It is preferable to mitigate misconduct at the source by insisting that faculty members, staff members, and students make themselves familiar with the code of ethics. Even then, small-scale deviant practices are likely to persist because, despite the principles against the manipulation of data (Chapter 8), researchers can always attribute small inconsistencies to unavoidable errors that accompany or infiltrate all research (Glaser, 1964; Barber, 1976). One of the major determinants of judgments of the degree of responsibility is whether a controllable act is perceived or intentionally committed or due to negligence (Werner 1995, p. 13). Since judgment can only be reliably made after some period of observation or investigation, there is a general feeling that such practices have increased.

However, before deciding whether an ethical crisis exists, it must be determined if one of three situations exists: (1) whether ethical standards are unknown and unclear, (2) whether ethical standards are clear but ignored, or (3) whether ethical standards were being followed (McDowell 2000, p. 6). This is where a duly-appointed ethics committee can be of valuable assistance.

11.4.1 The Ethics Committee

The ethics committee carries out the enforcement process if there is an alleged violation of the code that is supported by a formal complaint and sufficient documentation. The president of the university should shoulder the responsibility for appointing the members of that committee and should ensure that the committee members are chosen for their individual (or collective) lack of bias in favor of or against the person accused. It would also be a wise decision for the president to include committee members who are external to the university.

There may be differences of opinion within the ethics committee (because of bias in favor of or against the accused person) and to combat such differences of opinion, it would be preferable for the president of a university to set up an ethics committee (consisting of faculty from various levels as well as persons from outside of the university) that considered every case or claim and punishment was meted out on a consistent basis and it must be evident that any bias in favor of or against the person accused of misconduct is absent. If this is not done, anarchy in the form of misconduct and any other forms of unethical behavior that can be conjured up will be prevalent (Frankel, 1989; Schwartz, 2001; Fleddermann, 2008).

The committee reviews, on request, ethical or moral questions that may arise from a member. Committee members include members of the society from all subdisciplines. To reach a judicious decision, the ethics committee needs to study patterns in compliance and noncompliance with any university code, and the university (ethics committee) should use a process that gathers and analyzes the data for compliance or noncompliance. Upon request, the committee will provide advisory consultation and review in cases where ethical dilemmas are perceived by any member. The primary responsibility will be (1) to encourage dialogue, (2) to identify issues and offer viable options, (3) to seek supplemental resources, (4) to encourage problem resolution at the physician/patient level, and most important (5) to not pass the buck.

11.4.2 Punishment for Misconduct

The effectiveness of any code of ethics is influenced by its implementation, which includes reporting, enforcement and follow-up processes and how misconduct is treated and enforcement or its absence can affect code effectiveness (Adams *et al.*, 2001; McKay *et al.*, 2007). In addition, the policy is more effective when it is a zero-tolerance policy and the accused

person is found guilty by the ethics committee and not by a consensus of the uninformed!

Once the decision is made that the accuser is guilty, backroom whispering, backroom debating, and coffee klatch decisions – usually made with 20-20 hindsight – are not helpful to anyone, especially to the innocent victim of sexual harassment or sexual assault. Nor are they helpful to the faculty member, the staff member, or the student who has been found guilty of any form of misconduct. By the same token, acquittal of an accused person by a duly-formed ethics committee should not be subject to further debate, unless the accused person has been found not guilty by a committee of his or her peers (read: cronies), especially if the committee was formed without the go-ahead or without any support from the university administration.

Thus, a university that wishes a code of ethics to have an impact on the actions taken can increase the likelihood of this by careful selection and presentation of the content of the code. This can also increase the likelihood of having an impact by including an enforcement provision in the code as long as the faculty and staff and even a select group of students are involved in the selection of the items in the code and the presentation of the code to the whole campus. In addition, a university choosing to have an enforcement provision in its code of ethics is providing additional incentives (disincentives) to encourage (discourage) selection of certain actions. No student, staff faculty member should be fearful for his or her safety or the dire consequences that may result (Lere and Gaumnitz, 2003; Marklein, 2014; Dewan and Stolberg, 2015).

Part of the code must also be dedicated to the assessment of and the degree of punishment for misconduct. Any punishment must fit the misconduct (Chapter 1, Chapter 2); it is not sufficient to merely accept an apology from the miscreant followed by a minor reprimand in the form of a slap on the wrist (weak punishment, if it can be called punishment). The code of ethics should also indicate that the accused and the accusers should not act as judge and jury (Knight, 1991). There is also the suggestion, perhaps plausible but perhaps not, that definitions of misconduct should include turning to the news media with a story of misconduct (Roy, 1999).

Failure to mete out punishment that fits the type of misconduct only serves to propagate the problem – the punishment for a guilty verdict in a criminal setting is jail time; the punishment for being held responsible on campus should be expulsion (Wilkinson, 2015). There have been moves in this direction when teachers, as one example, in the Atlanta public school

system were indicted for testing irregularities and several were given prison sentences for inflating student standardized test scores (Winerip, 2013, 2014; Fausset and Blinder, 2015; Lowry, 2015; McWhirter, 2015). There have been moves to address allegations of cheating in other cities (Baltimore, Philadelphia, and Washington D.C.) and the result is that some effective measures to curb such cheating can be simple and need not break already-strained education budgets (Banchero and McWhirter, 2013). Other forms of misconduct, such as sexual harassment or sexual assault are not always reported as misconduct but there are numerous examples (<http://www.publicintegrity.org/accountability/education/sexual-assault-campus>; accessed March 15, 2016). It could well be that the educational system will recognize that the various forms of misconduct (in reality, these are various forms of cheating) will be considered as offenses worthy of jail time. A university may typically carry out a campus survey to determine if and when such assaults occur but such surveys are not always the answer (Fox, 2104).

With respect to university sports teams, university management needs to install comprehensive policy and educational solutions to coach, staff, and/or student-athlete misconduct that may cross the line or escalate into violations of Title IX prohibitions against sexual abuse and harassment. There should also be assessment of the university athletics policy manual and student-athlete handbook to insure inclusion of clear policy statements related to athletics staff and student obligations and prohibitions related to violence, bullying, hazing, sexual harassment, sexual misconduct, retaliation and professional misconduct (Chapter 9, Chapter 10). Furthermore, presentation of workshops to specific groups specified by the client: athletics and or physical education and recreation staff, coaches, student-athletes, senior administrators and Title IX compliance administrators. Coach-specific sessions that address high risk but common practices in competitive sport settings are also necessary and should include the penalties for the use of physical punishment, emotional or verbal abuse, physical bodily contact, equal treatment, responsibility for team success or failure, delegation of responsibility to team captains or volunteers, romantic, dating, or social relationships with staff or student-athletes, use of peer pressure, team rules or requests related to social isolation and team initiation rituals.

Thus, if a university determines that sexual harassment is in violation of Title IX (or its own school policy, which may be more restrictive than Title IX), the university has an obligation to take immediate and effective corrective action which is reasonably calculated to stop the harassment and prevent its recurrence, and where warranted, remedy its effects.

11.4.3 Success of the Code

Measuring the effectiveness of ethics and compliance programs is a developing discipline and may appear a daunting task. One manner of measuring the effectiveness of a code of ethics is to observe: (1) levels of observed misconduct, (2) reporting observed misconduct as well as frequency of misconduct, and (3) response to any reprimands or punishment meted out to those found guilty of misconduct and/or unethical behavior. However, the question of appropriate punishment might always be raised. Is resignation from a high position while retaining a faculty position (Kemsley, 2015) sufficient punishment or should dismissal from the university be complete with no fallback position?

One of the difficulties involved in investigating claims of unethical behavior in order to meaningfully address the issue of misconduct at the international level stems from the diversity of definitions and procedures among countries and universities. Any definition, although deemed satisfactory when designed or drafted, might be considered to be too restrictive when reduced to practice. Thus, alternatives to defining misconduct include attempts to take inventory of all misbehavior that undermines faculty integrity or proposals for a code of conduct. However, investigation of misconduct *must* proceed and not be delayed on the basis of a (flimsy) excuse related to procedure. At the same time, the proceedings cannot take the form of a *kangaroo court* presided over by a *hanging judge*!

Briefly, a *kangaroo court* is a judicial tribunal or assembly that blatantly disregards recognized standards of law or justice. It is also defined as a *mock court* in which the principles of law and justice are disregarded or perverted. The term may also apply to a court held by a legitimate judicial authority who intentionally disregards the court's legal or ethical obligations. A *hanging judge* is a colloquial phrase for a judge who has gained notoriety for handing down unusually harsh punishment that is beyond the normal punishment for a crime.

At different stages, faculty, staff, and student misconduct must not be overlooked insofar as events are underreported or not reported at all (Nitsch *et al.*, 2005), and leaders of universities seem to be reluctant to launch investigations, and journal editors sometimes do not retract erroneous papers. On the other hand, leaders of universities have their share of responsibility but may be reluctant to conduct investigations, since misconduct is likely to jeopardize the name of the university. The failure to proceed with an investigation of reported misconduct will always appear to be paradoxical to any observer since such investigations could show how the university is able to reliably handle misconduct and punish the miscreants.

The challenge for many universities is to cultivate a culture of inquiry that puts the emphasis on professional responsibility, obligations, commitments, and research. Some class-based ethical issues are: (1) using the work (assignments) given to students as data for research, (2) balancing a power of coercion by a professor with sensitivity to the concerns of the students (3) prioritizing the educational value of a course over concerns about achieving research goals through teaching of the course (Gale 2002, page 40; Markle 2002, p. 42).

Typically, a university does not impose limitations on the research faculty members may pursue in their individual capacity, other than to expect that such work will not interfere with their other university responsibilities, such as teachings. In addition to establishing research schools within the university, there must be policies to regulate the conduct of research, the most important of which are: (1) conflicts of interest and (2) conflicts of commitment (Chapter 6). There must also be a balance on the amount of research that is conducted by the professor and this should *not* affect preparation for teaching to the point where students become discouraged and feel they are not learning (Braxton and Bayer 1999, pp. 22-39, 43-60). This surely leaves the student (who might be readily tempted) no option but to seek alternate routes of submitting passing assignments and to seek the necessary means (other than intensive study) to pass examinations.

The issue of tenure (Chapter 3) always seems to be a sore spot when it comes to faculty behavior since some faculty members use tenure as a means of protection. Tenure should be respected and treated with dignity and not used as a shield from the repercussions that may follow any form of behavior, including wrongdoing or misconduct (Kowalski, 1997; Bruni, 2014). Related to this, the tenure policy should indicate what steps the university will take if a faculty member under consideration for tenure is charged with misconduct or if other negative events emerge (ACE, 2007).

Finally, the issue of sabbatical leave (Chapter 3) is sometimes raised in relation to whether or not the professor awarded the leave spent the time (and any money) for the purpose that the leave was intended. The issue of abuse of the sabbatical leave policy can be mitigated by the following actions (1) any member of the faculty taking sabbatical leave should be obligated by contract to return to the university for at least one full year of service at the completion of the leave period and (2) the faculty members should submit to the president of the university within a defined period (say, thirty days) through the regular administrative channels (the department head/chair, the dean, and the provost) a report that details the various activities of the faculty member during the leave period. The report format can vary depending upon the requirements of the university but

elements such as (1) leave activities in direct relation to the objectives in the leave application, (2) a list of publications, exhibits, papers presented, and/or instructional materials developed as a result of leave activities, (3) plans for future work in the area of the leave activities, and (4) impact of the leave on the applicant's professional responsibilities. In addition, it is advisable the report spend no longer than (say) thirty days in the department head-chair-dean-provost chain.

11.5 Necessary Actions

In the university world, a pivotal question that must be faced by the university administration should not be whether or not to institute measures to enforce the code of ethics but the application of punishment to fit the level of misconduct. Furthermore, the repercussions of unethical behavior should be clearly stated – such as summary dismissal – and acted upon when accusations of misconduct by a faculty member are proven (or admitted). Once misconduct by a faculty member, staff member, or student of a university has been proven, there should be no show of wrist-slapping. The member responsible for the misconduct must be made to face the punishment for his or her actions. In addition, universities should, therefore, consider making public the outcome of any review of the misconduct by a member, no matter what his or her level in the university or local community.

Briefly, an issue that needs attention is student misconduct since the occurrence of misconduct (cheating) starts early in the life of a student – at school, then following through to university, and into adult life (Chapter 1, Chapter 3) (Marcoux, 2002; Carpenter *et al.*, 2004; Speight and Foote, 201). Whatever the reasons or rationale given for misconduct – and there are many to the point where cheating and/or misconduct can be considered to be an epidemic of ethical lapses (Relman, 1989; Woodward and Goodstein, 1996; Brown, 2007; Rovner, 2007) – they should not be accepted.

Although codes of conduct and codes of ethics may not be consulted routinely, the codes can, in specific situations, serve as a guide or reminder for faculty members, staff, and students. They deal with items such as admission criteria, faculty and staff management, service conditions, examinations, and the use of financial and other resources. Implementing codes of conduct can also increase confidence in and support for the university by emphasizing the social responsibilities of the university towards the community. In building a better behavioral and learning environment, these codes contribute significantly to the quality of the university.

Universities must also question their own hiring policies, especially when persons who have already resigned or been dismissed for misconduct are hired as faculty (Kaminer, 2013; Pogrebin, 2013). Such practices may diminish the significance of the effect of a university code of ethics (or code of conduct) on behavior within the university. In addition, such practices also call for interpretation of the codes and, as a result, there may be difficulties in understanding them, poor knowledge on complaints procedures, and the lack of credibility for their enforcement. Such items remain as actions for the present and future.

As another thought, sometimes student detection of misconduct and enforcement of the university code of ethics can be more effective than faculty sanctions applied to student behavior or administrative sanctions applied to faculty and staff misbehavior. There is a high probability that students (rather than faculty) will observe cheating among students and misconduct among faculty and staff. But the involvement of students in the process has wider benefits because such involvement recognizes that universities are communities of students, faculty, and staff. As an example, a class of students may object to a professor being absent on travel to a society meeting or absent on consulting-related travel during a semester. As a reminder, the students are the source of revenue for the university (Chapter 3) and they have the right to expect the teacher-professor to be present during the classroom time. From classroom practices to faculty and staff conduct, universities need to be cognizant of the message they send about the types of behavior that are appropriate or not (Sykes, 1988; Hamilton, 2002; Cahn, 2011; Anderson and Kamata, 2013; Bretag, 2013; Shaw, 2013).

One of the best ways (if not the only way) to prevent misconduct for any university is to adopt and enforce policies which provide sufficient detail (written in understandable language) to provide guidance to faculty, staff, and students (Taylor *et al.*, 2006; Nadelson, 2007; Steinhauer, 2014) and, if negligence in code enforcement can be proven, the universities should be held accountable for failure to protect the students, faculty, and staff (Pérez-Peña and Taylor, 2014). Also, those students, faculty, and staff with a propensity for misconduct of any kind should also be made to realize that they cannot look for protection under the umbrella of any insurance policy that is carried by their respective universities. If there are a wide variety of disciplines within the university, then each discipline needs a data policy that is relevant to the specific type of research. In addition, the laboratory director should provide mentoring or formal training on policies (Hileman, 1997, 2005).

In summary, a code of ethics or a code of conduct within the university must embrace the concept of mutual accountability and the accountability

of all those involved in teaching, research, and administration – no one is to be excluded from adhering to a code of ethics. These codes can be (and should be) developed for faculty members, staff members, and students so as to prevent unethical behavior and the right of the university to punish such behavior. Faculty members and staff members are expected to be positive role models for the students both on-campus and off-campus because their conduct has a considerable impact on the students when it is credible, ethical, and focused on the well-being of the university.

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Glossary

Academic freedom: the freedom of thought that ensures that a faculty member has the autonomy to teach, to perform research, and publish the results of that research within the boundaries of ethical and moral behavior.

Academic Performance Index (API): A statewide ranking of schools based on student test scores from the CAT/6, CST, and high school exit exam; it ranges from 200 to 1,000; most schools have an API, a state ranking (by elementary, middle, or high school), a ranking in comparison to a hundred similar schools, and growth targets for the following year.

Academic year: The university year which usually runs from September to early May and is divided into two semesters (or three terms) of teaching, typically with vacations at Christmas, Spring Break, and Easter.

Accommodations: Changes in the way tests are designed or administered to respond to the special needs of students with disabilities and English learners (EL).

Accountability: The notion that people (e.g., students or teachers) or an organization (e.g., a school, school district, college of education, university or any educational establishment) should be held responsible for improving student achievement and should be rewarded or sanctioned for their success or lack of success in doing so.

Achievement gap: The gap in performance criteria that occurs when one group of students outperforms another group, and the difference in average scores

for the two groups is statistically significant (that is, larger than the margin of error).

Achievement test: A test to measure a student's knowledge and skills.

ACT (American College Testing): A set of admissions tests for entry into a college, university, or an establishment of higher education. Most establishments of higher education accept either the SAT or the ACT for admissions purposes.

Adequate yearly progress (AYP): An individual state's measure of yearly progress toward achieving state academic standards. Adequate yearly progress is the minimum level of improvement that states, school districts, and schools must achieve each year.

Adjunct faculty: professionals or instructors from other institutions who are associated with a particular university by teaching selected courses or supervising graduate students) but do not hold full-time appointments.

Adoption: Refers to the chosen curriculum of a particular school.

Advanced: See *Proficiency*.

Advanced placement (AP): A series of voluntary exams based on university/college-level courses taken in high school. High school students who do well on one or more of these exams have the opportunity to earn credit, advanced placement, or both for higher education.

Advancement via individual determination (AVID): A four-year elective college/university preparatory class designed to motivate students to attend college.

Alignment: The degree to which assessments, curriculum, instruction, textbooks and other instructional materials, teacher preparation and professional development, and systems of accountability all reflect and reinforce the educational program's objectives and standards.

Alternative assessments: Ways other than standardized tests to get information about what students know and where they need help, such as oral reports, projects, performances, experiments, and class participation.

Alternative schools' accountability model (ASAM): An alternative way of measuring student performance in schools with mostly high-risk students – such as continuation schools or some county office of education schools – and schools with fewer than eleven valid test scores.

Alumni: Former students.

Annual measurable objective (AMO): The annual target for the percentage of students whose test scores must be proficient or above in English/language arts and mathematics.

Assessment: Teacher-made tests, standardized tests, or tests from textbook companies that are used to evaluate student performance.

Assistant professor (rank): A faculty member at a university who is at the entry-level teaching rank; typically, a nontenured position.

Associate degree: A degree granted for the successful completion of a sub-baccalaureate program of studies, usually requiring at least two years (or equivalent) of full-time college-level study; this includes degrees granted in a cooperative or work-study program.

Associate professor (rank): A faculty member at a university who is at the mid-level teaching rank; typically, a tenured position.

At-risk student: Students may be labeled at risk if they are not succeeding in school based on information gathered from test scores, attendance, or discipline problems.

Average class size: The number of students in classes divided by the number of classes. Because some teachers, such as reading specialists, have assignments outside the regular classroom, the average class size is usually larger than the pupil-teacher ratio.

Average daily attendance (ADA): The total number of days of student attendance divided by the total number of days in the regular school year. A student attending every school day would equal one ADA. Generally, ADA is lower than enrollment due to such factors as transiency, dropouts, and illness. A school district's revenue limit income is based on its ADA.

Baccalaureate degree: An academic degree conferred by a college or university upon those who have completed the undergraduate curriculum as registered students; also called a *bachelor's degree*.

Basic: see *Proficiency*.

Basic aid: The minimum general-purpose aid that is guaranteed by the state's constitution for each school district in California. A basic aid district is one in which local property taxes equal or exceed the district's revenue limit. These districts may keep the money from local property taxes and still receive constitutionally guaranteed state funding.

Benchmarks: A detailed description of a specific level of student achievement expected of students at particular ages, grades, or developmental levels; academic goals set for each grade level.

Bilingual education: An in-school program for students whose first language is not English or who have limited English skills. Bilingual education provides English language development plus subject area instruction in the student's native language. The goal is for the child to gain knowledge and be literate in two languages.

Block scheduling: Instead of traditional forty- to fifty-minute periods, block scheduling allows for periods of an hour or more so that teachers can accomplish more during a class session. It also allows for teamwork across subject areas in some schools. For example, a math and science teacher may teach a physics lesson that includes both math and physics concepts.

Bond measure: A method of borrowing used by school districts to pay for construction or renovation projects. A bond measure requires a 55 percent majority to pass. The principal and interest are repaid by local property owners through an increase in property taxes. (See also *parcel tax*.)

Categorical aid: Funds from the state or federal government granted to qualifying schools or districts for specific children with special needs, certain programs such as class size reduction, or special purposes such as transportation. In general, schools or districts must spend the money for the specific purpose. All

districts receive categorical aid in varying amounts. This aid is in addition to the funding schools received for their general education program.

Certificated/credentialed employees: School employees who are required by the state to hold teaching credentials, including full-time, part-time, substitute, or temporary teachers and most administrators. A teacher who has not yet acquired a credential but has an emergency permit or a waiver to teach in the classroom is included in the count.

Certificate/credential: A state-issued license certifying that the teacher has completed the necessary basic training courses and passed the teacher exam.

Charter schools: Publicly funded schools that are exempt from many state laws and regulations for school districts. They are run by groups of teachers, parents, and/or foundations.

Cheating: An action in which the student deliberately violates the rules of fair play – such as copying from another student during a test.

Class size reduction: A state-funded program for kindergarten through third-grade classes to ensure that there are no more than twenty students per teacher. A separate program supports some smaller classes for core subjects in ninth grade.

Classified employees: School employees who are not required to hold teaching credentials, such as bus drivers, secretaries, custodians, instructional aides, and some management personnel.

Closed campus: This usually indicates that the school has one point of entry and a sign-in procedure as safety measures. It also refers to a high school that does not allow students to leave the campus for lunch or does not allow students to come and go without permission during the school day.

Cluster: To place small groups of students together for instruction, especially GATE students.

Code of Conduct: see *Code of Ethics*.

Code of Ethics: A code that is intended to legally reinforce the need for respect for personal and professional behavior and should remain at the forefront of faculty prioritization of differences as faculty members seek to achieve a more privileged position in the world of academia.

Code of Misconduct: see *Code of Ethics*.

College: An institute of higher education; a term sometimes used erroneously to describe a university, which may in reality be a collection of colleges.

Community college: A two-year college, also referred to as a junior college. Anyone who is eighteen years old or holds a high school diploma (or equivalent) is eligible to attend a community college.

Community-based learning: Students, faculty, administrators, and community members working together to create new learning opportunities within local communities but generally outside traditional learning institutions.

Comparable growth: Subgroups of students in a school must improve their scores on standardized tests. They are expected to achieve 80 percent of the predominant student group's target, which is known as comparable growth.

- Conflict management:** A strategy that schools use to prevent and address behavior problems by using peer counselors, mediators, or a school curriculum or program. It usually includes a set of expectations for behavior.
- Consolidated application (Con App):** The application districts can use to apply for more than twenty state and federal categorical programs, including the federal Title I program and the state School Improvement Program (SIP). Most if not all districts use the Con App to secure funding from at least some of the programs on the application.
- Content standards:** Standards that describe what students should know and be able to do in core academic subjects at each grade level.
- Cooperative learning:** A teaching method in which students of differing abilities work together on an assignment. Each student has a specific responsibility within the group. Students complete assignments together and receive a common grade.
- Core academics:** The required subjects in middle and high schools – usually English (literature), history (social studies), math, and science, each of which may be housed in a separate university college.
- Criterion-referenced test:** A test that measures how well a student has learned a specific body of knowledge and skills. The goal is typically to have every student attain a passing mark, not to compare students to each other. (See *norm-referenced assessment*).
- Cross-cultural language and development (CLAD):** A test that teachers must pass to gain credentials that qualify them to teach English to English learners. The BCLAD is a CLAD for bilingual teachers.
- Curriculum:** The courses of study offered by a school or district. California has developed a set of standards that are intended to guide curriculum and instruction. The final decisions about school curriculum are the responsibility of the local school board.
- Data manipulation:** The process of re-sorting, rearranging and otherwise moving research data, without fundamentally changing it; can also refer to the misuse of the data or statistics when a statistical argument asserts a falsehood; in some cases, the misuse may be accidental but in other cases it may be purposeful and for the gain of the perpetrator.
- Degree-granting institutions:** Postsecondary institutions that are eligible for Title IV federal financial aid programs and grant an associate degree or a higher degree. For an institution to be eligible to participate in Title IV financial aid programs it must offer a program of at least three hundred hours in length, have accreditation recognized by the U.S. Department of Education, have been in business for at least two years, and have signed a participation agreement with the Department of Education.
- Differentiated instruction:** Also referred to as *individualized instruction* or *customized instruction*. The curriculum offers several different learning experiences within one lesson to meet students' varied needs or learning styles. For example, different teaching methods for students with learning disabilities.

Diploma: A nondegree offering below the associate degree, most often offered in technical and vocational fields of study; the diploma generally leads to employment in an occupational field, such as Certificate in Bookkeeping and Certificate in Automotive Technology.

Disaggregated data: The presentation of data broken into segments of the student population instead of the entire enrollment. Typical segments include students who are economically disadvantaged, from racial or ethnic minority groups, have disabilities, or have limited English fluency. Disaggregated data allows parents and teachers to see how each student group is performing in a school.

Doctor's degree (*Doctorate*): An earned degree that generally carries the title of Doctor. The Doctor of Philosophy degree (Ph.D.), the Doctor of Science degree (D.Sc.), and the Doctor of Engineering Degree (D.Eng.) are the highest academic degrees and require mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctor's degrees are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.), musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in academic and professional fields require an earned master's degree as a prerequisite. The doctor's degree classification includes most degrees that NCES formerly classified as first-professional degrees. Such degrees are awarded in the fields of dentistry (D.D.S. or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), pharmacy (Pharm.D.), podiatry (D.P.M., Pod.D., or D.P.), veterinary medicine (D.V.M.), chiropractic (D.C. or D.C.M.), and law (L.L.B. or J.D.).

Dropout: A grade seven through twelve student who left school prior to completing the school year and had not returned by Information Day (a day in October when students throughout the state are counted and enrollment is determined). This does not include students who receive a General Education Development (GED) or California High School Proficiency Examination (CHSPE) certificate, transfer to another high school or to a college, move out of the United States, are suspended or sick that day, or enrolled late.

Elementary school: A school classified as elementary by state and local practice and composed of any span of grades not above Grade 8.

Emergency permit: In California, a one-year permit issued to people entering the teaching profession who have not completed some of the legal requirements for a credential; generally, the intent is that the person will enroll in and complete an approved teacher preparation program.

English as a second language classes: Support programs for students whose native language is not English.

English language advisory committee (ELAC): Variations include *English Language Advisory Council* and *English Language Learner Advisory Committee/Council*. The group consists of parents and school staff who work together to address the academic needs of students still learning English.

English learner: A student who is not proficient enough in the English language to succeed in the school's regular instructional programs and who qualifies for extra help.

Enrichment: Additional courses outside those required for graduation.

Ethics: The normative science of conduct, and conduct is a collective name for voluntary actions.

Faculty: A catch-all word which includes the academic staff of a university: professors, associate professors, assistant professors, lecturers/instructors, and/or researchers (such as research professor).

Faculty member: A professional chosen for his or her individual intellectual excellence and ability to pass on knowledge to the students.

Fairness: Following established rules and guidelines of a respective discipline or sport.

Falsification: The manipulation of research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record, and plagiarism.

Family math (*family mathematics*): A program that teaches families how to enjoy doing math together. Parents and children attend workshops or use the Family Math book to learn how to use everyday materials to do fun math activities.

Fluent English proficient (FEP): A designation that means that a student is no longer considered as part of the school's English learner population. It refers to students who have learned English.

Formative assessment: Any form of assessment used by an educator to evaluate students' knowledge and understanding of particular content and then to adjust instructional practices accordingly toward improving student achievement in that area.

Free/reduced-price meals: A federal program that provides food for students from low-income families.

Fudging the data: see *Data manipulation, Misuse of data*.

Gamesmanship: The principle that winning is everything no matter what the cost; athletes and coaches may be encouraged to bend the rules wherever possible in order to gain a competitive advantage over an opponent, and to pay less attention to the safety and welfare of the competition.

General fund: Accounting term used by the state and school districts to differentiate general revenues and expenditures from funds for specific uses, such as a cafeteria fund.

Gifted and talented education (GATE): A program that offers supplemental, differentiated, challenging curriculum and instruction for students identified as being intellectually gifted or talented.

Governor's performance awards: A competitive program that grants awards to public schools in California that meet or exceeds the Academic Performance Index performance growth target each year.

Graduate enrollment: The number of students who are working towards a master's or doctor's degree. These enrollment data measure those students who are

registered at a particular time during the fall. At some institutions, graduate enrollment also includes students who are in post-baccalaureate classes but not in degree programs. In most tables, graduate enrollment includes all students in regular graduate programs and all students in post-baccalaureate classes but not in degree programs (unclassified post-baccalaureate students).

Graduate school: A North American term for that part of a university that awards advanced academic degrees (such as master's degrees and doctoral degrees) with the general requirement that students must have earned a previous undergraduate (baccalaureate) degree prior to enrollment for the advanced degree.

Harassing conduct: Conduct that includes the use of epithets, slurs, negative stereotyping, or threatening, intimidating, or hostile acts that relate to race, color, religion, gender, sexual preference, national origin, age, or disability (including jokes or pranks that are hostile or demeaning with regard to race, color, religion, gender, national origin, age, or disability).

Harassment: Unwelcome conduct such as behavior as well as the spoken and written word that is based on race, color, religion, sex (including pregnancy), national origin, age (forty or older), disability or genetic information.

Highly qualified teacher: A teacher who has obtained full state teacher certification or has passed the state teacher licensing examination and holds a license to teach in the state; holds a minimum of a bachelor's degree; and has demonstrated subject area competence in each of the academic subjects in which he or she teaches.

High priority schools grant program (HPSGP): A program created to provide funds for schools in the lower half of the state rankings (Deciles 1-5) based on the API. It focuses on schools with APIs that fall in the bottom 10 percent of all schools and replaces the II/USP. Schools volunteer to be in this program.

Honor Code: see *Code of Ethics*.

II/USP (Immediate Intervention/Underperforming Schools Program): The Immediate Intervention/Underperforming Schools Program was designed to encourage a school-wide improvement program in schools with very low test scores and to provide assistance and intervention. Schools in the lowest five deciles of API scores were eligible if they did not meet their API targets. It was replaced in 2002 with HPSGP, a similar program.

Immersion education: A program that teaches children to speak, read, and write in a second language by surrounding them with conversation and instruction in that language. Note that English immersion may differ from other immersion programs.

Inclusion: The practice of placing students with disabilities in regular classrooms. Also known as *mainstreaming*.

Independent study: Specially designed instruction in courses taught through a variety of delivery methods that complement traditional high school curricula and provide an accredited diploma.

Individual education program (IEP): A written plan created for a student with learning disabilities by the student's teachers, parents or guardians, the school

- administrator, and other interested parties. The plan is tailored to the student's specific needs and abilities, and outlines goals for the student to reach. The IEP should be reviewed at least once a year.
- Instructional minutes: The amount of time the state requires teachers to spend providing instruction in each subject area.
- Integrated curriculum: The practice of using a single theme to teach a variety of subjects. It also refers to an interdisciplinary curriculum, which combines several school subjects into one project.
- Integrity: The quality of being honest and fair; firm adherence to a Code of Ethics or any code of especially moral or artistic values.
- Intellectual property rights: Exclusive rights over creations of the mind, both (1) artistic and (2) commercial.
- International baccalaureate (IB): A rigorous college preparation course of study that leads to examinations for highly motivated high school students. Students can earn college credit from many universities if their exam scores are high enough.
- International Standard Classification of Education (ISCED): Used to compare educational systems in different countries. ISCED is the standard used by many countries to report education statistics to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the Organization for Economic Co-operation and Development (OECD). ISCED divides educational systems into the following seven categories, based on six levels of education.
- Intervention: The funds that schools get for students who are not learning at grade level. They can be used to fund before-school or afterschool programs or to pay for materials and instructors.
- Job shadowing: A program that takes students into the workplace to learn about careers through one-day orientations or more extensive internships to see how the skills learned in school relate to the workplace.
- Joint school districts: School districts with boundaries that cross county lines.
- Language arts: Another term for English curriculum. The focus is on reading, speaking, listening, and writing skills.
- Lecturer: A low-level faculty member (often called an *instructor* in many universities) who typically (1) holds a minimum of a master's degree or equivalent, (2) has completed most or all of the requirements for the doctorate or equivalent, and (3) is expected to demonstrate effectiveness primarily as a teacher; the title *lecturer* should not be confused with the same title used in the older European universities, where the title lecturer was equivalent to associate professor in the United States and Canada.
- Assistant Lecturer (Europe) = Assistant Professor (U.S. and Canada)
- Lecturer (Europe) = Associate Professor (U.S. and Canada)
- Senior Lecturer (Europe) = Full Professor (U.S. and Canada)
- Literature (The Literature): The public collection that comprises publications (journals) that report original empirical and theoretical work in the various disciplines.

Magnet school: A school that focuses on a particular discipline, such as science, mathematics, arts, or computer science. It is designed to recruit students from other parts of the school district.

Mainstreaming: The practice of placing students with disabilities in regular classrooms; also known as *inclusion*.

Manipulation of data: see *Data manipulation*.

Manipulatives: Three-dimensional teaching aids and visuals that teachers use to help students with math concepts. Typical tools include counting beads or bars, base ten blocks, shapes, fraction parts, and rulers.

Master's degree: A degree awarded for successful completion of a program generally requiring one or two years of full-time college-level study beyond the bachelor's degree. One type of master's degree, including the master of arts degree, or M.A., and the master of science degree, or M.S., is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally oriented program, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, and an M.P.A. in public administration. Some master's degrees – such as divinity degrees (M.Div.) – may require more than two years of full-time study beyond the baccalaureate degree.

Minimum day: A shortened school day that allows teachers to meet outside of the classroom and work together.

Misconduct (Actions): Physically touching another employee in the workplace is a form of misconduct; physical touching can be offensive and considered to be harassment.

Misconduct (Breaching Confidentiality): Occurs when confidential information is used for personal gain; can be mitigated (to a point) by requiring all faculty and staff to sign a confidentiality agreement (nondisclosure agreement) so that the signers understand the importance of confidentiality and the consequences of violating the agreement.

Misconduct (Insubordination): Occurs when an employee willingly violates the request of the university administration; includes excessive tardiness, missing work without call in, using company e-mail to send personal messages; browsing the Internet on university time for reasons other than university-related work.

Misconduct (Intoxication): Arriving at work either intoxicated or high on drugs, whether prescription or street drugs.

Misconduct (Language): Using profane, violent, or vulgar language in the workplace is a form of misconduct; includes inappropriate jokes and jesting.

Misconduct (Relationships): Fraternizing in the workplace is a form of misconduct, especially when the fraternizing occurs between management and an entry-level employee; intimate relationships can affect workplace performance and impair the judgment of management.

- Misconduct (Theft):** Stealing but not limited to physical items and also refers to theft of intellectual property from the university or from a colleague; using the work of others for personal gain.
- Misuse of data:** Use of data produced by a research process or any process where the data are not used in the way that was originally intended; also fudging the data. See *Data manipulation*.
- Modernization:** The installation of new plumbing, air conditioning, floors, cabinets, carpeting, etc., on school grounds.
- Multiple-subject credential:** A credential required to teach in elementary and middle-school classrooms. It qualifies a teacher to teach multiple subjects in a self-contained class.
- National blue ribbon award:** This award honors public and private K–12 schools that are academically superior or that demonstrate dramatic gains in student achievement.
- News media:** Any group of organizations that report and disseminate the news; includes but not limited to: radio, television, newspaper, news magazines; spreading a story by word of mouth is not included in the term *news media*.
- Nonacademic staff:** typically, employees (professional employees) of the university who make a significant contribution to the operational aspects of the university by bringing a collection of varied professional skills as well as working with the faculty to support the mission of the university.
- Norm-referenced assessment:** An assessment in which an individual or group's performance is compared with a larger group. Usually the larger group is representative of a cross-section of all U.S. students.
- Offensive conduct:** Conduct that includes, but is not limited to, offensive jokes, slurs, epithets or name calling, physical assaults or threats, intimidation, ridicule or mockery, insults or put-downs, offensive objects or pictures, and interference with work performance.
- Open court reading series:** A program that provides systematic, explicit instruction to help students learn the structure of words and how to sound them out. Fluent reading and comprehension by the end of first grade is a program goal.
- Parcel tax:** An assessment on each parcel of property that must be approved by two-thirds of the votes in a school district. The proceeds are generally used for educational programs, not for construction or renovation, which is normally financed through a general obligation bond measure.
- Parent teacher association (PTA):** A national organization of parents, teachers, and other interested persons that has chapters in schools. They rely entirely on voluntary participation and offer assistance to schools in many different areas.
- Peer assistance and review program (PAR):** A program that encourages designated consulting teachers to assist other teachers who need help in developing their subject matter knowledge, teaching strategies, or both. They also help teachers to meet the standards for proficient teaching.
- Peer resource program:** A program that trains students to provide their peers with counseling, education, and support on issues such as prejudice, drugs, violence,

child abuse, dropping out, and peer pressure. Students are also trained to provide tutoring and conflict mediation.

Peer review: A general term that is used to describe a process of self-regulation by all university-related professions as a means of evaluation of paper before publication and involves review qualified individuals in the relevant field; peer review methods are employed to maintain standards, improve performance, and to verify whether the work satisfies the specifications for review, identify any deviations from the standards, and provide suggestions for improvements.

Percentile ranks: One way to compare a given child, class, school, or district to a national norm.

Phonics: An instructional strategy used to teach reading. It helps beginning readers by teaching them letter-sound relationships and having them sound out words.

Physical education (PE): Activities focused on developing physical and motor fitness; fundamental motor skills and patterns; and skills in aquatics, dance, individual and group games, and sports (including intramural and lifetime sports). The term includes special PE, adaptive PE, movement education, and motor development.

Plagiarism: The appropriation of another person's ideas, processes results, or words without giving appropriate credit.

Portable: A term commonly used to describe single-unit, relocatable buildings. A portable building can be moved from one site when it is no longer needed and used again in another location.

Portfolio: A collection of various samples of a student's work throughout the school year that can include writing samples, examples of math problems, and results of science experiments.

Post-baccalaureate enrollment: The number of students working towards advanced degrees and of students enrolled in graduate-level classes but not enrolled in degree programs. See also *Graduate enrollment*.

Postsecondary education: The provision of formal instructional programs with a curriculum designed primarily for students who have completed the requirements for a high school diploma or equivalent. This includes programs of an academic, vocational, and continuing professional education purpose, and excludes a vocational and adult basic education programs.

Primary language: A student's first language or the language spoken at home.

Private school: Private elementary/secondary schools surveyed by the Private School Universe Survey (PSS) are assigned to one of three major categories (Catholic, other religious, or nonsectarian) and, within each major category, one of three subcategories based on the school's religious affiliation provided by respondents.

Profession: any occupation that provides a means by which a person with a professional qualification earns a living.

Professional development: Programs that allow teachers or administrators to acquire the knowledge and skills they need to perform their jobs successfully.

- Professor:** In the context of this book, a person who disseminates knowledge to students at a university (at any level) and a person who has an intimate knowledge of and experience in the subject being taught.
- Professor (rank):** A faculty member at a university who has reached the top-level teaching rank; typically, a tenured position.
- Proficiency:** Mastery or ability to do something at grade level.
- Program improvement (PI):** A multistep plan to improve the performance of students in schools that did not make adequate yearly progress under No Child Left Behind for two years in a row. Only schools that receive federal Title I funds may be entered in Program Improvement. The steps in PI can include a revised school plan, professional development, tutoring for some students, transfer to another school.
- Publication:** The exchange of information through publication of the results of research in a learned journal (or any other substitute); an essential part of the life of many faculty members.
- Pull-out programs:** Students receive instruction in small groups outside of the classroom.
- Pupil-teacher ratio:** The total student enrollment divided by the number of full-time equivalent teachers. The pupil-teacher ratio is the most common statistic for comparing data across states; it is usually smaller than average class size because some teachers work outside the classroom.
- Regional occupational programs (ROP):** State funded programs for job training, jobs-related counseling, and skills upgrades for students ages sixteen to eighteen. Students often take ROP classes in high school to start learning a trade.
- Regular school:** A public elementary/secondary school providing instruction and education services that does not focus primarily on special education, vocational/ technical education, or alternative education, or on any of the particular themes associated with magnet/special-program-emphasis schools.
- Research fellow:** Often refers to a junior researcher who is appointed to work on a specific project on a temporary basis.
- Research fellowship:** A research position in a university. The research fellow (the man or woman appointed to the position) may act either as an independent researcher or (more typically) under the supervision of a principal researcher; in some universities, the term *research fellow* often refers to a junior researcher who is appointed to work on a specific project on a temporary basis.
- Research misconduct:** Fabrication of data, i.e., making up results and recording or reporting them.
- Resource specialists:** Specially credentialed teachers who work with special education students by assisting them in regular classes or pulling them out of class for extra help.
- Resource teacher:** A teacher who instructs children with various learning differences. Most often these teachers use small group and individual instruction. Children are assigned to resource teachers after undergoing testing and receiving an IEP.

Responsibility: Being held accountable for actions, including thoughts, words and deeds; also includes being held accountable for actions that are subject to, or originate from, emotions.

Rubric: Refers to a grading or scoring system. A rubric is a scoring tool that lists the criteria to be met in a piece of work. A rubric also describes levels of quality for each of the criteria. These levels of performance may be written as different ratings (e.g., Excellent, Good, Needs Improvement) or as numerical scores (e.g., 4, 3, 2, 1).

Sabotage: An action in which the student prevents others from doing their work – such as disrupting a laboratory experiment.

Safe harbor: An alternate method for a school to meet AMO if it shows progress in moving students from scoring at the “below proficient” level to the “proficient” level or above on STAR, CAHSEE, and/or CAPA. The state, school districts, and schools may still make AYP if each subgroup that fails to reach its proficiency performance targets reduces its percentage of students not meeting standards by 10 percent of the previous year’s percentage, plus the subgroup must meet the attendance rate or graduation rate targets (Dataquest).

SAT (Standardized Achievement Test): Also known as the SAT Reasoning Test (formerly called Scholastic Aptitude Test), this test is widely used as a college entrance examination. Scores can be compared to state and national averages of seniors graduating from any public or private school.

SAT II: This was formerly known as the *achievement tests* and was renamed the SAT II: Subject Tests. They are administered by the College Board and widely used as a college entrance exam. Students may take the test more than once, but only the highest score is reported at the year of graduation.

School accountability report card (SARC): An annual disclosure report for parents and the public produced by a school that presents student achievement, test scores, teacher credentials, dropout rates, class sizes, resources, and more. The SARC is required by state and federal law.

School improvement program (SIP): A state-funded program for elementary, intermediate, and secondary schools to improve instruction, services, school environment and organization at school sites according to plans developed by School site councils (see *School site council*).

School site council (SSC): A group of teachers, parents, administrators, and interested community members who work together to develop and monitor a school’s improvement plan. It is a legally required decision-making body for any school receiving federal funds (see *School Improvement Plan*).

Scientifically based research: Research that involves the application of rigorous, systemic, and objective procedures to obtain reliable and valid knowledge relevant to educational activities and programs.

Secondary school: A school comprising any span of grades beginning with the next grade following an elementary or middle school (usually Grade 7, 8, or 9) and ending with or below Grade 12. Both junior high schools and senior high schools are included.

- Sexual favoritism:** Occurs when a person (such as a faculty member or staff member) is granted a promotion or a student is given passing grade in return for sexual favors; other male and female coworkers or costudents can allege sexual harassment by showing that they were denied an equal opportunity for promotion because of the improper sexual conduct.
- Sexual harassment:** Harassment on the basis of sex; can take any one or more of several forms: such as: unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when: (1) submission to such contact is made either explicitly or implicitly a term or condition of an individual's employment or education, (2) submission or rejection of such conduct by an individual is used as the basis for employment or educational decisions affecting the individual, (3) such conduct has the purpose or effect of substantially interfering with an individual's welfare, academic or work performance, or creating an intimidating, hostile, or demeaning learning or work environment.
- Sheltered English:** An instructional approach in which classes are composed entirely of students learning English. Students are taught using methods that make academic instruction in English understandable. In some schools, students may be clustered in a mainstream classroom.
- Slap-on-the-wrist:** A colloquial term for punishment that is minimal and well below the level of punishment that should be meted out for crime.
- Single-subject credential:** A credential required to teach middle or high school in California. It authorizes a teacher to teach in a single subject area such as English or a foreign language.
- Socioeconomically disadvantaged:** Students whose parents do not have a high school diploma or who participate in the federally funded free/reduced price meal program because of low family income.
- Special day classes:** Full-day classes for students with learning disabilities, speech and/or language impairments, serious emotional disturbances, cognitive delays, and a range of other impairments. Classes are taught by certified special education teachers. A student may be placed in a regular classroom as appropriate according to the student's IEP.
- Special education:** Special instruction provided for students with educational or physical disabilities, tailored to each student's needs and learning style.
- Sportsmanship:** The correct order of behavior for athletes in all sports; should also be applied to off-the-field behavior. Not all universities watch over the off-the-field (or off-the-court) behavior of the student athletes.
- Staff:** Office workers and support people on campus; nonteaching employees of the university; an employee of the university other than faculty – administrative staff (secretaries and assistants).
- Staff development days:** Days set aside in the school calendar for teacher training. School is not generally held on these days.
- Standardized test:** A test that is in the same format for all who take it. It often relies on multiple-choice questions and the testing conditions—including

instructions, time limits, and scoring rubrics—are the same for all students, though sometimes accommodations on time limits and instructions are made for disabled students.

Standardized testing and reporting program (STAR Program): The three tests that are required for grades two through 11.

Standards-referenced tests: Also known as *standards-based assessments*.

Student: The recipient of knowledge for the teacher/professor who has the capability of retaining the knowledge and is able to assimilate and sort the knowledge for further thought and practice; the paying client who (with parents or guardians or the scholarship-awarding organization) has the right to expect for his or her payment a good education based on lectures, laboratory classes (including field work – work off-campus), and guidance from competent faculty members.

Student study team (also referred to as *student success team*): A team of educators that comes together at the request of a classroom teacher, parent, or counselor to design in-class intervention techniques to meet the needs of a particular student.

Student teacher: A teacher in training who is in the last semester of a teacher education program. Student teachers work with a regular teacher who supervises their practice teaching.

Teacher: In the context of this book, a person who disseminates knowledge to students at a school (at any level) and a person who has an intimate knowledge of and experience in the subject being taught.

Teaching assistant (school): A person who assists the teacher or professor in his or her teaching duties – typically a person who has experience in teaching but may no longer be involved in giving classroom instruction on a full-time basis.

Teaching assistant (university): A person who assists the teacher or professor in his or her teaching duties – typically a graduate research student or graduate research assistant.

Team teaching: A teaching method in which two or more teachers teach the same subjects or theme. The teachers may alternate teaching the entire group or divide the group into sections or classes that rotate between the teachers.

Tenure (teachers): A system of guaranteed employment for teachers; after serving a two-year probationary period, teachers are assured continued employment in the school district unless carefully defined procedures for dismissal or layoff are successfully followed.

Tenure (university faculty): A system that has typically been used (and defined) to provide university faculty with job protection; through misinterpretation of misappropriation of the meaning of the word, tenure has evolved over the decades to mean *job protection for life*: an appointment without tenure is not always a palatable option for many would-be teachers and would-be professors.

Theft: An action in which the student steals library books or other property of others.

Thematic units: A unit of study that has lessons focused on a specific theme, sometimes covering all core subject areas. It is often used as an alternative approach to teaching history or social studies chronologically.

Tracking: The instructional practice of organizing students in groups based on their academic skills. Tracking allows a teacher to provide the same level of instruction to the entire group.

Traditional calendar: School starts in September and ends in June for a total of 180 days of instruction.

Traditional public school: Publicly funded schools other than public charter schools. See also *Public school or institution* and *Charter school*.

Undergraduate students: Students registered at an institution of higher education who are working in a baccalaureate degree program or other formal program below the baccalaureate, such as an associate's degree, vocational, or technical program.

University: An institute of higher education that often consists of a collection of colleges, each of which houses a separate area of scholarship; a community of students and teachers committed to the pursuit of learning, accumulation of knowledge, the transmission of this knowledge to succeeding generations, and the development of new knowledge.

University administration: Members of the university such as the president, the provost, vice presidents, deans, department chairs, deans, vice presidents, presidents, and the campus librarians.

University mandate: To teach students – unless the university has been founded and funded as a research university, but as a result of the research the university mandate is expanded to include teaching students the key elements of a successful career in research.

Visiting faculty: see *Adjunct faculty*.

Watchdog agency: An organization that works or acts to stop people or organizations from using illegal acts in a particular area of business or society.

Whistleblower: A person who raises a concern about wrongdoing (in the context of this book) occurring in a university or body of people; usually this person would be from that same university.

Whistleblower (Anonymous): Occurs when the employee who is reporting misconduct refuses to divulge his or her name when making accusations.

Whistleblower (External): A person who reports misconduct to outside persons or entities, such as lawyers, the news media, law enforcement agencies, watchdog agencies, or other local, state, or federal agencies.

Whistleblower (Internal): A person who reports misconduct to a fellow employee or an administrator within the university.

White lie: A misused and misinformed term used in an attempt to define an untruth and often used to bend or deny the truth; an unimportant lie (especially one told to be tactful or polite).

Year-round education: A modified school calendar that gives students short breaks throughout the year, instead of a traditional three-month summer break. Year-round calendars vary, sometimes within the same school district. Some schools use the staggered schedule to relieve overcrowding, while others believe the three-month break allows students to forget much of the material covered in the previous year.

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About the Author

Dr. James G. Speight has more than forty-five years of experience in areas associated with (1) the properties, recovery, and refining of reservoir fluids, conventional petroleum, heavy oil, and tar sand bitumen, (2) the properties and refining of natural gas, gaseous fuels, and (3) the properties and refining of biomass, biofuels, biogas, and the generation of bioenergy. His work has also focused on environmental effects, environmental remediation, and safety issues associated with the production and use of fuels and biofuels. He is the author of more than 65 books in petroleum science, petroleum engineering, biomass and biofuels, and environmental sciences.

Although he has always worked in private industry which focused on contract-based work, Dr. Speight has served as Adjunct Professor in the Department of Chemical and Fuels Engineering at the University of Utah and in the Departments of Chemistry and Chemical and Petroleum Engineering at the University of Wyoming. In addition, he was a Visiting Professor in the College of Science, University of Mosul, Iraq and has also been a Visiting Professor in Chemical Engineering at the following universities: the University of Missouri-Columbia, the Technical University of Denmark, and the University of Trinidad and Tobago. He has served as a thesis examiner for more than 25 theses and has been an advisor/mentor to MSc and PhD students.

As a result of his work, Dr. Speight has been honored as the recipient of the following awards:

- Diploma of Honor, United States National Petroleum Engineering Society. *For Outstanding Contributions to the Petroleum Industry*, 1995.
- Gold Medal of the Russian Academy of Sciences. *For Outstanding Work in the Area of Petroleum Science*. 1996.
- Einstein Medal of the Russian Academy of Sciences. *In recognition of Outstanding Contributions and Service in the field of Geologic Sciences*. 2001.

- Gold Medal - Scientists without Frontiers, Russian Academy of Sciences. *In recognition of His Continuous Encouragement of Scientists to Work Together across International Borders*. 2005.
- Methanex Distinguished Professor, University of Trinidad and Tobago. *In Recognition of Excellence in Research*. 2006.
- Gold Medal – Giants of Science and Engineering, Russian Academy of Sciences. *In recognition of Continued Excellence in Science and Engineering*. 2006.

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