A Study of Ethics for All Disciplines with Foundations in Humanity

A Study of Ethics for All Disciplines with Foundations in Humanity

By

Beverly J. Whelton and
Jane Neuenschwander

A Study of Ethics for All Disciplines with Foundations in Humanity

By Beverly J. Whelton and Jane Neuenschwander

This book first published 2022

To honor our beloved faculty colleague,
Kenneth Edward Rastall (Ken), PhD.
Biologist, Scientist and Educator
(1961-2020)

TABLE OF CONTENTS

Section Four: Ethical Reasoning and Ethical Theories

Section Five: Humanity at the Heart of Practice

PREFACE

As a graduate student of Nursing Education and while teaching Nursing, I learned of the discipline called Ethics. The ethicists I met from their lectures, never had answers. Suggestions, yes, but not answers. Still, they were concerned with how one ought to act within the imperfect circumstances of our lives. Their question haunted me. How ought I to act to be good and have a good life. Having been brought up in a Christian culture, I could not accept that we were without guidance. In time, I learned this appeal to authority might provide answers but it was not Ethics. The discipline did not depend on divine revelation but on the human capacity to reason from principles. There is a discipline of theological ethics that reasons from revealed doctrine. Nonetheless, there is a discipline of ethical discourse that reasons from foundational principles accessible to human experience and human reason. This discipline was closer to science than theology because of its use of experience and reason. It was evident to me that one could be a good person without being a godly person, because my favorite relative who did much to inspire my life, J. Robert Nelson, was a good person who did not believe in God. It became important to me to find answers in, what I would call, a scientific way.

In graduate school studying Philosophy, I found some answers. Classical Philosophy looks at what it is to be human and how humans ought to live to be happy, which was conceived as a peaceful stable inner life. Plato looked to other worldly perfections for a pattern of human life, but his student Aristotle was scientific in his approach to finding answers and argued from his experience of life. He saw humans as unique in the world in our ability to learn from experience, to ask questions and to reason to answers. For Aristotle the answer to how one ought to act to be good and have a good life could be found within the nature of being human, a being with reason and freedom. The human good lies in the development and preservation of knowledge and freedom of choice. I ought to act in ways that respect these human capacities. Beyond what one ought to do is how one ought to be treated, in ways that preserve the other person's capacity to know and their freedom of choice. These ideas place humanity itself at the center of ethical practice. Easily said but how does

this universal idea develop actual behaviors in individual, particular practice settings.

My initial vision was to form guidance for nurses. With years of life experience in nursing practice and nursing education, I saw the multiple responsibilities of the nurse become multiple disciplines, like respiratory therapy, physical therapy, and occupational therapy just to name a few. This expanded my understanding of health care and practitioners of health care. Becoming involved in online instruction, I began writing lessons and activities that could be used independent of myself. They were self-contained. After many years, I began to see this collected work as a textbook. For well over ten years, I sent queries to publishers and learned about proposals. My writing became better, more focused. Still, no one wanted to publish what I was writing. It was not academic philosophy and it was not professional practice.

My friend in the Education Department, Jane Neuenschwander began reading my work. She helped me to focus and to streamline sentences and form paragraphs. She made the work readable, and so we rewrote chapters. By the time we had rewritten the first text, *Humanity at the Heart of Practice: A Study of Ethics for Health-Care Students and Practitioners,* we had a contract with Cambridge Scholars Publishing (2019).

Now this text operationalizes insight from the multidisciplinary classroom that principles of ethical practice apply for all disciplines. We are grateful to the many students who have made suggestions and helped us understand how principles can be employed within their disciplines.

This text begins with an understanding of values and how values impact the way we see the world. It moves to questions of reasoning and how principles guide practice. If one is going to place humanity at the heart of practice, we need to know what it is to exist as a being in the world and what it is to be human. Both practitioners and recipients of practice--patients, students, and clients are human, so the third section has chapters from these two perspectives. The fourth section moves formally to provide ethical reasoning and ethical theories. The fifth and final ethical content section is application of the preceding lessons to explicit content areas, beginning of life, end of life, science, education and business. We wanted to consider many more disciplines but found these sufficient to guide students to know how to make their own applications within their own professions. The Appendix is devoted to teaching ethics within a multidisciplinary, interactive classroom. We believe in active learning and operationalize this for those who chose this text to guide their students to be moral persons and ethical practitioners.

Through your ethical studies using this text you will be able to (1) make decisions in moral situations by the application of your values and personal perspectives enhanced by principles of philosophical ethics, (2) understand the foundations of the philosophical principles you find compatible with your personal moral development, and (3) resolve ethical dilemmas into their essential components using a provided framework to make clear the conflicting values, policies, or principles to move to a principle-based solution. In order to communicate with fellow students, faculty, clinicians and practitioners, you need the vocabulary of ethical conversation. Within this text, important terms appear in bold and are provided in the glossary.

Introduction to the Text

Every semester, some students suffer the loss of a friend or family. This is a heartbreaking reality. Sometimes students will talk about their family's need to decide whether or not to take the friend or family member off life support. This is a complex decision. Questions include: Is there a designated **health care agent** and is there a written document of the person's wishes, often called **a living will**? Is there estranged family? Are there family members living far away? How long until they can arrive? What was the person's health prior to this event? What are the religious perspectives of the person and the family? In this difficult scenario, sometimes family members are confident and peaceful; sometimes they are anxious and irritable, but it is always a sad time. In the midst of this sorrow, life and death decisions must be made.

A Difficult Situation

An example of such a difficult situation was in the news in December 2013 following a California court decision to extend life support for Jahi McMath. The 13 year old girl hemorrhaged after tonsillectomy surgery and went into cardiac arrest. She was resuscitated and put on a ventilator for life support. Three days later she was assessed as **brain dead**; having no central nervous system function.[1] Thus far, no one has recovered from brain death, so in all fifty states brain dead is dead. The person can be legally taken off of life support and their donated organs transplanted. Jahi's family did not accept this assessment. It is quite natural for her family to think of her as still alive. They could see her chest rise and fall with mechanical ventilation. Cardiac rhythm has been restored so the body has warmth. But there is no detectable brain activity.

Jahi's mother, Nailah Winkfeld, believed death occurred when the heart and lungs no longer functioned, and prior to 1968, this was the standard of death. There became a serious clash between medical and

---

[1] (December 2013) http://www.bbc.co.uk/news/world-us-canada-25552818 (accessed January 1, 2014).

parental perspectives. Since Jahi had been declared dead and physicians do not treat the dead, she could no longer stay in the hospital. Her body was to be turned over to the coroner and a death certificate prepared. Ms. Winkfeld refused to allow the ventilator to be turned off. As a compromise, Jahi's mother was convinced to accept the issuance of a death certificate in order to have her daughter turned over to her care on a ventilator. Now, with a death certificate, no medical facility could admit the child for care.[2] With the help of financial donors, her mother transferred the girl on the ventilator in a private jet to New Jersey; the only state in the United States of America which allows a parent to overrule this diagnosis on religious grounds. For a long time Jahi's exact location was not disclosed. June 22, 2018, four and a half years later, Jahi died from complications of another surgery.[3]

Humans are Concerned with Good and Evil

Humans are the beings in the world who are concerned with what is done and what ought to be done. Humans perceive the impact of another human's action as good or evil, moral or immoral. Ethics is the study of how good or moral decisions are made. It also evaluates the way humans treat each other and their environments, so it is natural that this book about ethical decision-making uses humanity as its organizing structure. With recent Ethics courses being taught for all disciplines in the same class, this manuscript is being especially prepared to welcome both health and non-health-care students; anyone who reflects on proper human actions. All of us are faced with health-care decisions, so we believe all students will benefit from patient-care content included from *Ethics at the Heart of Practice: A Study of Ethics for Health-care Students and Practitioners*, but instruction, examples, discussion and activities embrace all majors and practice careers.

[2] Tim Darrah, "Citing signs of brain activity, family of girl sues to avoid death certificate," NJ.com, Jan. 17, 2019,
http://www.nj.com/somerset/index.ssf/2016/01/family_of_brain_dead_girl_sue_to_change_death_cert.html
[3] Alene Tehekmedyian, "Jahi McMath, girl at center of debate over brain death, dies, mother says," Los Angeles Times, June 28, 2018,
https://www.latimes.com/local/lanow/la-me-ln-jahi-mcmath-dies-20180628-story.html and Samuel Chamberlain, "Jahi McMath's mother says she has 'no regrets' for keeping daughter on ventilator for years," July 3, 2018,
http://www.foxnews.com/us/2018/07/03/jahi-mcmaths-mother-says-has-no-regrets-for-keeping-daughter-on-ventilator-for-years.html

Perceptions of a situation and what ought to be done are closely tied to one's values. Thus, assessment and accurate expression of a situation require self-knowledge, knowledge of the circumstances including applicable codes and laws, inner strength, courage, and wisdom. Within ethical situations, there are issues of compliance with policies and codes, informed consent, autonomy and surrogate decision making, ethical business practices, fair treatment and protection of children, to name a few aspects. Discussed in this text will be distinctions between killing and letting die, acting and letting happen, and other related issues like equality and fair distribution of goods and services.

In the First Section, we begin with the consideration of values and good reasoning. Philosophy is concerned with what can be known through the power of human reason, so we need to consider what it is to know, to grasp concepts and to use good reasoning to make arguments. In Section Two we discuss what it is to be a being in the world, which means we look at nature and then human nature. Section Three considers persons, the professional and the person served, client, customer or student. That will conclude the foundational content. Section Four moves to making good ethical choices and theory or rules proposed by some philosophers to evaluate what the good choice is. Section Five provides issues at the beginning and end of life and concerns related to human practice in education, business, and science, important aspects in a just society. Although we will see examples of ethical concerns throughout the text the last chapters seek to make clear some of the most challenging decisions.

Through your ethical studies using this text you will be able to (1) make decisions in moral situations by the application of your values and personal perspectives enhanced by principles of philosophical ethics, (2) understand the foundations of the philosophical principles you find compatible with your personal moral development, and (3) resolve ethical dilemmas into their essential components using a provided framework to make clear the conflicting values, policies, or principles to move to a principle-based solution. In order to communicate with fellow students, faculty, clinicians and practitioners, you need the vocabulary of ethical conversation. Within this text, important terms appear in bold and are provided in the glossary.

SECTION ONE

VALUES AND PRACTICAL REASONING

CHAPTER ONE

VALUES

Objectives

This chapter provides an opportunity for you to:
1. Describe the role of values in personal, professional and community life.
2. Describe the role of values in ethical decisions.
3. Identify your core values and the principles that follow from them.

Introduction

If you are an undergraduate student or practitioner this book was written for you. It does not assume that you have already studied philosophy but uses philosophy for insight and instruction in making decisions in difficult situations. Philosophical activities assist in the development of clear thinking and careful decision making. Careful decisions lend to peaceful living, although sometimes the best we can do is reduce the tensions we have to live with. Being human is practically synonymous with seeking to be happy. Philosophy is a discipline that seeks to find the way to human happiness through understanding the world, especially human life. To a great extent, happiness is being at peace with your decisions.

You may be thinking, "*I do not care about some universal ideal called human happiness or what ancient philosophers have said about being happy. I just want to make decisions that keep me out of trouble. In fact, I never even think about my decisions. I just follow what I am told to do. I presume it is legal or I would not have been asked to do it.*" This book is very much opposed to this position. As a practitioner, college or university graduate, you must question. You are responsible for what you do and for doing the proper action within your practice situation. This means that you must pay attention to the particulars of the situation and know what the reasonably intelligent practitioner (of any profession) would do.

Ethical Decisions are Similar to Clinical and Management Decisions

Sometimes ethical situations are not as clear as clinical and management circumstances calling for decisions, but there are similarities. In all of these cases, one must know circumstances and principles that guide actions and one must apply a decision-making strategy to determine the action to be done. Ethical situations may contain clinical or management information, but the decision is whether or not a particular action is the right or good in these particular circumstances. The conclusion is whether or not the situation is a case of a known accepted principle. In most decisions, there is a difference of opinion as to what ought to be done, but especially in questions of ethics because of differing positions on what is good for humanity based on one's values.

Community Values

In July 2002, the people of Quecreek, Pennsylvania, and the United States as a whole, focused attention and hundreds of thousands of dollars to rescue nine miners trapped 200 feet underground. [1] And yet, if one miner had needed a liver transplant it would likely not have been covered by his health insurance. How does this make sense? We are, thus, led to a deeply philosophical question, "What is justice and how can we have a just society?"

The scientist paleontologist in Australia, Dr. Michael Archer dreamed of restoring the extinct Tasmanian Tiger from alcohol preserved DNA fragments harvested from a one-hundred-year-old museum specimen. [2] Other scientists strive to clone extinct dinosaurs [3] or prepare a cell that will replicate the constructed DNA. [4] Whether or not these projects are reasonable scientifically is one question. Ethically, one has to ask if this is

---

[1] http://old.post-gazette.com/localnews/20020730money0730p3.asp. (last accessed July 30, 2018).

[2] http://www.petermaas.nl/extinct/speciesinfo/tasmaniantiger.htm. (last accessed July 30, 2015).

[3] J.B. Smitts, "Scientists Clone Dinosaurs," July 3, 2015, http://weeklyworldnews.com/headlines/27557/scientists-clone-dinosaur/ (last accessed July 30, 2018).

[4] Wil Hylton, "Craig Venter's Bugs Might Save the World," May 30, 2021, The New York times Magazines, http://www.nytimes.com/2012/06/03/magazine/craig-venters-bugs-might-save-the-world.html?pagewanted=all#4 (last accessed July 30, 2018).

a reasonable use of human resources and if these kinds of scientific activities ought to be done. Is it the case that something ought to be done, just because it can be done? Are there moral limits to be placed on science as a kind of human endeavor? Is it right to try to use dinosaur DNA to make new life if the funds were available? Aren't we morally free to use our money the way we choose? Is there a moral obligation involved in how we use our money? Ought the money to be reserved for a clear human benefit? Would it make a difference if the creature brought back to life was human? To a great extent, these are questions of meaning and value. An individual's answer depends on what he or she values.

Personal Values

Knowing your values and their related ethical principles, and clear reasoning can be especially important when you are working in a situation containing moral or ethical tensions. These tensions can occur when there is an emotional pull between right and wrong, or between two goods that cannot both be acquired, or two evils or discomforts that cannot both be avoided. Knowledge and insight also help your decision-making in situations of ethical tension and in the stress of living with difficult decisions.

Professional Values

When you are studying within a profession, you become familiar with the values of your discipline. A review of disciplinary codes as considered by students, leads me to assert professions have two main values, personal integrity and loyalty to the profession. Looking for business values on line, I came upon the phrase, "professional ethics in the business environment."[5] I mention this to note that business persons can be professional. Business persons do experience the tension between living their personal values as suggested by the meaning of integrity and loyalty to persons and institutions in the workplace. No matter what your discipline is you need to know your values. This knowledge of yourself

---

[5] Reference note: This text focuses on philosophical ethics. The reader looking for Christian ethics within business is referred to the excellent discussion and resources in Beyond Integrity: A Judeo-Christian Approach to Business Ethics (3rd ed.) by Scott B. Rae, Kenman L. Wong, Zondervan edition, (February 21, 2012) Full text available on line including from
https://openlibrary.org/books/OL25273465M/Beyond_integrity

allows you to select a work environment in which you will be comfortable living your values. It is also important to realize knowing your values encourages personal integrity and will keep you from imposing them on others.

Ethical Dilemmas

These are situations in which arguments can be posed for doing two different things. There may be a conflict of values, policies, or principles so that one must determine priorities among them. A person can only do one of the possible actions and once you have acted you cannot go back and undo what was done.

The most important skill you will gain from studies in philosophical ethics is to make principle-based decisions in complex situations that challenge you to ask, "What is the good that ought to be done?" In order to do this, we will consider personal, community, and professional values, the meaning of human life, the human good, individual and corporate virtue, principles from codes of practice, a just society, and the processes of ethical-decision making. Complex situations often have values, codes, and principles in conflict. The hallmark of an ethical dilemma is that once an action is taken, you cannot go back and make another decision. Dilemmas are resolved by careful identification and discarding of irrelevant details, analysis and selection of relevant content, determination of priorities, and identification of relevant principles and policies that support moral decisions and actions. Sometimes, what seems to be an ethical dilemma is actually a lack of communication and information. Then, once those involved know the particulars of the situation and the options, the action to be taken becomes clear, and the dilemma dissolves.

Management Decisions

When managers set a course of action, they usually also set a time to evaluate that course of action, which is quite different from an ethical dilemma where one cannot reverse the action taken. If leadership is not satisfied with outcomes, the manager's program can be reversed, or one can alter the course of action. This is not so with many practice dilemmas. Someone might have already died, or the information is now known and cannot again be hidden. Again, you cannot undo what has been done. For example, if you, as the respiratory therapist, remove a patient from the ventilator as a terminal weaning, and the patient dies, you cannot go back and say, "No, I will not participate in this process." You already did. On

reflection, you may think about whether or not this is an activity in which you would participate in the future, but you cannot undo your involvement or the current situation. Concerned about production or business practices you may contact administration or decide to go to the local news agency. Once you have shared the information, it cannot be undone. In this way, ethical dilemmas are distinguished from management, communication, and social problems, to name a few.

Some business, athletic and management situations share this irreversible quality. Someone considering whether or not to report an event publicly or to upper management must realize that the disclosure cannot be reversed. Also, once you report to the principal that a student is at risk in their current circumstances, protective services take over. The situation is no longer within your control. You must not delay reporting for fear of being wrong. It is better to be wrong than for a child to be hurt. Our point here is that the disclosure is irreversible.

Common Moral Decisions

Unlike ethical dilemmas, daily moral decisions require little thought. Prior development and training from childhood prepares us to match situations and principles of acting well. However, in the resolution of ethical dilemmas, you need awareness of your values and foundational principles. Knowing yourself allows you to preserve your conscience while not imposing your views on other persons. Thus, your ethical studies begin with discovering your own values and the principles that operationalize these values.

Seeking the Principle-based Action

Ethical inquiry and the quest for principle-based action take us to the beginnings of recorded Western thought. In Athens, Greece some 2300 years ago, Plato documented the arguments of his mentor, Socrates, in the dialogue play, *The Euthyphro.*[6] Euthyphro planned to take his father to court because Euthyphro's servant died, bound in a ditch, for killing the father's slave in a drunken fight. Euthyphro argued that the Greek gods would expect him to try his father for murder even though it violated Greek social norms or values. Since Euthyphro acted as if he knew what the proper action was, Socrates challenged him to provide the principles of

---

[6] The *Euthyphro* and *Apology* are in *The Collected Dialogues of Plato,* E. Hamilton and H. Cairns, editors. Princeton University Press, 1961, tenth printing, 1980.

just or right action. Although it is asked as a question, Socrates implied right action is not right because the community or a god says it is right. There is something in the behavior itself that makes it the right thing to do in a particular situation. Socrates is saying there are principles that can be known and applied.

Equality is a Principle

In the last year, in the United States there were several violent demonstrations protesting police brutality toward minorities and seeking equality of treatment. Certainly, equality is not a new idea. We even find an early indication of equality among humans in Euthyphro's speech justifying his taking his father to court. He argues the status of the person killed and one's relationship to the person who killed does not matter. A human death is a human death. The only question was whether or not it was justified. (8b-c) This was counter intuitive for a culture that had slaves, indentured servants, and people in positions of privilege and power.

In the *Apology,*[7] Socrates argues that one must be free to ask questions, and to be a faithful citizen, a person is to challenge and to think for oneself. He would say students must be allowed to question interventions and challenge procedures. People must reflect on what they are doing, and have done, to discern the good and proper human action. This is what it is to be human. All of this questioning begins with oneself. Socrates' famous maxim from the conclusion of his defense is, "The unexamined life is not worth living." (38a)

This text will return to consider principles and discovering principle-based actions, however at this time; we need to consider values and their impact on one's moral perceptions and selection of what is important. As soon as one evaluates the outcome of a decision, one's values become apparent. One's values point to acceptable outcomes from interventions and what is seen as an ethical principle for use in decision making. While we are free to determine our actions and to ask for respect for our conscience positions in support of our views, we need to be careful about sitting in judgment of another person's values. Nevertheless, it is necessary to discern when values and personal decisions can lead to benefit or harm. It is easy to say decisions leading to harm are not ethical, and they do not promote the human good. Yet we value many health-care interventions that lead to both healing (good) and harm. One example is the cures possible

---

[7] The *Euthyphro* and *Apology* are in *The Collected Dialogues of Plato,* E. Hamilton and H. Cairns, editors. Princeton University Press, 1961, tenth printing, 1980.

with chemotherapy. An oncologist spoke to me after a lecture once, and he was quite concerned. He firmly asserted that there was nothing he did that did not cause harm, but he did not like the implications that he was unethical. His hope was that the good of a potential cure outweighed the harm. From this example, we need to take caution about sitting in judgment of another person's decision and of expecting the good outcome to be the only criterion of a moral action.

While professionals may have opportunities to help people in crisis clarify their values, the professionals are not the ones to determine what the other person ought to value; neither should they impose their values. The professionals will clarify and inform but respect the other person's decision. This does not mean professionals assist in behaviors against their conscience or allow actions they know are harmful.

Later in this text (Chapter 8), we will look at the foundations of some principles in order to strengthen our understanding and decision-making capacities. When there are different principles supporting different answers in the same situation, it is helpful to understand the origins and meaning of the principles in order to make a careful decision by prioritizing relevant principles. Since there are differences in ethical principles and your principles are selected from your values, it is helpful to begin a study of ethics with an understanding of yourself.

These few short paragraphs have suggested that to be an ethical practitioner it is important to know yourself and know your patients, clients or customers. You need to know yourself to avoid imposing your values on others. You need to know the other person's values in order to represent their needs and advocate for them or offer merchandise appropriate to their situation. Additionally, it is very important to be aware of the values within your place of employment so you properly represent your employer. You need to know what you value and the principles you hold dear, so you can choose to work in an environment where people value what you value or at least respect your values. You have a conscience that needs to be respected, but you have an obligation to choose work in an environment whose mission and goals are at peace with your conscience.

Finally, when you come to know your clients, customers or patients, you enter their world and are better able to understand the meaning of what they say. Respecting others does not require that you affirm their life choices, but we need to see each other as fellow persons with a right to his or her values and personal choices. To enter the world of another, one must be aware of cultural, social, and religious preferences and expectations. Respect for the individual requires that one act in culturally sensitive

ways. This awareness allows your actions, instructions, and information to be relevant and, thus, more effective.

Conversation Starters:
1. Support your reasoning that we, as a community, should or should not fund speculative scientific projects.
2. Describe examples of projects you would want the community to fund. Provide support for your projects.
3. What capacities are common to all people? In what ways do cultures impact respect for persons as having these capacities? Think about differences in roles and treatment of men and women, children and adults.

Reflection Submissions:
1. Can one's cultural heritage lead to immoral actions? Provide an example where culture provides positive guidance then provide an example of culture not leading positively. By what standard (standards) did you make this evaluation?
2. Write a reflection sharing your ideas and experiences of situations in which values made a difference. Explain why you say what you say about the situations. Share your understanding of the connections between values and actions.

Note to teachers: There is an activity found in Appendix D entitled "The House that Values Built" that supplements this chapter.

Terminology for Chapter One
Moral or ethical tensions
Dilemmas

CHAPTER TWO

PRACTICAL REASONING

Objectives

This chapter provides an opportunity for you to:
1. Distinguish between deductive and inductive reasoning; speculative and practical reasoning.
2. Apply the practical syllogism in resolving select ethical questions.
3. Use the normative ideals of Principlism: Nonmalfeasance, Beneficence, Autonomy and Justice as first premises in the practical syllogism.
4. Recognize the role in arguments of the principle of identity and the principle of non-contradiction.

Introduction to Arguments

While you can decide what ought to be done intuitively, based on how you feel, this is not as trustworthy as expressing reasons using language. Feelings are important indicators, but they are just indicators and not a solid base for decisions unless supported by reason. Developing sentences, expressing thoughts and feelings in words clarifies one's thinking. When you develop statements of values, beliefs, positions, principles and circumstances, you can form an **argument** that can then be thoughtfully evaluated for the support provided the conclusion. This support is evaluated by the relationships between terms in the premises and conclusion of the formal argument, which will be covered in Chapter Three. Assertions or affirmative sentences are **propositions.** [1] These propositions are claims that may be evaluated as true or false and offered as **premises** in support of another claim, the **conclusion** that an action ought to be done or not done.

---

[1] Watson, J.C. and Arp, R. Critical *Thinking: An Introduction to Reasoning Well*. New York: Continuum International Publishing Group, 2011, p. 34.

Nuclear medicine students develop their skills through working with clinical preceptors in the hospital. It is my understanding that in some departments experienced practitioners give a slightly larger dose than in the protocol to increase absorption and decrease waiting time, so more patients can be processed in the allotted time. In this way, the department is on time and earns more money for the hospital. Some students experience ethical tension as they must decide if they ought to follow this practice and even if they ought to report this variance to a hospital administrator. It is a common practice but in violation of policy and may endanger the patient as it delivers a slightly higher dose of radiation.

An argument for compliance with this practice includes the propositions that it is common practice, experienced technicians do this, processing more patients makes the department look good and makes more money for the hospital. Each of these points is a proposition stated as a premise for the conclusion that the student ought to follow the same practice. This is an **inductive** argument. Each proposed reason provides more evidence that strengthens the case concluding to the behavior. On the other hand, the values of following policy and protecting patients from radiation argue **deductively** from general statements to the conclusion that the student ought not to give larger doses of radioactive dye.

Coming to Know Concepts

Before further considering principles and forming ethical propositions, it will be helpful to consider how we come to know our world on the conceptual or universal level. This involves ideas in our mind, and how these ideas (concepts) are related to what exists outside of the mind. From our experiences of the world, the intellect grasps similarities across items or settings. Through this capacity to grasp similarities and differences the intellect forms concepts. **Concepts** are general ideas. They cross time and place and are formed in the intellect as we experience individuals. When we think and talk and study, we use concepts. They are also called **universals** because they leave aside the uniqueness of individuals to express what is common to the set of particular individuals that can be experienced. Concepts (universals) are expressed in words, that is, terms that can then be used to label other items of the same kind. On the simplest level, the sentences we speak use concepts expressed as nouns, adjectives, quantifiers, logical connections and so on. With the sentence, "The baby is hungry," the nouns 'baby' and 'hunger' are concepts formed in the intellect from experience of the world outside of the mind and labeled with the terms "baby" and "hunger." "The" is a quantifier indicating one, and "is"

provides the logical connection. In this case "is" expresses the state of being or condition of the baby being hungry. The word "is" logically joins the subject and the predicate of the sentence. Logical concepts are drawn from the structure of the world but do not exist as items in the world, as a baby does. One needs to be alert to the way words direct us to both concepts in thought and particulars in the world of experience outside the mind. The extra-mental reality of babies like, Betty and Joe, give rise to the concept that is then labeled with the term "baby." This labeled concept can then be used whenever such a being is experienced. This process allows us to know and to accurately speak about this world in which we live when the concept is accurately identified and labeled.

Mathematical Concepts in Measurement

When we measure a car's length or a person's blood pressure and other physical parameters these measurements are accurate within the capacity of our instruments and our ability to observe. Repeated measurement is a way of increasing accuracy. The numerical properties can be separated from the physical. Length, weight, blood pressures or blood sugars can be considered separate from the item or person with these readings. These measurements can then be compared to a chart of average readings and what they indicate, or they could be collected to graph data as an indication of function. Errors can be reduced in practice by repeated measurements and there is little debate about the meaning of the data.

Non-mathematical Concepts

With non-mathematical concepts, it is easy to misunderstand or misinterpret each other. Some ways we misunderstand are by faulty hearing, being distracted or by using the wrong word for a concept. We may also misunderstand another person when we think we already know what the other person means. Additionally, we interpret experiences differently because of our differing backgrounds but especially when anxiety or illness alters perception. With our tendencies to misinterpret, it is critical to confirm what the other person is meaning to communicate. As professional practitioners, we have an obligation to enter the more vulnerable person's understanding, to ask and attend to their perception.