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The Functional Specialties: A Workshop on Applying Lonergan

Praxis Program of the Advanced Seminar on Mission, Seton Hall University

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**THE ROLE OF THE FUNCTIONAL SPECIALTIES:
A WORKSHOP ON APPLYING LONERGAN**

**PROCEEDINGS OF
THE PRAXIS PROGRAM OF THE ADVANCED SEMINAR ON MISSION'S
THIRD ANNUAL SUMMER WORKSHOP**

**Sponsored by the Center for Vocation and Servant Leadership and
The Center for Catholic Studies, Seton Hall University, and
Co-sponsored by Boston College, the Jacques Maritain Institute and
The University of Trieste.**

TRIESTE, ITALY, JULY 24-27, 2017

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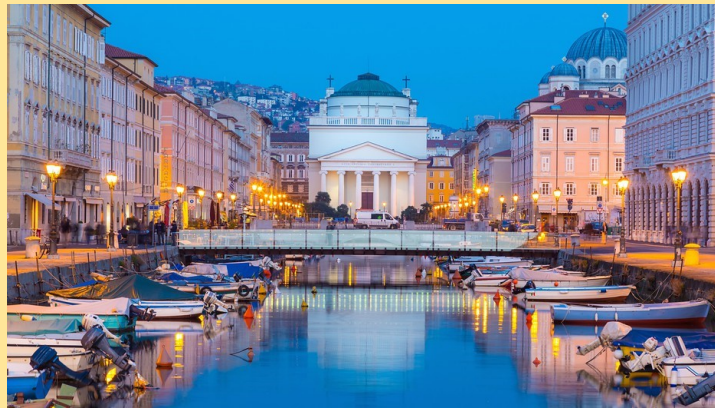
SETON HALL UNIVERSITY

PRAXIS PROGRAM OF THE ADVANCED SEMINAR ON MISSION

Co-Sponsored by the Center for Catholic Studies
Boston College, the Jacques Maritain Institute, and the University of Trieste

THE ROLE OF FUNCTIONAL SPECIALTIES

A WORKSHOP ON APPLYING LONERGAN



JULY 25, 26, and 27, 2017 • TRIESTE, ITALY

It is our pleasure to announce an international workshop for academics and scholars exploring Bernard Lonergan's Functional Specialties and their integration into the various disciplines to enhance scholarship, research and pedagogy. The Praxis Program is an advanced faculty development program that focuses on the implementation of Lonergan's Generalized Empirical Method (GEM) into the disciplines and professions. Its purpose is to integrate the mission of the university, educate the whole person, and form an interdisciplinary community for ongoing collaboration.

Three days of workshop sessions will be conducted at the University of Trieste. Invited speakers for the morning sessions include Frederick Lawrence and Patrick Byrne (Boston College); Michele Averchi (Catholic University of America); Hilary Mooney (University of Education Weingarten); and Francesca Zaccaron (Jacques Maritain Institute). In the afternoon sessions, Praxis Program participants will give presentations on the implementation of GEM and the Functional Specialties in their various academic disciplines. A limited number of guests can be accommodated for the workshop sessions. Deadline for registration is June 15, 2017. For more information or to register, please contact Giada Maselli at the Jacques Maritain Institute: segreteria@maritain.eu

For information on the Praxis Program, please visit the website at:

<http://www13.shu.edu/catholic-mission/servant-leadership-praxis-program.cfm>.

or contact: csl@shu.edu

PREFACE

These are the proceedings of the Praxis Program of the Advanced Seminar on Mission's third annual summer workshop which was held in Trieste, Italy in July 2017. It focused on the application of Bernard Lonergan's Functional Specialties to the work of the Seton Hall University faculty participants. The workshop was jointly sponsored by the Center for Vocation and Servant Leadership and the Center for Catholic Studies, and co-sponsored by Boston College, the Jacques Maritain Institute and the University of Trieste.

The Praxis Program of the Advanced Seminar on Mission ("Praxis") began in spring 2013 and is sponsored by the Center for Vocation and Servant Leadership and co-sponsored by the Center for Catholic Studies and the Bernard J. Lonergan Institute. The program was created to engage faculty and administrators in a process of peer mentoring and curricular/co-curricular support designed to apply the mission of the university to their respective disciplines and departments, through a method that connects the disciplines to each other, to an integrated understanding of knowledge, and to the Catholic Intellectual Tradition. The chosen method was Bernard Lonergan's Generalized Empirical Method (GEM), which brings a cohesion to knowledge across the disciplines through a shared cognitional structure. An integral part of Praxis is the requirement for participants to formally "apply the method" to their teaching or administrative role (ATM) and report on the results. To date, 70 faculty and administrators have been participants in the Praxis Program. For more information about the Praxis program, see the Praxis website, <https://www.shu.edu/vocation-servant-leadership/praxis-program-of-advanced-seminar-on-mission.cfm>

When we began preparing for this workshop, we were frankly intimidated. Our Praxis participants are not Lonergan scholars. They "apply Lonergan" to the best of their abilities, without extensive (or in some cases, any) background in theology, philosophy or Lonergan's work beyond that which we have studied together as part of the Praxis Program. However, the organizers and the participants alike believed that sharing this work was important, both to demonstrate the application of Lonergan's GEM in practical terms in a modern Catholic university and to show its application across various disciplines. Since Lonergan's Functional Specialties provide a language for interdisciplinary conversation, we were excited by what we were doing—we wanted to share what we had achieved—and we were eager for feedback, including constructive criticism.

We were overwhelmed by the positive response to the workshop proposal and the workshop itself, especially the supportive comments from our mentors, Frederick Lawrence, Patrick Byrne, Hillary Mooney and Francesca Zaccaron. Nonetheless, it is with great humility that we offer these papers to a broader audience, in the hope that they will recognize the value of the practical applications. And perhaps we will inspire others to undertake their own applications of Lonergan's work in their own disciplines and institutions.

As editor, I found great encouragement in the words of John Haughey, S.J.'s book, *"Where is Knowing Going,"* where he speaks of the individual efforts of many faculty members who, Catholic or otherwise, have a clear vision of their purpose as researchers and educators, and who contribute to the Catholic intellectual tradition. He observes, "...how greater their contributions would be if they were aggregated in some way and assembled into a greater whole." (Haughey 2009; p. 153) For us at Seton Hall University, the Praxis program is "this greater whole" to which we contribute. Our workshop represents a part of this contribution.

Many people contributed to the success of this workshop, including of course our sponsors. Particular thanks are due to Linda Garofalo and Danute Nourse, the directors of the Praxis Program, and Francia Peterson, the administrative assistant. Msgr. Richard Liddy has been a constant presence – teacher, mentor, spiritual advisor, and advocate. Msgr. Anthony Ziccardi has generously and wholeheartedly supported the program from its inception. The workshop would not have been possible without the help of our Italian colleague, Francesca Zaccaron, who gave so much time and effort to its inception and fruition, as well as cheerfully taking on the burden of organizing our logistics and activities in Trieste. Further thanks are due to our workshop mentors, Frederick Lawrence, Hillary Mooney, Patrick Byrne and Francesca Zaccaron. We also thank the organizers and staff at the University of Trieste for the beautiful venue and accommodations. We are profoundly grateful for this wonderful experience and the warm welcome that we received.

Lisa Rose-Wiles, March 26, 2018

Haughey, J. C. (2009). *Where is knowing going?: The horizons of the knowing subject*. Washington, D.C: Georgetown University Press.

THE ROLE OF FUNCTIONAL SPECIALTIES: A WORKSHOP ON APPLYING LONERGAN

BIOGRAPHIES of FACULTY PARTICIPANTS



Beth Bloom, M.A.

Beth Bloom is Associate Professor, Librarian II, at Seton Hall University. She is Coordinator of Library Instruction, in addition to serving as library liaison to nursing, the performing arts, art, music, and women's studies. She recently edited a book with Marta Deyrup titled *Successful Strategies for Teaching Undergraduate Research*. She has published and presented widely on information literacy. She has been a GEM Fellow since 2014.



Maureen Byrnes, DNP, RN, CNM

Dr. Maureen Byrnes is nationally credentialed as a Certified Nurse Midwife through the American College of Nurse Midwives and the American Midwifery Certification Board. She has received numerous Advanced Practice Nursing awards for clinical excellence in the delivery of women's healthcare, in particular, to underserved populations. In 2017, she earned recognition as a GEM Fellow, Praxis Program of the Advanced Seminar on Mission. Dr. Byrnes recently presented her doctoral mHealth project at the 2015 CARE4 International Scientific Nursing and Midwifery Congress in Antwerp, Belgium. Covenant House International and the Healthy Mothers/Healthy Babies coalition have both recognized her work, which implemented a maternal-infant mHealth program (Text4baby) within Covenant House New Jersey, as evidencing best practices in serving homeless 18-21 year old pregnant or new mothers and their infants.



Irene DeMasi, PT, DPT

Irene DeMasi is the Director of Clinical Education (DCE) and Assistant Professor at Seton Hall University Doctor of the Physical Therapy Program. In addition to her primary role as DCE she currently teaches Health Care Organization and Administration and co-teaches Service Learning. She received her entry-level B.S. degree in Physical Therapy from SUNY Downstate in 1977. She acquired a Master of Arts degree from New York University in 1985 and her doctorate degree in Physical Therapy from UMDNJ in 2005. Since entering practice she worked as a clinician and served in various management and leadership positions including President of the Onsite Division at Kessler Institute until 2003. Her area of scholarship is in critical thinking, experiential learning and leadership



Josephine De Vito, Ph.D., RN

Dr. Josephine DeVito is an associate professor and chairperson of the undergraduate nursing program at Seton Hall University's College of Nursing. Dr. DeVito is a Virginia Henderson Fellow and a member of Sigma Theta Tau, the International Honor Society of Nursing. She has presented research, nationally and internationally, in the areas of maternal newborn nursing and baccalaureate nursing education. As a member of the Praxis Program at Seton Hall University and a GEM Fellow, Dr. DeVito has presented research at the Nursing Education and Research Conference in 2016 on application of the Generalized Empirical Method of Bernard Lonergan, in the area of teaching undergraduate nursing students about the care of the Orthodox Jewish family during Childbirth.



Marian Glenn, Ph.D.

Dr. Marian Glenn joined the Biology Department faculty at Seton Hall University in 1985 after completing a Ph.D. in Biology at Tufts University and a post-doc at Rutgers Medical School. She is now Professor Emerita. Her scientific research focuses on forest ecology. In addition to research and teaching in the Biological Sciences, she participates in a number of interdisciplinary academic programs, including the University Core Curriculum, Environmental Studies, and the Praxis Program of the Advanced Seminar on Mission.



Anthony Haynor, Ph.D.

Anthony Haynor is associate professor of sociology at Seton Hall University. He was formerly chair of the Department of Sociology and Anthropology. His publications include a book, *Social Practice: Philosophy and Method* and a forthcoming entry on classical sociological theory to appear in the *Cambridge Handbook of Sociology*. His main areas of interest are social problem-solving, social change, self and society, and the philosophical and theological foundations of the human sciences.



Melinda Papaccio, M.A.

Melinda D. Papaccio is a GEM Fellow of the Praxis Program of the Advanced Seminar on Mission and she has been a First Year Writing Instructor with Seton Hall's English Department for over 16 years. She also teaches within the University Core. She is a team leader for Seton Hall's Critical Thinking Core Proficiency, having worked on both the development of the proficiency from its inception to the present efforts to expand the infusion of courses throughout the university curriculum. She is particularly interested in applying the principles of Bernard Lonergan's Generalized Empirical Method to her teaching to enhance critical thinking and to foster intellectual conversion and authenticity in her students. Lonergan's principles have been deeply transformational to her personally as well.



Mary Ellen Roberts, DNP, RN, APN-c, FAANP, FAAN

Dr. Roberts is certified as an Adult Primary and Acute Care Nurse Practitioner. She is an assistant professor and Director of the Doctor of Nurse Practice and Acute Care Adult Gerontology Nurse Practitioner Programs at Seton Hall University. Her professional interests are in the primary care of adult cardiovascular patients. Dr. Roberts maintains a practice with the Urban Health Initiative Program serving vulnerable populations in the greater Newark, New Jersey area. Dr. Roberts is co-author of the seminal AANP white paper on the Doctor of Nursing Practice. Dr. Roberts currently serves as Chair, Board of Commissioners of the American

Academy of Nurse Practitioners Certification Board (AANPCB), test developer and item writer for the AANPCB Adult and Family Nurse Practitioner National Certification Exam. Dr. Roberts serves on the editorial board of the "Journal of the American Association of Nurse Practitioners" and the Internet "Journal of Advanced Nursing Practice". An active member of the American Academy of Nurse Practitioners, Dr. Roberts is Past President of the AANP Board of Directors. Other professional activities include Charter member of the Board of Trustees for the American Academy of Nurse Practitioners Political Action Committee. Dr. Roberts is a Fellow of the American Academy of Nurse Practitioners, the American Academy of Nursing and the National Academies of Practice. She serves as Immediate Past Chair of the Fellows of the American Association of Nurse Practitioners, and as Senior Advisor to the Planning Committee for the National Conference for AANP. She serves on several national advisory boards. She is a national and international lecturer on the role of the nurse practitioner.



Lisa Rose-Wiles, Ph.D., MLIS.

Dr. Lisa Rose-Wiles is an Associate Professor and Science Librarian at Seton Hall University Libraries. She holds a Master of Information & Library Science from Rutgers University and a Ph.D. in Biological Anthropology from Washington University in St. Louis. Prior to moving into the library field, she conducted field research on capuchin monkeys in Costa Rica, Argentina and Suriname, and published numerous articles in primate behavioral ecology. She continues to co-teach in Biology. Her interests include embedded librarianship, student research skills, copyright, intellectual property and scholarly communication. As a GEM fellow and peer-leader in the Praxis Program of the Advanced Seminar on Mission, she is particularly interested in the philosophy and contemporary practice of Catholic education and the intersection of science and religion.



Doreen Stiskal, PT, Ph.D.

Dr. Stiskal holds a B.S. degree in Physical Therapy from Sargent College of Boston University, a M.S. in Musculoskeletal Physical Therapy with a minor in Education from Long Island University, and a Ph.D. in Health Sciences with a specialization in Movement Science from Seton Hall University. She also completed the APTA Educational Leadership Fellowship in 2013. In 2015, she became a GEM Fellow in the Praxis Program of the Advanced Seminar on Mission. Dr. Stiskal's clinical teaching is in the areas of address kinesiology, exercise, and gait for over 30 years, to students seeking various healthcare degrees. For 21 years, she has been full-time at Seton Hall. Presently she is the chairperson of the Department of Physical Therapy and one of her professional service activities is as a volunteer member of the Commission on Accreditation in Physical Therapy Education.



Genevieve Zipp, PT, Ed.D.

Genevieve Pinto Zipp, PT, Ed.D. is a professor at Seton Hall University in the School of Health and Medical Sciences, Department of Interprofessional Health Sciences and Health Administration. Dr Pinto Zipp is Director, Center for Interprofessional Education in Health Sciences and a GEM Fellow, Praxis Program of the Advanced Seminar on Mission. In addition to mentoring interprofessional health science Ph.D. students, she teaches in her area of clinical specialty in the Department of Physical Therapy at Seton Hall, teaching the Management of Neuromuscular Problems and Motor Learning and Control coursework. She received her PT degree in 1986 from UMDNJ, NJ and her Ed.D. in Motor Learning from Teachers College, Columbia University in 1996. She has co-owned a pediatric neuro rehab school based practice for over 25 years. Her scholarly interests focus on the following areas of interest: a) interprofessional education practices, b) the effects of dual task performance on walking, and c) use of diverse teaching and learning strategies for the promotion of critical thinking skills. She is active in the Academy of Neurology where she has co-chaired IVSTEP, Entry-Level Neuro Practice Guidelines, and StrokEDGE endeavors.

BETH BLOOM

Interiority and Function: Pedagogical Developments at Seton Hall University

Abstract

For the past few years, faculty and administrators at Seton Hall have participated in the Praxis Program of the Advanced Seminar on Mission, in order to enhance their fulfillment of the University's Catholic mission. The program directors have chosen Bernard Lonergan's Generalized Empirical Method (GEM) as a model to help its participants to employ a uniquely personalized approach in their application of academic duties with reference to Seton Hall's mission. A review of participants' ATMs (Application of the Method) and updates—including application of GEM to new courses, interdisciplinary collaboration, curricular changes, creation of services for the university, and personal insight - has revealed that, through the process of creating the ATMs and assuring their follow through, the participants of Seton Hall's Praxis program almost universally have experienced significant interior development that parallels the restructuring of their courses and pedagogies. Moreover, by experiencing and understanding GEM and the subsequent creation of their ATMs, participants also mirrored the stages in the Functional Specialities. The paper will illustrate this process and provide examples of such.

Since 2013, faculty and administrators at Seton Hall have taken part in Praxis workshops, whose purpose is to enhance their fulfillment of the University's Catholic mission. In order to participate in the Praxis program, faculty and administrators are required first to have attended a series of University Seminars on Mission, sponsored by the Office of Mission and Ministry and the Center for Vocation and Servant Leadership and devoted to understanding and interpreting the university mission and its function in promoting and honoring the Catholic Intellectual Tradition.¹ The mission of the Praxis program, as stated in introductory literature, is:

“To engage Seton Hall faculty and administrators in a process to develop educational support designed to apply the mission of the University to their disciplines, through a method [that] connects the disciplines to each other, to an integrated understanding of knowledge and to the Catholic Intellectual tradition.”

The program directors chose Bernard Lonergan's Generalized Empirical Method (GEM) “to help participants apply this method to their disciplines/professions” and as a model to help its participants employ a uniquely personalized approach in their application of academic duties with reference to Seton Hall's mission. The purpose of the Praxis program was to approach satisfaction of the university's mission through practical application. In essence, this necessitated an examination of current curricula and teaching methods in multiple areas. Thus the selection of (GEM) would promulgate a successful approach to the above processes, because:

¹ Such topics included were “the mission of Seton Hall and Our Current Work,” “Subsidiarity, Universality, and Unity,” “The Catholic View of Humanity,” “Authentic Knowing: Reason and Faith, Theology and Science,” “The Catholic Intellectual Tradition,” “Called to Community, Solidarity, and Social Justice,” and “Called to Personal Action: Valuing Rightly and Acting Morally.”

Its operations are the operations we can verify each in his own consciousness. And the normative pattern that relates these operations to one another is the conscious dynamism of sensitive spontaneity...presiding over all and revealing to the subject his authenticity or his unauthenticity as he observed or isolates the immanent norms of his own sensitivity, his own intelligence, his own reasonableness, his own freedom and responsibility (Lonergan, 1985. p. 150).

The GEM stipulates a process of self-knowledge, in which a person must first “experience, understand the unity and relation of one’s experienced experiencing, understanding judging and deciding, affirming the reality of one’s experienced and understood experiencing....judge, and deciding to operate in accord with the norms immanent in the spontaneous relatedness of one’s experienced, understood, affirmed experiencing, understanding, judging, and deciding” (Lonergan, 1985, p. 15). In other words, one must do one’s best to be attentive, intelligent, reasonable, and responsible.

To date, the Praxis cohorts have consisted of approximately 14 participants per annum, starting in 2013 and extending into the 2015-2016 academic year. Discussions and readings have focused, for the most part, on Lonergan’s cognitional theory (an understanding of how we come to know), although topics are wide-ranging at times, all in an effort to decipher and understand Lonergan’s theories. Each cohort member, after the first year of study, has been required to prepare an Application of the Method (ATM), in order to examine and revise some aspect or aspects of his or her academic life. The ATMs represent, to some degree, a progression toward fresh awareness of self, greater interiority, and, in effect, a process of conversion into a more authentic human being. This, in turn, results in a deeper understanding of one’s pedagogy, attitude toward students, and respect for the University’s Catholic mission. In subsequent years, each participant has submitted updates that describe the progress of his or her ATM.

As a participant of Cohort 2, I volunteered to read and analyze all participants’ ATMs (including their updates), in order to find common themes and look for the application of GEM to new courses, interdisciplinary collaborations, curricular changes, the creation of services for the university and the community at large, and, perhaps most importantly, such internal personal developments as reflective insights and new apprehensions of authenticity.

In the reading and initial analysis of the Praxis documents, I have discovered that, through the process of creating the ATMs and assuring their follow through, our faculty and administrators almost universally have experienced significant interior development that results in the restructuring of their courses and teaching methods. Moreover, several cohort members report feeling a deeper spirituality in their personal lives and a greater understanding and commitment to Seton Hall’s Catholic mission and understanding of the Catholic intellectual tradition--all of which virtually fulfill the goal of the Praxis.

In yearly assessments of the program, and in their ATM updates, faculty have recounted their own behavior modification in the classroom as well. A greater understanding of self has transformed their relationship with and understanding of their students’ academic journeys. Several had noted, with concern, that their students were learning rules and data by rote and were apprehensive mostly about others’ perceptions of their class performance. The ideal, on the other hand, would encourage students to instead to focus on their own sense of self-worth and what they could contribute to others. Consequently, several faculty developed new classroom techniques and pedagogies. Some redesigned designated courses, in order to help their students understand their own learning process and to search for authenticity in their academic and personal lives. In order to encourage students’ self-reflection, a number of faculty required students to keep daily journals of their professional and personal behaviors—a requirement for what Cronin (1999, p. 260) terms as “reflective acts of understanding”.

Some of those students were so inspired by this particular requirement that they continued journaling, even after graduation and into their professional lives. Such curricular/program developments have resulted in students and faculty understanding how their spirituality is implicit in their application of the Seton Hall mission to their work.

In examining participants' application of Lonergan's GEM and in formulating their ATMs within their respective academic areas and updates I perceived a dynamism that could be correlated with the stages of Functional Specialities. For the purposes of this workshop, I analyzed the data through the lens of the Functional Specialities, in my understanding, and found that it was useful in reaching and confirming some conclusions about the consequent pedagogical developments in our curriculum. Lonergan has described the Functional Specialities as **research** (assembling data thought relevant), **interpretation** (ascertaining the meaning of the data), **history** (finding meanings incarnate in deeds and movements), **dialectic** (investigating the conflicting conclusions of historians, interpreters, and researchers), **foundations** (objectifying the horizon effected by intellectual moral and religious conversion), **doctrines** (using foundations as a guide in selecting from the alternatives presented by dialectic), **systematics** (seeking ultimate clarification of the meaning or doctrine; (Lonergan, 1985, p.355), **communications** (interdisciplinary, developmental, and technological (p.132).

Lonergan's conceptualization of the specialties works in a variety of contexts. For instance, since the Praxis participants' ATMs focused on pedagogy and centered on the Seton Hall's Catholic mission, in my analysis of ATMs and updates I have reflected that focus in my interpretation of how the participants worked through the eight Functional Specialities:

1. They used **research** to assemble data that evidenced problems in our curriculum.
2. They **interpreted** these data as they scrutinized and studied these programmatic deficiencies *vis-à-vis* meaning.
3. They used **history** to understand the evolution of our curricular problems and how they were reinforced by outside forces.
4. **Dialectic** transpired as the Praxis participants' struggled with, discussed, and posited new or conflicting ideas that challenged historically inadequate pedagogics and addressed curricular problems.
5. The ATMs functioned as **foundations** framed for rectification of above-mentioned problems. Such foundations resulted from conversion based on expanding horizons and self-knowledge that in turn resulted from GEM and ascertained through the Praxis program.
6. **Doctrines** solidified policy making, guided by the ATMs.
7. Participants have **systematically** prepared the greater Seton Hall community for global change through clarification of the resulting curricular developments.
8. Indeed, **Communication** of the successes has resulted in and established new rules and programmatic requirements for the revised curricula.

With respect to this interpretation of the Functional Specialities, included below are statements and phraseology taken directly from participants' ATMs and updates. The ATMs explicitly articulate systemic problems that need resolution, and possible solutions.

- 1. Assembling data that evidenced problems in our curriculum as demonstrated by student behaviors:**
 - Students in labs only use “common sense”
 - Students don’t know what they don’t know. Students think they “already know this material”
 - Often students’ answers precede their questions
 - Students place little value on question formation
 - Graduate students have been heard to say “just tell me what to do”
 - Many students are scared and feel in over their heads when approaching new learning
 - Most students engage in “magical thinking” and assume their work is done once they have taken a test
 - There are 98,000 medically preventable deaths annually in the US in 1998
 - SHU School of Nursing reported that their students’ NCLEX-RN Board scores are generally low.

- 2. Scrutiny and study of these programmatic deficiencies vis a vis meaning:**
 - Organizational disconnections exist that not only impair function but are destructive to the organization’s true meaning and purpose
 - Students need understanding and insight into planning of lab activities
 - Students do not spend time for careful reflection but must be encouraged to do so
 - There is no continuity in library instruction
 - Law students do not have time for contemplation
 - In business instruction, there is no regularly communicated measure that signifies the course
 - Nursing students do not have time to benefit from self-evaluation.

- 3. Understanding how the curricular problems developed and were reinforced:**
 - Devolution of administrative structures and processes developed to sever the organization into data generating silos
 - Students sign up for single courses, take them, and then forget content
 - The library has not been allowed to offer credit bearing courses
 - There is a lack of authenticity in theology and religious studies from a scientific perspective
 - Law professors force students to accept solely a narrow positivism in concept of legal regulations, which leads to an incomplete understanding of the law
 - In some countries or societies, conflict has wounded or destroyed humanity and has threatened cultural memory
 - Over time the perspective of the profession has shifted to a view of occupational performance as both means and ends in [occupational] therapy
 - The specification that graduates of nursing programs develop into servant leaders is less measurable quantitatively than other program outcomes
 - Our curriculum has contributed to a health care system that has transitioned from acute care centric to population health, from a cottage industry to mega health, from nonprofit to profit.

- 4. Struggle with ideas that challenge historically inadequate pedagogies:**
 - Lab processes need to happen over course of several years
 - Credit bearing library courses would help students develop information literacy
 - The university as a whole needs to strengthen students’ critical thinking skills
 - Students must learn to ask reflective questions
 - Students need to focus on paying attention, getting insights, grasping truth and action

- Students need to be challenged to step beyond self-conceptions and cultural misunderstanding
- Students need to see that paths others choose do not necessarily work well for them
- Students need to become authors of their own lives
- Students need to be open to learning from the past
- Students need to learn to question
- Students need to be adventurers rather than tourists
- Students need a genesis of methods and values
- Students need to be attentive to surroundings and then move from description to explanation
- Scholarship needs to be seen as a journey not destination
- Students need to re-evaluate their own common knowledge
- Mission should be an opportunity for students to experience conversion that requires an understanding of self in order to relate to others
- Students need service learning to fix gaps in linking knowledge to problem solving.

5. ATMs as foundations framed for rectification of above-mentioned problems. Courses were created to include the following:

- “Introducing students to a model of human understanding and taking them through a consideration of how we come to understanding”
- “Implement concepts of cognitional theory and self-appropriation into students’ first clinical course ...and in the [occupational therapy] course on group process”
- Encourage ethos of self-assessment before and after projects
- Create an interdisciplinary course exploring spirituality and health using GEM
- Replace lecture with word problems
- Use journaling as measure of understanding of service learning in nursing
- Base exams based on reflection, in addition to clinical knowledge
- Connect clearly defined sense of meaning and insight with values in literature classes
- Encourage students to take risks
- Focus on self-directed learning.

6. Formation of policies based on the ATMs:

- Reinforce GEM over the four years
- Curriculum must change to be mission centered
- Use GEM and transcendental precepts to help students learn to read and write
- Change approach toward administration—to focus on daily documentation of self-reflection
- Apply Lonergan-Boyer-Maloy model to promote scholarship²
- Apply GEM to QSEN (Quality and Safety Education for Nurses) in graduate instruction
- Apply GEM to design thinking process in order to create customer-centric products

² Re. the Lonergan-Boyer-Maloy model. Science faculty member Dr. Joseph Maloy’s ATM includes discussion of his new course, “Engaging the World and the Church,” which “deals with the development of the experimental sciences and examines the relationship between law and theory. Experimental science is used as a philosophical system that illuminates other sciences and has provided some philosophical insights to the development of theological perspectives within the church.” Joseph Maloy. Note: The course is running as a CORE III course. According to statements in Dr. Nicholas Snow’s ATM, Boyer provides working definitions for modern faculty scholarship. Whereas Lonergan’s cycle of knowing is experiencing, understanding, judgment, and deciding, Boyer’s is: learn something new, integration, teaching and learning, and application.”

- Refocus women of diplomacy leadership program to spirituality rather than women's inequality
- Examine and apply GEM in context of faculty work on strategies for delivering content and assessment.

7. Systematic preparation of the greater Seton Hall community for global change through clarification of the resulting curricular developments:

- Capstone course redesigned to use GEM as training for authentic Physical Therapists
- Reading and writing preparation for each class. Students use research skills. Oral presentation of cases, medication, calculation, and exam
- Aspects of Lonergan's model adapted to maternal child nursing
- Course that immerses students in skills of just-war deliberation
- Study abroad course in Basque country that focuses on memory, history, and conflict
- New curriculum that applies GEM to change levels of presentation, understanding, and reflection in a variety of disciplines
- Creation of a new course for teacher candidates using GEM to help construct civic and professional identities
- New faculty enrichment series. Five week active learning faculty-focused mentoring program exploring mission and goals
- Link between work of mercy and utility of GEM for professional and personal growth
- Mandatory ethics course made into first year semester course (law)
- Added critical thinking and clinical reasoning component to law courses.

8. Communication resulting in established new rules and programmatic requirements for a revised curriculum:

- New first year experience at Seton Hall Law.
- New ways to integrate faith and mission in teaching
- Common sense nursing practice is guided by science in order to maintain nursing as a profession
- More deliberate effective and compassionate leadership
- Mandatory foundational support to create a strong flipped classroom
- Biology 1201 students wrote better lab reports than sophomores and juniors after GEM was introduced into freshman course
- Professional development series for administrators that enable them to speak about their work in light of SHU mission
- Students developed own philosophy of nursing
- Applied GEM to social interaction
- New course, "Catholicism and the Human Sciences" that juxtaposes and integrates Catholic and human scientific perspectives on the human person—bears imprint of GEM
- End of semester presentation of elder's life story
- Students have become more attentive, reflective, and loving as a result of their exposure and investment in the written word
- Physics course begins with a demonstration that relates physics to everyday life
- Enriched the business design thinking model and integrated Lonergan's approach into the model so that the design process taught in class more closely aligns with SHU mission
- GEM will be foundation for promoting critical thinking in leadership and self-reflection
- GEM process supports a means to know selves as their service on advisory board has changed them

- Connections with colleagues in other units as all are trying to advance Catholic mission in their own work
- Encourage student inquiry: what do you know, want to know, what is your question?
- Revamped capstone course
- Students must understand that in-depth planning is paramount
- Positive change in clinical reasoning among students
- Best scores on standardized exams in all her experience at SHU.

Two Examples of Curricular Changes Resulting from the Praxis Program

1. A new course designed by Dr. KC Choi, Associate professor, Department of Religion, Seton Hall College of Arts and Sciences.

Dr. KC Choi, a Cohort 3 participant, was concerned about how to justify the use of force when we belong to a society that honors human dignity. If all persons are valuable and worthy of love, he asks students “what kind of military intervention is justifiable based on the above concepts?” Dr. Choi’s ATM involves creation of a course that applies Lonergan’s conception of Conversion and its application to Christian just war theory and the Seton Hall Mission.

The course, “War, Peace, and Theological Ethics,” requires students to question their own preconceived ideas about others. Are they influenced by economic, social, and political variations among individuals in society, and do they allow these factors to create gaps in their understanding of others. If so, then they must understand how this hampers the common good.

One of his answers is to recognize the importance of solidarity as an integral social virtue, opposing a society that tolerates deep social divisions. He posits that all persons have value, should participate in society, and are worthy of love.

According to Dr. Choi, Lonergan’s emphasis on conversion is necessary for just-war thinking. Solidarity is necessary to achieve this, and we must undergo conversion to achieve solidarity. This necessitates changing one’s perceptions of one’s counterparts in society—inquiry, self-criticism, reflection, deliberation, and transcendence.

He has added a new section in his course that explores how automation in warfare challenges Christian just war theory. He is trying to make moral reasoning in the Catholic Christian tradition less theoretical and abstract.

Dr. Choi has commented that a combination of the Advanced Seminars on Mission and the Praxis program have reminded him of what the work of a professor is all about: that teaching is formation, which underscores the kind of moral obligation toward our students that we have as professors.³

2. Reconstruction of Seton Hall Law School’s first-year experience by Prof. Brian Sheppard, Seton Hall School of Law.

Professor Brian Sheppard, S.J.D., LL.M, was in the first Praxis cohort. As the year progressed, he expressed concern about law students’ incomplete understanding of law, due to their being forced to accept solely a narrow positivism in their concept of legal regulations; further, he noted that students

³ All ideas and or phrases in this section are taken from Dr. Choi’s ATM and update.

interpreted their coursework as an indication that their role is to provide solid answers rather than ask further questions.

He wanted students to have the opportunity to experience insight in their studies. They needed an intellectually rigorous environment that supported questioning, commitment to truth, and a respect for the norms of authenticity. He looked for a legal method to determine GEM ability, as expressed in legal methodologies such as legislation, interpretation, argumentation, and jurisprudence.

He discovered that the first year of law school is a time during which students are most willing to transform the manner in which they gain knowledge and insight. Consequently, in his ATM he introduced values training into the curriculum, delegated questioning power to students, gave them more time for reflection, more insight and discovery of the virtually unconditioned. The initial orientation was focused on the concept of justice

Radical changes in students' first-year experience, introduced by Professor Sheppard:

- Taught GEM-centered legal reasoning the summer preceding the first year
- The orientation program for incoming students centered on concept of justice
- Shifted questioning from professor to students
- Included case collections that are difficult and challenging
- Affirmed the self rather than the argument
- Shifted away from correctness towards meaning in case outcomes
- Mandatory ethics course was made into a first year first semester course
- Brought in more faculty
- Created a justice guide
- Redesigned problems in the professional responsibility course to overlap and supplement problems in the lawyering course.

As a result the students:

- Understood that their own personal insights into justice received a privileged place
- Were forced into interior thinking—who they were as knowers
- Shifted away from correctness in case outcomes towards harmonization and meaning
- Were forced to focus more on facts than legal doctrine
- Were forced to seek their own understanding of how to organize facts into understandable legal rights or arguments

Initially, the law faculty expressed concern that all philosophically-focused training was crammed into the first few months of law school; consequently, the faculty shifted the professional responsibility course from the first to second semester, which allowed them to use sessions that focus on justice issues in order to prime the students with methodological moral thinking in the summer and rekindle it five months later when professional ethics instruction begins.⁴

Praxis Moving Forward

At the writing of this paper, the Praxis program looks forward to the introduction of a new group of participants in spring 2018. Thus, the program will continue with a fifth cohort of faculty and administrators. As the faculty work through the process of GEM, many have experienced a conversion

⁴ All ideas and phrases in this section are taken from Professor Sheppard's ATM and update.

that inspires their ATM. As is evidenced above, Praxis has had significant impact on the professional and personal lives of faculty and administrators fortunate enough to have participated in the program. Still in its early stages, the Praxis program at Seton Hall has made a huge impact on the lives of those involved. As the program expands to include more participants, Seton Hall promises to become a vital center of academic innovation and personal development. *Hazard Zet Forward*.

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MAUREEN BYRNES

Applying Lonergan in Clinical Undergraduate Nursing Education

Abstract

In 1998, the Institute of Medicine drew attention to the fact that 98,000 preventable deaths occur annually in hospitals throughout the United States. Ten years later (2008) the American Association of Colleges of Nursing highlighted the importance of providing safe and quality patient care as they defined the goals of a new project “Quality and Safety Education for Nurses”(QSEN). The QSEN initiative addresses the challenge of preparing future nurses with the knowledge, skills and attitudes (KSA’s) necessary to continuously improve the quality and safety of the healthcare systems in which they will work. Seton Hall University-College of Nursing prepares future nurses to consider and apply the KSA’s that provide a solid foundation in preventing healthcare error resulting in patient deaths.

This application of Lonergan’s ‘imperatives’ provided nursing students the opportunity to intersect the QSEN competency “Teamwork & Collaboration” with Lonergan’s thoughts on the phenomenology of Human Understanding during their clinical Maternal-Newborn Nursing experience. The goal of integrating QSEN and Lonergan precepts was to enhance their development of authenticity within their beginning basic nursing practice, thereby resulting in fewer preventable in-patient errors resulting in death, throughout their career.

In 1998, the Institute of Medicine (IOM, 1999) drew attention to the fact that 98,000 preventable deaths occur annually in hospitals throughout the United States. Ten years later in 2008, the American Association of Colleges of Nursing (www.aacn.nche.edu), which is the national voice for university and four-year college education programs in nursing, highlighted the importance of providing safe and quality patient care as they defined the goals of a new project “Quality and Safety Education for Nurses” (QSEN) (www.qsen.org). The Robert Wood Johnson Foundation (www.rwjf.org) funded the QSEN project development, implementation and faculty development, evaluation, expertise and innovation nationwide. In order to accomplish this lofty goal, six competencies were defined. These competencies include five from the IOM – patient centered care, teamwork and collaboration, evidence-based practice, quality improvement and informatics – as well as safety (IOM, 2004). In addition to these definitions, sets of knowledge, skills and attitudes (KSA) for each of the six competencies were created for use in nursing pre-licensure programs (Cronenwett *et al.*, 2007). Funding continues to support the promotion of innovation in the development and evaluation of methods to elicit and assess student learning of KSA of the six QSEN competencies and the widespread sharing of these competencies among nursing faculty.

Bernard Lonergan may provide additional insight into how nursing students create mechanisms to sustain the will to change the status quo, while also assisting nursing faculty to address the challenge of preparing future nurses with the knowledge, skills and attitudes (KSA’s) necessary to continuously improve the quality and safety of the healthcare systems in which they will work. At Seton Hall University-College of Nursing we strive to prepare future nurses that consider and apply the KSA’s that provide a solid foundation in preventing healthcare error resulting in patient deaths. This innovative Lonergan/QSEN project focuses primarily on the eighth Functional Specialty: ‘Communications’ within

the QSEN Competency 'Teamwork and Collaboration'. The nursing students who participated in this project also utilized Lonergan's 'Phenomenology of Human Understanding' (Lonergan, 1971).

My first application of Lonergan's Human Understanding imperatives with nursing students took place within a group of second-degree maternity nursing clinical students, during the 2016 Fall Semester. Second-degree nursing students were provided with the opportunity to consider and reflect upon the QSEN competency "Teamwork & Collaboration" along with Lonergan's thoughts on the phenomenology of Human Understanding during their clinical Maternal-Newborn Nursing experience. The integration of QSEN and Lonergan precepts was utilized within this project in an attempt to enhance their development of authenticity within their beginning basic nursing practice, enabling the lowering of preventable in-patient errors, especially errors resulting in patient death, throughout their career.

This clinical group of maternity nursing students was provided with an overview of basic QSEN and Lonergan precepts, materials and grids to consider as they completed four written reflections, during the first half of a fifteen-week in-patient clinical maternity nursing course. All nursing students were introduced to 'A Conceptual Model of QSEN' (www.qsen.org/a-conceptual-model-of-qsen), as well as viewing the online webinar "Conceptual Model of QSEN - Virtual Abstract" regarding the creation of the conceptual model of QSEN (http://nursetimtube.com/qsen_conceptual_model). The nursing students were provided with time to record/journal their personal "insights" regarding Lonergan's "Human Understanding Imperatives" superimposed upon QSEN's "Teamwork & Collaboration" KSA's at the end of a six-hour clinical nursing experience. The nursing students addressed Lonergan's four imperatives in sequential order [Be Attentive, Be Intelligent, Be Reasonable, and Be Responsible] and as a part of their post-conference. The nursing student's reflections on Lonergan's 'imperatives' were elicited during the first half of the clinical semester in order to foster their continued growth process of understanding and authenticity within the clinical in-patient setting. A written, brief essay entitled "What Am I Doing When I Am Knowing?" was scheduled to take place during the last clinical session, as an opportunity for the nursing students to consider a broader application of both QSEN and Lonergan precepts within their future nursing clinical work.

A diagram and grid, developed as a part of this small study, in preparation for articulating Lonergan's Model was provided for each nursing student to assist their conceptualizing the purpose and perspectives intersecting this newfound knowledge in philosophy and nursing (Figure 1) QSEN's Teamwork & Collaboration competency "Knowledge, Skills & Attitudes" requirements (in table form) were also provided for each nursing student. The web-based links to "A Conceptual Model of QSEN" the on-line "Virtual Abstract" of "A Conceptual Model of QSEN", describing its background and development.

As their nursing clinical professor, to ensure the safekeeping of this important work, I maintained the students' written reflections and grids. The materials were then presented to the students for their input as a part of post-conference in the hospital setting in a sunny, quiet, and calm reflective environment, in order to best provide the proper environment for nursing students to do the necessary inner work of contemplating their growing human understanding. By the end of this experience in understanding, nursing students better understood, in part, Lonergan's question: "What are we doing when we are knowing?" as a fuller consideration of the QSEN Competency: "Teamwork & Collaboration" as it relates to patient safety and best patient outcomes. Their short essay and reflection on the overall project took place during the last clinical nursing experience.

Communication was a theme within the four written reflections by this group of student nurses. Lonergan (1971) points out that communications "...is a major concern, for it is in this final stage that [nursing] reflection bears fruit. Without the first seven stages, of course, there is no fruit to be borne.

But without the last the first seven are in vain, for they fail to mature” (p. 355). It is up to nursing and nurse educators to communicate clearly, concisely, effectively and honestly. A common meaning [valuing safety] and a common field of experience [student nurses] came together within this project because of ongoing communication. The student nurses came to share the same cognitive structure regarding patient safety! Arising between the self and others: including this nursing clinical professor and nursing staff! Students recognized authoritative gradients within communication and began to effectively manage their anxiety in speaking with staff nurses regarding error. That is a very big area of needed clinical growth among student and newer nurses. Division and hierarchy stratify and create barriers to effective patient centered communication. As Lonergan (1971) posits, “the divided community, their conflicting actions, and the messy situation are headed for disaster” (p. 358). There are a minimum of 268 preventable in-patient deaths every day in our country’s hospitals (IOM, 1999). QSEN KSA’s along with Lonergan’s imperatives of Human Understanding can enhance the provision of safer care within and among nursing students.

Communication Themes

QSEN defines ‘Teamwork and Communication-Competency’ for the pre-licensure nursing student as reflecting the ability to “function effectively within nursing and inter-professional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care” (www.qsen.org). Safe, effective, satisfying patient care requires teamwork, collaboration with and communication among members of the team, including the patient and family as active partners. Teamwork is a joint action by two or more people, in which each person contributes with different skills and expresses his or her individual interests and opinions to the unity and efficiency of the group in order to achieve common goals; while, communication is the process of joint decision making among independent parties involving joint ownership of decisions and collective responsibility for outcomes. The essence of collaboration involves working across professional boundaries. However, realities differ. Nurses describe collaboration and role responsibility differently than doctors do! Reconciling different understandings, thoughts on leadership, shared decision-making and partnerships is required. Student nurses who participated in this project provided their ‘insights’ on QSEN based communication precepts, dovetailed with Lonergan ‘imperatives’. Their reflections revealed the following themes:

Be Attentive: I value the perspectives and expertise of all members. I now have an awareness of my own strengths and limitations as a team member. I appreciate the importance of intra- and inter-professional collaboration. I act with integrity, consistency and respect for differing views.

Be Intelligent: I choose communication styles that diminish the risks associated with authority gradients among team members. We initiated requests for help when appropriate to situation. I recognized the contributions of other individuals and groups in helping patient/family achieve health goals. I am no longer afraid because I feel I can ask for help.

Be Reasonable: I value teamwork and the relationships upon which it is based. I acknowledge my own potential to contribute to effective team functioning. I am willing to examine strategies for improving systems to support team functioning. I solicited input from other team members to improve individual, as well as team, performance. I demonstrated a commitment to team goals.

Be Responsible: I value the influence of systems solutions in achieving effective team functioning. I identified system barriers and facilitators of effective team functioning. I can now explain how authority gradients influence teamwork and patient safety.

Lonergan (1971) notes that “common meaning” (p. 356) is the formal constituent of community and calls for a common experience, common understanding, common judgments and “common values, goals and policies” (p. 357). This small group of clinical nursing student reflections evidence common meaning of the value and redemptive quality of communications in the healthcare setting.

Conflict

Effective teams collaborate willingly and well – in a perfect world! Yet, barriers to teamwork and collaboration exist. QSEN identifies barriers to collaboration within three domains: persistent worldview differences; the notion of ‘professional autonomy’; and inequitable power gradients. There are many benefits to patients, families and healthcare providers in identifying and addressing conflict in the healthcare setting. A KSA approach to conflict identification and resolution provides guidance on this issue.

Knowledge: Discuss effective strategies for communicating and resolving conflict.

Skill: Initiate actions to resolve conflict.

Attitudes: Contribute to the resolution of conflict or disagreement.

In an entirely different nursing class, communication issues led to a conflict within the team. The team issue revolved around grades! A class project required the team to decide if they should receive a “Group grade” or “Individual grades” for the project. The team reached out to me and asked if I would be willing to meet with them about ‘team conflict’! They implemented their learning about communications! They initiated a request for help! I was happy to meet with them about ‘team conflict’ but with one provision: that they communicate with their class professor that they requested to meet with me regarding their ‘team conflict’, that they provide me with a copy of the resolution submitted to their professor and that they complete a Root Cause Analysis. A Root Cause Analysis provides a systematic approach to get to the true root causes of process problems utilizing “five whys”, “brainstorming” and a “Fishbone Diagram” outlining cause and effect. “Group grade” was ultimately chosen by consensus and a detailed “Fishbone Diagram” was submitted, as requested. This experience will prove to be beneficial throughout their nursing careers.

Lonergan (1971) notes that our interest is in dialectic as affecting community. Dialectic divides community into radically opposed groups, with the resulting messy situation headed for disaster. The “messy situation is diagnosed differently by the divided community; action is ever more at cross-purposes; and the situation becomes still messier to provoke still sharper differences in diagnosis and policy, more radical criticism of one another’s actions, and an ever deeper crisis in the situation”(p. 358). Not so with this team of nursing students applying QSEN and Lonergan precepts to their development of highly effective communication skills!

Although Lonergan (1971) posits, “groups exaggerate the magnitude and importance of their contribution to society” (p.360), I believe this work is an imperative of the highest order within undergraduate clinical nursing education. Throughout a student-nurse’s academic education, both didactic intellectual content and clinical application activities, within the hospital in-patient setting, are required. The work within this project provided an opportunity for the academic application of Lonergan’s philosophy within the QSEN competency “Teamwork & Collaboration”. It may additionally provide an understanding of Lonergan’s philosophical application within the remaining QSEN competencies of Safety, Patient Centered Care, Quality Improvement, Evidence Based Practice and Informatics within other nursing courses and future nursing curriculum approaches.

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Figure 1: Human Understanding & QSEN Teamwork & Collaboration

Imperative	Level	Questions/Activities	QSEN: T&C "KSA"	Reflection
Be Attentive	Experiencing	Q: sensing, instinct Desiring A: remembering, imagining, responding		
Be Intelligent	Understanding	Q: of intelligence A: research, think, observe, study, draw		
Be Reasonable	Judgment	Q: of reflection A: checking, review all data		
Be Responsible	Valuing	Q: evaluate actions A: worth, goodness		

Note: the two columns on the right were completed by participating students

IRENE DE MASI and CATHERINE MAHER

**Shaping Professional Development:
Broadening Students' Horizon of Their Role and Responsibility to Effect Human Good
By infusing the Generalized Empirical Method and Functional Specialities of Dialectics and
Communication into a Service Learning Seminar**

Abstract

Transformation from graduate student to doctor of physical therapy (DPT) requires movement away from the known role of student being served towards a new emerging identity as a health professional, serving the community and addressing the needs of society to promote the greater good. The dialectic tension between the student's perception of "who I am as student" and the unknown "practitioner I seek to become" is pivotal within this transformational process. In concert with the dialectic tension, communication is a vital generic ability the student needs to ultimately master to develop the requisite confidence and voice for moral action and advocacy as a practitioner. The ultimate goal in promoting this transformation process is the ability to shift the student's horizon toward valuing others above or equal to oneself and ignite servant leadership to foster professional transformation. GEM serves as the foundational pedagogy to foster discovery of the mindful process of knowing to enhance DPT student's critical thinking, clinical reasoning, professional judgment and ethos development. The purpose of this ATM addresses infusion of two Functional Specialities, dialectic and communications, with both processes of GEM, the way of achievement and the way of heritage, to advance both habits of mind and heart to shape this critical transformation process and promote the desired shift in the student's horizon through specific experiential learning experiences provided through the *Service Learning Seminar* during the student's final academic semester.

Introduction

Transformation from graduate student to doctor of physical therapy (DPT) requires movement away from the known role of student being served towards a new emerging identity as a health professional; serving the community and addressing the needs of society to promote the greater good. The dialectic tension between the student's perception of "who I am as student" and the unknown "practitioner I seek to become" is pivotal within this transformational process. In concert with the dialectic tension, communication is a vital generic ability the student needs to ultimately master to develop the requisite confidence and voice for moral action and advocacy as a practitioner. The ultimate goal in promoting this transformation process is the ability to shift the student's horizon toward valuing others equal to oneself and ignite servant leadership to foster professional transformation. This educational goal directly linked to the American Physical Therapy Association (APTA) professional vision is "transforming society by optimizing movement to improve the human experience" (Gorman, 2013, p.1). This new vision is outward focused rather than the inward focused prior vision and can only be realized if students consciously move away from self toward the greater good. Both the dialectic tension and the opportunity to find one's voice serve as the cornerstone for the necessary conversion of both

mind and heart, as one takes accountability and responsibility for this new role identification. This journey from the original self-identity of student to an authentic “professing person” is essential if the physical therapy profession seeks to contribute and enhance the human condition in ways not otherwise anticipated (Purtilo *et al.*, 2005, p.2). To shape this critical transformation process and promote the desired shift in the student’s horizon, specific experiential learning experiences are provided through Service Learning Seminar during the student’s final academic semester.

Service Learning Seminar

As a profession, the APTA has a code of ethics and core values that guide the “professing person” (Purtilo *et al.*, 2005 p.2). Among the seven APTA core values is social responsibility, which is defined as “responding to societal needs for health and wellness” (Scarpaci, 2007, p.4). Service Learning is the experiential learning opportunity that directly addresses the various components of social responsibility. This unique course connects both curricular and co-curricular learning with community partners outside the traditional classroom setting. Both settings and experiences, if intentionally designed, challenge students’ previously held beliefs and foster the requisite personal and professional development to broaden their horizon. Furthermore, this unique experiential opportunity provides a forum for the student to have a voice, not as a student but as a partner in addressing a community need. Immersion within experiential learning provides a pathway for students to develop their thought process and promote a deeper understanding of their role as leader, advocate, and health change agents. Linkage of the student’s understanding to the greater human good as health professionals is facilitated. To promote these abilities students need to develop both habits of mind for exploring, questioning and reflection to synthesize and integrate knowledge, as well as habits of heart to incorporate the professional values from within to outside the classroom.

Positioning this seminar in the final semester of academic preparation was purposefully done during and throughout curriculum design. As Crowe (1985) identifies, “a university student is nowhere near the pinnacle of authenticity that would give immunity to bias. But...the student is now in a position...in regard especially to oneself and the critical evaluation of one’s own horizons” (p. 117)

Applying the Method

Recognizing the student’s readiness, the seminar was designed to first introduce the students to key underlining concepts and strategies prior to community engagement. The classroom discussions centered on topics of mission, servant leadership, service learning, professional values, reflection, critical thinking and Bernard Lonergan’s (1971) Generalized Empirical Method (GEM). The conversation regarding uncertainty and uncomfortableness within the community environment and its importance for gaining new insight facilitated active engagement of students to “set the stage” for their service learning experience to create and execute a fitness day for children/adolescents with special needs.

In the context of this course, taught in spring 2017, GEM serves as the foundational pedagogy to foster discovery of the mindful process of knowing to enhance DPT student’s critical thinking, clinical reasoning, professional judgment and ethos development. Generally, critical thinking throughout the curriculum is implicit. Students are not challenged to define what critical thinking is or more importantly, the process it is linked to. By using GEM as the foundational pedagogy, the process of knowing is now explicit. Attention is given to GEM principles; the art of questioning and process of uncertainty, as pathway for self-reflection as students transition into their role and responsibility as advocates and leaders, and develop their voice within this emerging role. This in concert with the four levels of

conscious intentionality with emphasis on the fourth, to be responsible, was intentionally incorporated to further elucidate their role regarding social responsibility and advocacy. As noted by Lonergan (1971, p.9), “on all four levels, we are aware of ourselves but, as we mount from level to level, it is a fuller self of which we are aware and the awareness itself is different.”

Conscious incorporation of both the way of achievement from below upward and the way of heritage from above downward was emphasized to enhance habits of heart and mind, both identified for professional ethos development and promote construct and broadening of the student’s horizon. As Crowe (1985, p.2) noted, “It is this single structure, and the possibility of traversing it in either direction, that proves a real basis for the complementarity of the two ways.” Infusion of both processes seeks to move the student beyond cognitive thought only, toward a means of thought to moral action. GEM’s process of knowing serves as an excellent framework to allow the students to understand the importance of framing a question and reflecting on the insight gained to cultivate a greater understanding with the ultimate goal for judgment and effective decision-making. This GEM process of knowing has provided new insight and promoted a deeper awareness of strategies to promote “habits of mind” from a bottom up approach and “habits of heart” from the above downward that could directly link to student’s learning.

This year’s continued expansion of Lonergan’s work, to include a greater focus on “habits of the heart” using GEM from the top down approach, has fueled renewed enthusiasm for a structure to link the intellectual and moral self-transcendence necessary to meet a component of our program’s mission. The program’s mission states “graduates are prepared to be reflective practitioners to address the needs of society and to assume leadership roles within the profession and the health care environment” (Seton Hall University, Department of Physical Therapy, 2016). As Lonergan (2015, p.106) elucidated, “An ethics of achievement reveals that there is the world and that there is something for me to do in it. It includes the idea of vocation... and of development in the apprehension of the good.”

Faculty specifically provided the GEM process on the classroom blackboard. Dialogue regarding the way of achievement and way of heritage was incorporated. Examples related to their upcoming Service Learning experience reinforced both processes. Identification regarding the passion and dedication of the facility staff to children with special needs and the love that the staff have for their profession and ability to serve as advocates was reinforced in concert with the process from above down. Explicit identification of both ways and direct application of each provided students the tools necessary to understand the components of the process of knowing, and more importantly, recognize the inherent value each process plays in advancing higher level thinking, judgment and decision making strategies. Guided questions that were incorporated throughout the semester promoted application and integration to augment usage of both processes. Throughout this semester faculty focused on incorporation of the two key Functional Specialities (FS) that directly addressed the objectives and outcomes of the Service Learning Seminar. These Functional Specialities are Dialectic and Communications. Student responsibilities to the facility partners in relationship to these two FS were reviewed and updated. The group and individual reflections were updated to place attention on critical elements faculty identified as necessary for the transformation process for both group and individual students emphasizing Dialectic and Communications. Reflection and written assignments promoted thoughts to words and served as key tools to facilitate students’ finding and developing their “voice”, role as advocates and their leadership skills within a natural contextual environment.

To facilitate active learning for the thirty-one 3rd year DPT students, a collaborative learning model engaging a group of 5-7 students with a single community partner was intentionally incorporated.

This model of experimental learning facilitates the student's active engagement with the school-aged children/adolescents with special needs. Specifically written to incorporate GEM as the foundational pedagogy, the questions include question formulation, reflection, understanding, judgement, decision-making, uncertainty, insights and value determination. The aim is to facilitate meaningful insight and deeper understanding and active connection of the APTA Core Values and to the service learning experience for professional development. The final question is directed to the student's individual reflection. This reflection seeks to address key individual insights gained and awareness of the role and responsibilities as a professional by following the GEM approach. Again, dialectic specifically redesigned the final reflective of the question specifically addressing the tension experienced by students during the transformation process. The final reflection this semester now includes this preliminary statement to facilitate student focus on this tension. The reflection statement is as follows:

Transformation from student to doctor of physical therapy requires movement away from your previous role of student being served, toward your new role as a health professional. As a doctor of physical therapy, you are serving the community and addressing the needs of society to promote the greater good. Pivotal to this transformational process is a conversion of both mind and heart as one takes responsibility for this emerging new role identification.

What is noteworthy is that inclusion of these specific guided questions for the group throughout the semester with an understanding of dialectic and communications, as well as a specific directed individual question as the final question, was not part of the initial design or in any updated design until this year. These questions were designed only after immersion into Lonergan's work on FS occurred. This elucidates the importance of expansion of the educator's horizon before the student's expansion and further reinforces the role and responsibility of educators in today's current environment. As Lonergan (2005, p.106) described, "The fundamental problem is ...the horizon of the teacher. Insofar as their horizons are insufficiently enlarged, there will be difficulties all along the line".

The following are the group reflective questions that were incorporated into the Service Learning Seminar. These questions sought to address opportunities for students to apply and glean important awareness of both way of achievement (habits of mind) and way of heritage (habits of heart) as they seek to advance their personal and professional journey toward doctor of physical therapy.

Group Reflective Questions for Service Learning 2017

Chapter 1: Following your initial contact with the community partner today, how has this changed your understanding of the needs of children?

Chapter 2: What key questions have you formulated to allow you to begin to explore and search for information that will be relevant in the design of your service learning project for the children within your community partner?

Chapter 3: Choose one key question that was identified in your reflection in chapter 2 and provide at least 2 resources that guided the search for solutions for your service learning project. What additional questions have you now formulated as result of your initial questions and searching for answers?

Chapter 4: What are the top 4 judgments and decisions that you have placed important value on?

Chapter 5: At what points during this experience have you encountered/perceived uncertainty, ambiguity or uncomfortableness. What strategies have you implemented to overcome these barriers to your learning?

Chapter 6: What modifications and changes did you implement to ensure success in the fun fitness day for all the children?

Chapter 7: Group reflection addressing the service-learning project

- What professional values have been changed or reinforced
- What has been the group impact on the community partners
- Key insights the group experienced as a result of service learning experience

Chapter 8: Personal Reflection

Transformation from student to doctor of physical therapy requires movement away from your previous role of student being served, toward your new role as a health professional. As a doctor of physical therapy, you are serving the community and addressing the needs of society to promote the greater good. Pivotal to this transformational process is a conversion of both mind and heart as one takes responsibility for this emerging new role identification. A key value connected in this process is social responsibility. Service Learning is the experiential learning opportunity that connects both curricular and co-curricular learning with community partners outside the traditional classroom setting.

This unique course has taken you to settings and experiences that challenge previously held beliefs and fosters the requisite personal and professional development for transformation. Identify what insight you have gleaned about yourself, your emerging role as a doctor of physical therapy and the importance of social responsibility. Provide specific experiences that have personally affected your conversion of heart and mind.

Student Insights/Broadening Horizons

The following are selected student individual reflections (chapter 8 above) that attest to the value of incorporating GEM as the foundational pedagogy with mindful incorporation of Functional Specialities within a service-learning seminar.

- *“Through this service learning experience, I have learned more about myself and developed more as a person. One of the key things I learned about myself is recognizing my own strengths and weaknesses. ... My thoughts on my role as a PT has changed throughout the course of the semester. Throughout my previous years, especially in undergraduate, I continuously worked on developing myself. During the service learning experience, I transitioned from self-development to development of others.... Now, I understand what it means to be a servant leader at a deeper level. There is a clear delineation between being successful and being a leader. To be successful, one must develop oneself. To be a leader, one must develop others.” JG*
- *“Just as we have always learned in class, people will always remember the way you feel. I believe this was the key aspect that I learned from my service learning experience, and it will tie into my daily practice as a doctor of physical therapy.” DF*

- *“My role is no longer that of a student but a leader, therefore I must strive to be the best version of myself I can be in all circumstances whether in clinic or outside of clinic. Having my service learning at the Phoenix center was a life changing experience.” DC*
- *“One of the biggest lessons I have learned is to see individuals for who they are and not see them for their diagnosis or disabilities. This was particularly difficult for me when working with children with special needs because I would solely focus on what they could not do, when they portrayed so many other amazing abilities.” KM*
- *“When I first entered DCF Newark’s doors, I was very nervous to be working with this population... I didn’t think I wanted to work with children. I was close-minded to the idea... I began to open up my mind and put aside my initial judgments... I began to see how my effort was reciprocated. The children had smiles on their faces every time they saw us enter the doors.” KJ*
- *“I’ve discovered that I genuinely like to learn and not ashamed of asking questions in order to understand and further explore the topic in the hopes to make it my own. An example of this is asking questions to professors, even if they aren’t teaching a particular class that I’m in anymore. If they know something I’m curious in, I know they will be open to answering my question. I see how much they care about teaching and how they want the field of Physical Therapy to continue to grow through us.” MP*
- *“Through this experience, I feel like I have changed the way that I view children with disabilities. Prior to this service-learning project, when I looked at children with disabilities, I focused more on what they cannot do and how fragile they are. Now, I look these children and think about all of the things they can do and how they have so much potential to accomplish their goals. As a Doctor of Physical Therapy, I feel like this experience has opened my eyes to how much we can do in the community to make a difference in these children’s lives.” TC*
- *“There has been so much I have learned about not only myself but also the world of PT from this service learning experience. Coming in to the PT program my mind was very isolated as to the type of patients that I would be working with... I believe this service learning experience was a fantastic opportunity to really see the spectrum of people we have the possibility of working with and how much of an impact we can have. We really opened our minds to the different ideas for working with these kids... I really believe I’ve grown as I emerge as a future DPT.” SM*
- *“... The students at Horizon Lower taught me many lessons. Life is full of challenges but no matter how small or large those challenge are we must still find a way to make it through the day. They reminded me not to take anything for granted as abilities and freedom can be taken away as quickly as they are given. They taught me patience, they challenged my critical thinking skills, they taught me love in a way I never knew possible and most importantly, they taught me that no matter what others say, we are all beautiful and strong in our way.” JG*

Outcomes

Students actively participating in this semester long service-learning project developed a deeper understanding of their role and responsibility as health advocates and servant leaders by expanding their own personal horizons to directly impact children/adolescents with special needs. Lonergan

(2005, p.102) identified, “the more their education has been a broadening of horizons toward a real apprehension of the human good in all its dimensions, the better they will be prepared.”

Through reflection, the students identified key insights garnered because of following GEM which evokes formulating questions, seeking solutions and ultimately making pertinent decisions and value judgements that will guide and facilitate their professional development. As Liddy (2000, p.524) described, “By our decisions we not only affect objects, but we also change ourselves and make ourselves who we are to be ... Moral development leads to the autonomous and personal choice of who one is going to be: what kind of person, with what values”. Therefore, critical thinking and value-centered judgment are vital skills that must be cultivated and developed during the formation and transformational process as the student advances on their vocational journey to becoming a doctor of physical therapy. Lonergan’s method has provided the fundamental cornerstone for their metacognitive and professional ethos development, which facilitate their expanding horizons. As Lonergan (2005, p.90) observes, “To know about a horizon one has to have a larger horizon within which one can define the smaller one”. Lastly, this faculty believe the infusion of GEM, both the below upward and above downward approach, as the foundational pedagogy with emphasis on dialectics and communication as key Functional Specialities within service learning seminar, fostered a learning environment to sharpen the doctoral students’ insight and judgment of their critical thinking, decision making and professional values development as emerging healthcare leaders. “Teach people to make good decisions and you equip them to improve their own futures and become contributing members of society” (Facione, 2011, p.1).

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JOSEPHINE DeVITO

The Functional Specialities of Bernard Lonergan: The Generalized Empirical Method for Nursing Students in the Care of the Orthodox Jewish Family during Childbirth

Abstract

Nurses need to provide culturally competent, skilled, responsive care that reflects respect for the Orthodox Jewish couple and Lonergan's GEM can contribute to this important time for the childbearing family. To understand the Orthodox Jewish family going through childbirth required more knowledge, discussion and reflection by students to enhance their learning through the GEM. To begin this pedagogy we discussed the invariant structure of the human good in relation to the vital, social, cultural, moral, and religious values that apply to this special population. According to maternal newborn theories (Mercer, 1995; Rubin, 1984), students recognized the importance of childbirth experience as the foundation for the mother-newborn relationship. Understanding how the GEM enhanced this process also illustrates that the Functional Specialities can apply to nursing education, practice and research for students participating in the care of the Orthodox Jewish family during childbirth.

The nursing profession is both an art and a science. A baccalaureate nursing education provides students with the foundation to develop their philosophy of nursing, which becomes part of who they are in life. As part of the Praxis program, I developed my application of the method (ATM) of the Generalized Empirical Method (GEM) and applied it to Maternal Newborn Nursing, which is a required course in the nursing curriculum. In this course students learn about nursing care for women during childbirth, postpartum, and newborn care, and apply the principles of maternal newborn theories and supportive courses, which include, culture, ethics, communications, philosophy, religion, biology, microbiology, anatomy, and chemistry to enhance their understanding. During the clinical experience, students take care of different family cultures and religions going through childbirth and understanding the Orthodox Jewish family was challenging for nursing students. This problem required more knowledge, discussion, and reflection by students to enhance their learning. To begin this pedagogy, in order to more deeply understand the invariant structure of the human good, values were examined in their vital, social, cultural, moral and religious aspects, in relation to this special population.

The Generalized Empirical Method (GEM) of Bernard Lonergan, applied to the pedagogy of the maternal newborn nursing course, enhanced the integrative process for understanding the vital social and cultural values of the Orthodox Jewish population during the time of transition to professional practice for student nurses.

In this study, the student nurse uses conscious intellectual processes of inquiry, meaning, insight, reflection and judgment to choose among different possibilities, since the human person exists as a consciously developing unity and this is congruent with nursing (Perry, 2004). Nursing views each person as a unified whole and incorporates a temporal element of development into this unity. Nurses understand the effects of a client's past experiences on the current situation and they use this understanding to help the client create a meaningful experience in health care. Through nursing intervention, the nurse and the client influence each other's development as unique subjects of a consciously developing unity (Perry, 2004, 2013). When we consider nursing as a scientific profession,

we need to consider it as a transformation in ourselves (as nurses) and our nursing practice. Lonergan (2003) suggests that a real change in the subject involves a radical conversion, which is a challenge.

Human cognition involves experiencing the data, as is illustrated in the responses from the students in their reflective journals each week. Questions arise from our experiences and on the intellectual level, we seek to understand “what is.” From our preliminary understanding, further questions arise and we weigh the evidence to verify the truth or falsity of our understanding and reach a judgment, which is followed by more knowledge, and making decisions. Student nurses went through the process of *self-transcendence*, by *being attentive through experience, being intelligent through understanding, being reasonable through judging, and being responsible through deciding* (Lonergan, 2003).

Lonergan (2003) and Perry (2004, 2013) suggest five categories regarding man’s development that corresponds to nursing. These include the following:

First, man is a unity with physical, chemical, organic, psychic, and intellectual conjugates. Nursing students had to apply the principles of anatomy, physiology, chemistry, and psychology to understand the changes occurring within the Orthodox Jewish women during childbirth. The psychological changes are equally important to the psychology of the “transition to becoming a mother” (Mercer, 1995) and bring with them how our culture, religion and family values make up this transition to motherhood.

Second, man is a ‘system on the move’ and what man is today was not always so and what man is today need not remain so. Intellectual development is contingent on obtaining new insights and new insights require further questions. As nursing students begin to understand and progress through their nursing education, they begin to use clinical reasoning to develop critical thinking in the application of knowledge, which will also change who they are becoming as they develop their role of a professional nurse.

Third, the law of integration states that whether development is by organic, psychic, intellectual or external sources it must be integrated on all levels. The nursing student begins to think, feel, and react as a nurse who understands her clients, families, and the health care system.

Fourth, the law of limitation and transcendence relates to the tension between the subject a person is and the subject they will become. An understanding of the guidelines for ethical nursing practice became a part of them as they transition to the role of the professional nurse.

Fifth, the law of genuineness, which relates to the law of limitation and transcendence in that its success demands, correct apprehension of its starting point, process, and goal. Genuineness confronts issues, inspects them, studies their many aspects, works out their various implications and contemplates the concrete consequences in one’s own life and in the lives of others. Nursing becomes part of you. You cannot leave it. Being involved in a healthy lifestyle, caring for yourself and family are forever a part of your life because you become an advocate and resource for those who seek health care.

During the maternal newborn nursing course, students attend a two-hour lecture each week and a six-hour clinical experience on an obstetric unit at a medical center, where there is a large population of Orthodox Jewish women. Student nurses had many questions about how these women transition throughout the birth experience. To understand this culture and religion, students read about the Orthodox Jewish family laws and traditions during childbearing. In class, there was discussion about the Orthodox Jewish women and husband during the childbirth process. Students reflected on their

feelings as well as the meanings, insights, and values of the Orthodox Jewish culture while writing in their journals.

From this rich source of data and reflection a descriptive phenomenology study developed. A sample of fifteen female and three male nursing students (ages 19-21) enrolled in a baccalaureate nursing program in maternal newborn nursing participated in this study. For 10 weeks, the students wrote in journals their reflections on the following areas: Laws of Modesty, Laws of Niddah, Laws of Sabbath and Holidays, Laws of Kosher, and the Laws of naming the child and circumcision (Zauderer, 2009). According to Zauderer (2009), nurses need to provide Orthodox Jewish couples with sensitive and individualized care. Culture and rituals can affect a young couple's perception of their birth experience (Zauderer, 2009). The student nurse must also respect the personal and religious expressions of cultural views and expectations that surround childbirth.

The following themes emerged from the experiences and the assigned readings the students participated in as they wrote in their weekly journals. Student comments were very insightful and reflective, as they commented on the following questions, "What are my thoughts on the..... Laws of Modesty, Niddah, Kosher, Sabbath and Holidays, Naming a male child and Circumcision, Naming a female child and gender issues?" The themes further enhanced and reflected the understanding of values for nursing students concerning the Orthodox Jewish family during childbirth.

Selected Comments on Values from the Reflective Journals of Nursing Students

Laws of Modesty

The law of modesty is very distinctive for Orthodox Jewish women. Students commented on the laws of modesty as the following:

"I think it is great that these women respect their bodies and in return show respect to their religion but I think skirts can be difficult to wear doing regular chores and pants are more comfortable and less of a hassle when taking care of children."

"I can see how nurses need to know how modesty can be an issue for these women. Being aware of the placement of bed linens, patient gowns, and hair covers need take this into consideration in establishing the nurse patient relationship."

"During physical assessments in labor and delivery, I can see how this could be a problem if a women is exposed and how this can make her husband feel uncomfortable. Nurses need to pay special attention to this."

"As a male nurse, I would do not be assigned to an Orthodox Jewish client because of the restrictions of their faith. As a man, I find it hard to be in the husband's place since they are not able to comfort or express openly by touching their wife, or tell her how they feel."

"As a member of the Pentecostal church, women are expected to dress modestly, such as with skirts knee length, pants, and shirts that cover their shoulders. My pastor says this is so that men do not feel tempted by physical desires as they look at a woman. I think this is very extreme."

Laws of Niddah

The laws of *Niddah* are referred to as a state of impurity. The Orthodox Jewish woman enters this when she begins having labor contractions. Students commented on the laws of *Niddah* as the following:

"I find it difficult to understand how this can be a time of impurity for a woman. I believe that the birth of a child is one of the greatest gifts and is a miracle from God. To me, touch is the way a man and woman show how much they love each other especially in labor and delivery."

"I can respect the fact that a husband does not touch his wife immediately after birth, but what I feel uncomfortable about is that they sleep in separate rooms. I would want to be close to my husband and feel his love and joy at the birth of our baby."

"I am of the Islamic faith and the law of Niddah is similar to my religion, the difference is that the woman is not allowed to participate in daily prayers and must not have any sexual intercourse during this time. What happens if a woman goes into labor at home and there is blood, can her husband take her to the hospital?"

"I would respect their beliefs but do not totally understand them. I would want my husband to support me physically by touch or stroking and by talking to me. I would also want my husband to hand the baby to me and share in this moment when we can gaze into each other's eyes at our beautiful baby."

Laws of Sabbath and Holidays

During the Sabbath and on the holy holidays the Orthodox Jewish family does not engage in traveling, use electricity, or participate in activities of daily living or work (Zauderer, 2009). Students commented on the laws of the Sabbath and holidays as the following:

"I find it hard to believe that if the mother is in the hospital no one can visit her on a holiday during the Sabbath since driving or taking public transportation is not allowed. I know that there was a couple who got permission from their Rabbi to get a car service when their baby was discharged from NICU, on the Sabbath. I feel a baby's home coming and holidays should be a celebration, not a restriction."

"As someone who was raised in a Catholic family and lived in a town, where the 'blue laws' were in affect there were no stores at the Mall open on Sundays, I can understand these restrictions. Sunday in my house was going to Mass, having a family dinner with my extended family, and not doing any normal work activities. It was nice to relax and worship God. "

"I find it difficult for the Orthodox Jewish family not be able to ask for help or sign any documents, if it is needed, during this time. I remember entering an Orthodox Jewish mother's postpartum room with the nurse who was taking care of her and the nurse had to open the window shades to let in the sunlight since the mother could not do this. As we entered the mother was sitting in darkness."

"I would think following this tradition with its limitations might be difficult for the young Orthodox Jewish family with children. Until they are older and begin to become familiar with these laws, what activities are children engaged in?"

Laws of Kosher

The Orthodox Jewish family eats only kosher foods. Meats and dairy are not eaten together and are placed in separate dishes (Zauderer, 2009). Students commented on the laws of Kosher as the following:

"I find it hard for this religious culture to follow the laws of kosher. Today there are so many fast food places. What if the mother is having a hard day with the kids and does not want to cook? She cannot order take out. This involves a lot of discipline and I respect them for that. Also at the hospital where we did our clinic rotation, they had a kosher menu which I think was good."

“As a Catholic, I grew up saying grace before every family meal. I can remember not eating meat on Fridays during lent. I went to Catholic school all my life and even though our restrictions were not like the Orthodox Jewish laws, I respect them. As a nurse I will be very conscious of these laws.”

“I would find it very difficult not to eat meat and dairy together, but if you are raised this way, it must seem natural. As a nurse, we must be aware and respect these traditions. I am glad hospitals accommodate the Orthodox Jewish dietary needs.”

“I am Jewish but my family did not follow the laws of Kosher. My family went to temple each weekend and observed the holy days where some food traditions were followed. I respect these customs.”

Laws of Naming the Child and Circumcision

For male infants, a circumcision occurs on the eighth day after birth at a *Brit Milah*, known as a *‘bris’*. This follows the covenant between God and Abraham (Lewis, 2003). The infant receives his Hebrew name. Female infants receive their Hebrew name, in Synagogue, on the day that the Torah is read. Orthodox Jewish parents usually give an English name on the birth certificate in the hospital. Students commented on the laws of Naming the child and Circumcision as the following:

“I took care of an Orthodox mother this semester and observed her talking with her sister about the arrangements for her son’s ‘bris.’ I thought it was nice to have a celebration when naming a child with their Hebrew name.”

“It seemed to me that a girl was not as important in the Orthodox Jewish customs as a boy is. I think gender should not be an issue when it comes to welcoming a new life into the world. I observed the planning of an Orthodox Jewish family for their son’s ‘bris’. This couple had twins, a boy and girl. The girl’s Hebrew name was to be announced in the synagogue when the Torah was read with family but did not seem as elaborate as with a ‘bris,’ which was planned for the son.

“I attended a circumcision in the hospital on a non-Jewish male baby. It makes me wonder how this can be done safely in a Synagogue. Do only certain Rabbi’s perform these? Are they trained? What if the baby has complications?”

“I respect the traditions of this religious culture. My concern is with the emphasis on ‘gender differences.’ I did not think this went on as much today, but in this religion, it seems evident that male babies are highly valued. It makes me uncomfortable, since I grew up with five brothers and my sister and I were valued equally by our parents.”

The Application of the Functional Specialities of Loneragan for Nursing Students and the Orthodox Jewish Family during Childbearing

Students became familiar with the Orthodox Jewish Family customs, laws, and traditions as these pertained to childbirth. These included the following:

Research

Nursing theories can assist the student nurse to apply the nursing process for care of the Orthodox Jewish family during childbirth. Maternal newborn nursing theories of Rubin (1984) and Mercer (1995) which include maternal newborn attachment and the bonding process for the mother prenatally and postnatal are at the foundation of the mother child relationship, as well as the emerging role of becoming a mother. An understanding of the Orthodox Jewish Laws regarding modesty, *Niddah*, the

Sabbath and holidays, kosher, and naming a child and circumcision were reflected on, so this religious culture could be provided the nursing care that was appropriate for the family at this time. Lonergan's GEM added to the richness of understanding and reflection by allowing students to **Experience** while being attentive to this process. **Understand** while gaining knowledge to expand their intelligence, **Judge** while be reasonable, and then **Deciding and Acting** while being responsible to developing their professional nursing role.

Interpretation

Nursing as an art and science is the application of clinical reasoning and critical thinking to provide culturally sensitive professional nursing care for the Orthodox Jewish family during childbirth. The GEM of Bernard Lonergan, assisted in enhancing meaning, values, insight, and reflection on the Orthodox Jewish family during childbirth.

History

Nurses need to acknowledge and understand the customs and laws of the Orthodox Jewish family to provide meaningful nursing care throughout the childbearing process. How have the customs of the past influenced the childbirth process today? How has the nursing profession evolved from its beginnings as a profession to the present time in dealing with diverse cultural and religious clients in need of health care?

Dialectic

Providing compassionate care with respect of the gender of the caregiver (female and male student nurses) is a challenge. Teaching strategies for diverse student populations with the development of a case study to reflect the nursing care of the Orthodox Jewish couple during childbirth.

Lonergan (2000, 2003) suggests that operations of human cognition occur across cultures and professions and therefore, during this study, the Functional Specialities can apply to nursing practice, education and research for nursing students participating in the care of the Orthodox Jewish family during childbirth.

Implications for Future Nursing Research and Practice

According to Callister (2001), nurses need to provide culturally competent, skilled, responsive care that reflects respect for the Orthodox Jewish mothers and their families. Further research and knowledge of specific cultural practices can facilitate the provision of holistic, family-centered care to Orthodox Jewish childbearing women and their families. Student nurses need to incorporate cultural diversity into nursing care.

Cultural diversity necessitates the need for all health professionals to understand the needs of clients from other cultures and religious affiliations. Nurses need to become culturally competent to care for clients. Student nurses who are familiar with traditional practices can discuss options openly with their clients and adjust their nursing care accordingly, understanding how to intervene within the framework of hospital policies. It is important to provide maternity and postpartum clients with personalized care that is sensitive to diverse client populations to all faiths, cultures, and value systems in society.

According to maternal newborn theories, the integration of the childbirth experience into the framework of a woman's life has the potential to promote self-actualization, strengthen her

relationships with those who are most significant to her and facilitate successful adaptation to the role of motherhood (Mercer, 1995; Rubin, 1984). The Generalized Empirical Method of Bernard Lonergan enhanced this process during this time of transition for student nurses. *Authenticity* and the *human good* are at the heart of the GEM. During this study, student nurses went through the process of *self-transcendence*, which is comprised of four transcendental precepts, which are as follows: *being attentive through experience, being intelligent through understanding, being reasonable through judging, and being responsible through deciding.*

Further research should include longitudinal studies on how student nurses incorporate the application of the Generalized Empirical Method to further advanced their understanding, judgement, and decision making when dealing with diverse client situations. Nursing practice can benefit from an understanding of Lonergan's self-transcendence process, which can be used to integrate nursing theory and research. For the student nurse, this is a time of transition into the role of a professional nurse, as they continue to develop their philosophy of nursing, which is the foundation of the nurse they aspire to become.

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MARIAN GLENN

Growing Self-Knowledge within Humanity's Growing Knowledge of the Universe

Abstract

This paper was inspired by the work of a variety of Catholic thought leaders who grapple with the relationship between knowledge generated in the natural sciences and the foundations, doctrines, and systematics of Catholic theology. Bernard Lonergan identifies the beginning of theology as a science with the discovery of the supernatural order by Philip the Chancellor of the University of Paris in 1230 via Aristotle's *Metaphysics* and the Islamic commentaries. Dante's poetic popularization of the supernatural order as locations in the earth and sky, created a unified moral and physical cosmology that persists even today in our imagination, even though we also know it as a myth. Lonergan addresses this inchoate mixture of the physical and the mythical through dialectic and intellectual conversion. Thomas Berry and his students approach the study of human self-understanding through the new scientific knowledge of the deep history of the universe. The data demonstrate that creation in the universe is an ongoing process directed toward increasing complexity and interdependence. During the past few decades, humanity has discovered it faces an existential challenge largely created by its own activities. Pope Francis, in his encyclical, *Laudato Si': On Care for Our Common Home*, describes the deteriorating conditions on Earth, both material and spiritual, and offers moral guidance on addressing the issues. The contemporary Catholic theologian, John Haught, finds in the scientific story of the universe, a metaphysics of the future, to inspire hopeful energy to address these existential challenges facing humanity. Lonergan's method and Functional Specialities provide a guide for dialogue and reunification of the natural and supernatural, and Haught's work seeds the popular imagination with God as a loving guide into the future.

Every time we are drawn to look up into the night sky and reflect on the awesome beauty of the universe, we are actually the universe reflecting on itself. And this changes everything (Swimme & Tucker, 2011, p. 2).

*In the act of knowledge, object and subject are wedded together and mutually transform each other (Teilhard de Chardin, *The Human Phenomenon*, 1999, p. 4).*

Human self-reflective consciousness and innate desire to understand, to question, to understand understanding, launched a new era in the evolution of the universe. Over the course of 250,000 years, as the human niche (Deane-Drummond, 2016) on planet Earth expanded, these inquiring beings gained expertise in a wide range of Functional Specialities, as they slowly organized themselves into diverse cultural communities spread across the planet.

Our ancient ancestors, seeing the bowl of the night sky slowly rotating, brightly illuminated with uncountable stars, must have wondered, what are these twinkling beings? Why are there five of them who wander slowly among the others within the path of the moon, this luminous moon whose changing shapes predict the heights of the tides? Who made these mysterious beings who live in the sky yet affect so much on Earth? Our ancestors created dramatic stories to satisfy their innate desire to understand the universe and its relation to their lives. Stories were refined and written, painted, sculpted, sung, and danced. As civilizations developed at various places, some thought leaders asked a

different type of question; reflecting on the stories, they asked, “Is it so?” and created geometry, logic, numbers, and specialized instruments and vocabulary to seek theoretical insight about these phenomena. Thought leaders continued to ponder the meaning of what they were coming to know, and eventually Church councils deliberated on the meaning of this knowledge, and formulated doctrines in technical language to explain the foundations of the Christian community. Knowledge became more systematic. For example, St. Thomas Aquinas applied reason to the question of God’s existence: Is it so? And answered: Yes. Universities were established to create a community of knowledgeable religious leaders.

One of the recurrent questions people wrestled with is to understand the source of their own understanding. Bernard Lonergan identified an important point of inflexion in the history of this pursuit in about 1230, when Philip, Chancellor of the University of Paris, discovered “the systematic notion of the supernatural order.” This put Theology among the sciences by providing it with a domain and a system. (Lonergan, 1993, p. 242).⁵

Just as Euclidean geometry selects and orders a domain, just as Newtonian mechanics selects and orders a domain, just as the Periodic Table selects and orders a domain that makes the science a single whole with a clear method, clear criteria, and full awareness of what pertains to it and what does not, similarly theology selects an order that consists in grace which is above nature, in faith which is above reason, in charity which is above ordinary human good will, and in merit for eternal life which is above any human deserts.

Lonergan goes on to explain the relationship of each of these entities to the Christian religion and the Catholic Church.

There is an entitative order of grace, faith, charity, and merit that comes to us through Christ, that is known by faith, that is realized by charity that is socialized in the mystical body which is the church. (Lonergan, 1993, p. 242)

The supernatural order, ruled by love, known by faith, became the domain studied by Theologians; the natural order, ruled by laws, known by reason, was studied by Philosophers, like Aristotle, Newton, Darwin and many more. The supernatural ordered by love reminded me of what I’d been taught about God in Sunday school: *God is Love*. I also recalled Dante’s God making order in the supernatural realm of Paradise: “the Love that moves the sun and other stars” (Canto XXXIII l. 145). I pulled off the shelf Dante’s great work melding Aristotle’s model of the heavens with Christian theology, describing a moral universe consistent with the scientific knowledge of his time, and re-read the end, where Dante, the traveler, sees God. Dante’s God is represented as three circles of different colors of energetically moving light (optics tells us that red, green and blue light shining together make white light). Dante uses a geometric analogy, the impossibility find a rational formula to construct a square with the same area as a given circle, to describe his inability to understand the mystery of the incarnation. Then he describes the flash of light that illuminates his mind, not as an analogy, but as real, the insight he had

⁵ On Lonergan’s use of the word “discovered”: Philip is one of the first major thinkers in the Latin West whose work reflects the influence of the recent influx of newly translated texts from Aristotle and his Arabic commentators, particularly in the area of metaphysics. This may help to explain the distinctive character of his work. Philip’s use of Aristotelian metaphysics is especially interesting given that many of Aristotle’s metaphysical treatises and work in natural philosophy were officially banned at Paris during the time that Philip was working on *Summa de bono*. Quoted from McCluskey, Colleen, “Philip the Chancellor”, *The Stanford Encyclopedia of Philosophy* (winter 2014 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2014/entries/philip-chancellor/>, accessed 6/2/17).

asked for. He goes on to observe that he was not able to force this insight, it arrived in a flash and he felt his small being moved by God's grace, as God's love moves the large beings of the universe.

Eternal Light, you only dwell within
Yourself, and only you know you; Self-knowing,
Self-known, You love and smile upon yourself!
That circle – which, begotten so, appeared
in you as light reflected – when my eyes
had watched it with attention for some time,
within itself and colored like itself,
On me seemed painted with our effigy,
so that my sight was set on it completely.
As the geometer intently seeks
to square the circle, but he cannot reach,
through thought on thought, the principle he needs,
so I searched that strange sight: I wished to see
the way in which our human effigy
suited the circle and found place in it ---
and my own wings were far too weak for that.
But then my mind was struck by light that flashed
and with this light received what it had asked.
Here force failed my high fantasy: but my
desire and will were moved already -- like
a wheel revolving uniformly -- by
the Love that moves the sun and the other stars.

(Alighieri, 1991, translation by Mandelbaum, canto XXXIII, lines 124-145)

Dante placed God, the love force that moves the supernatural realm, in the empyrean, above an unmoving Earth, and outside the bowl of the evenly rotating heavens, a place beyond any known "place". Dante as the traveler discovers the placeless origin of the supernatural order, and he experiences how a flash of the light of the prime mover of the sun and other stars deeply affected the traveler's mind and heart. Both Dante and Philip the Chancellor are remembered as poets, and their artfully described moral and physical universe is reflected in the systematic theology of Thomas Aquinas and the scholastics.

Dante's perfectly coordinated moral and physical heavenly order has gradually fallen apart in the face of scientific observations. From 1610 when Galileo published what he saw through his telescope as dark sunspots and a rocky moon, and not ethereal bodies, the sky as the abode of heaven became open to question.

And new Philosophy calls all in doubt,
The element of fire is quite put out;
The sun is lost, and th'earth, and no man's wit
Can well direct him where to look for it.
Tis all in pieces, all coherence gone...

John Donne, *Anatomie of the World*, 1612 (Hought 2015b p. 43)

Galileo explained the new methods for reading the book of nature.

Philosophy is written in that great book which ever lies before our eyes — I mean the universe — but we cannot understand it if we do not first learn the language and grasp the symbols, in which it is written. This book is written in the mathematical language, and the symbols are triangles, circles and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth.

(Galilei, *The Assayer* (1623), as translated by Thomas Salusbury (1661), p. 178, as quoted in *The Metaphysical Foundations of Modern Science* (2003) by E. A. Burtt, p. 75.)

Natural philosophers got to work interpreting the book of nature, using mathematics, logic and reason and constructed theoretical models that boggled the imagination. And experiment by experiment the empirical evidence accumulated to support a new interpretation of reality. Here is a very brief list of what could be called the doctrines and systematics of the natural sciences.

- Newton's Laws of Motion pulled together Earth and Sky into one system.
- Mendeleev made Chemistry a systematic science.
- James Clerk Maxwell described light as arising from the interaction of electric and magnetic fields, and 20 years later, such electromagnetic waves were discovered by Heinrich Hertz, and found to include, besides light, radio waves, microwaves, and cosmic rays.
- Einstein used Maxwell's equations for his theory of relativity, and invented **space-time** to describe how light was bent by massive bodies like the sun. And a few years later this was observed during a solar eclipse by Arthur Eddington.
- Einstein's equation $E=mc^2$ showed that mass and energy were interconvertible, the foundational doctrine for nuclear physics.
- Quantum mechanics introduced probability into the structure of matter and energy. Physics does not yet have a unified theory of matter and energy.
- Wegner proposed Continental Drift in the 1920's and plate tectonics provided a mechanism in the 1960s giving Earth Science a system of its own.
- Cell Theory, Genetics and Evolution are the doctrines of Biology.
- The Catholic priest, Georges Lemaitre, applied Einstein's theory of relativity to astronomical observations and concluded that the universe is expanding. Some crucial evidence came shortly before he died, when Arno Penzias and Robert Wilson working at Bell Labs in Murray Hill, New Jersey, were perturbed by persistent background radiation that was interfering with long distance phone transmission, and Robert Dicke, Jim Peebles and David Wilkinson, working nearby at Princeton University, identified it as the cosmic microwave radiation that they'd been looking for as evidence for the theory of the Big Bang universe.

Theologians grappled with integrating their supernatural order into these wild discoveries about physical reality. Bernard Lonergan, in his great work, *Insight*, marveled at how these new scientific discoveries changed the world mediated by meaning in the scholastic tradition. He answered Pope Leo XIII's call to "build up and perfect what is old by means of the new" (Liddy, 1993 p. 112, quoting Lonergan, quoting Leo XIII). Lonergan's Functional Specialities described in his *Method in Theology* (1971) are a useful framework for organizing insights into the task of reunifying the cosmos as an integrated physical and moral universe.

Lonergan pointed out that the meaning of Saint Thomas's systematic theology was being consistently misinterpreted, which called for dialectic and intellectual conversion to eliminate an extremely stubborn myth concerning reality, objectivity, and knowledge. The myth is that "knowing is

like looking, that objectivity is seeing what is there to be seen and not seeing what is not there, and that the real is what is out there now to be looked at," (Liddy, 1993, p.109 quoting Lonergan, 1971 p. 238).

Perhaps this myth persists so stubbornly because in Dante's cosmos knowing *was* indeed like seeing, because the planets and stars were observable supernatural beings. The natural and the supernatural were connected domains of the visible universe, ruled by God's love-force which demonstrably moves the sun and other stars. The heavens as the location of the supernatural order continues to persist in the popular imagination, perhaps explaining the startling strangeness that accompanies an intellectual conversion that releases the mind from space-based thinking. As John Haught puts it, "pre-scientific sensibilities still imprison our souls" (Haught 2015b, p. 13).

As Saint Thomas worked to unify knowledge based on faith and that based on reason, Bernard Lonergan, educated in Thomist philosophy and cognizant of the methods and advances in the natural sciences, explained how belief in the supernatural order and belief in the natural sciences both arise from a common method of human cognition, a method that transcends the individual and the culture. Belief about both nature and the supernatural is generated through a process of self-reflection on one's own conscious activities of experiencing, understanding, judging and deciding. The process takes place in an individual mind, but transcends the individual through accessing the enormous resources of the world mediated by meaning.

A world known not by the sense experience of an individual but by the external and internal experience of a cultural community, and by the continuously checked and rechecked judgments of the community. Knowing, accordingly, is not just seeing; it is experiencing, understanding, judging, and believing. (Lonergan, 1971 p. 238)

Understanding is "organized intelligence that places the full set of clues in a unique explanatory perspective" (Crowe p. 40 quoting Lonergan *Insight* p. ix.). Believing by faith and knowing by reason rest upon the same cognitive act of judgment, which is a self-transcendent act carried out after critical reflection on one's understanding. This is expressed in the following set of imperatives.

- Be attentive to one's own experience.
- Be intelligent, receptive to insight, Ask, "WHAT is it? What is its essence"
- Be reasonable. Question the insight, ask, "Is it so?" Answer yes, no, or maybe, and continue posing questions and inviting insights until all relevant questions have been answered affirmatively. The insight is then "virtually unconditioned," and the judgment follows: "Yes, it is so. It exists."
- Be responsible. Come to a value judgment about this new knowledge, deliberate on possible courses of action, make a decision and carry out the action.

The iterative, two-step cognitive process, moving from an insight about the possible interpretation of experience: *What is it?* To the conditions to be met to affirm the insight: *"Is it so? It is."* is similar to the testing of a scientific hypothesis, the basis of empirical science. By adding the 4th step: be responsible, the value judgment generalizes the method beyond facts, to include decisions about moral action. Lonergan's method is thus named the Generalized Empirical Method (GEM). It is an experimental method, with the experiment taking place in the consciousness of the experimenter and the judgment applying to the knowledge of Being, both natural and supernatural, which Lonergan describes as characterizing a critical reality. A naïve reality, formed from sense data and insight, but lacking a theoretical foundation is an unsystematic mixture of naturalist and supernaturalist beliefs, which he describes as "an incoherent realism, half animal and half human, that poses as a half-way house between materialism and idealism" (Liddy 2007 p. 71, quoting Lonergan, *Insight*, p. xxviii).

Creating critically-real knowledge, answering, *Yes, it is so*, from a stream of insights (various “whats”) rests not only on reflection, that is self-appropriation of one’s own cognitive processes, but also requires self-transcendence through immersion in the world mediated by meaning, and an understanding based not on “taking a close look” but on theory.

Two examples from the natural sciences illustrate how knowledge is generated by a community using this method. Alfred Wegener in 1912 proposed a hypothesis of continental drift based on looking at the shape of South America and West Africa, and the continuity of geologic strata and fossil forms across the two continents, but lack of a convincing mechanism dogged his efforts to persuade his colleagues that this seemingly unimaginable process could have actually taken place, and he had died before plate tectonics confirmed his hypothesis in the 1960s. He describes the piece-meal state of knowledge that exists when a set of related insights lacks an organizing theoretical explanation.

Scientists still do not appear to understand sufficiently that all earth sciences must contribute evidence toward unveiling the state of our planet in earlier times, . . . It is only by combing the information furnished by all the earth sciences that we can hope to determine 'truth' here, that is to say, to find the picture that sets out all the known facts in the best arrangement and that therefore has the highest degree of probability. Further, we have to be prepared always for the possibility that each new discovery, no matter what science furnishes it, may modify the conclusions we draw. (Wegener. *The Origins of Continents and Oceans*, 4th edition, quoted online at www.ucmp.berkeley.edu/history/wegener.html)

Another example is Einstein’s stubborn refusal to accept the idea of an expanding universe even when shown convincing empirical evidence of receding galaxies, until he worked out an explanatory mathematical model (Nussbaumer, 2013). Sense data and theoretical explanation are both needed for the creation of new knowledge.

As scientific knowledge of the evolution of life continued to grow, Catholic thought leaders considered how to form a coherent systematics that reunites the natural and supernatural domains, and understanding human evolution was especially contentious. The scientist, Stephen Jay Gould (2002) described “non-overlapping magisteria,” with science having the teaching authority about facts, and religion about values. Yet both sorts of inquiry, facts and values, exist within the same human community, and often within the same individual mind, giving rise, philosophically, to an incoherent understanding of what is real. Dialectic is needed to reconcile various positions and counter positions. Gould was working at countering anti-evolutionist doctrines of various religious groups. He considered this division of facts and values as an arrangement that recognized the contributions of both domains, and might lead to dialogue across the tracks. In considering how to broker dialogue, Gould studied Pope Pius XII’s 1950 encyclical *Humani generis*, which reflects on the divide between the natural and the supernatural: evolution of the human *body*, which is studied by scientists, and the creation by God of individual souls, which is the domain of theology.

The Teaching Authority of the Church does not forbid that, in conformity with the present state of human sciences and sacred theology, research and discussions, on the part of men experienced in both fields, take place with regard to the doctrine of evolution, in as far as it enquires into the origin of the human body as coming from pre-existent and living matter—for the Catholic faith obliges us to hold that souls are immediately created by God. However this must be done in such a way that the reasons for both opinions, that is, those favorable and those unfavorable to evolution, be weighed and judged with the necessary seriousness, moderation and measure, and provided that all are prepared to submit to the judgment of the

Church, to whom Christ has given the mission of interpreting authentically the Sacred Scriptures and of defending the dogmas of faith. (Pius XII, *Humani generis*, 36)

Today, almost half a century after publication of the encyclical, new knowledge has led to the recognition of the theory of evolution as more than a hypothesis. It is indeed remarkable that this theory has been progressively accepted by researchers, following a series of discoveries in various fields of knowledge. (Pope John Paul II, 1997)

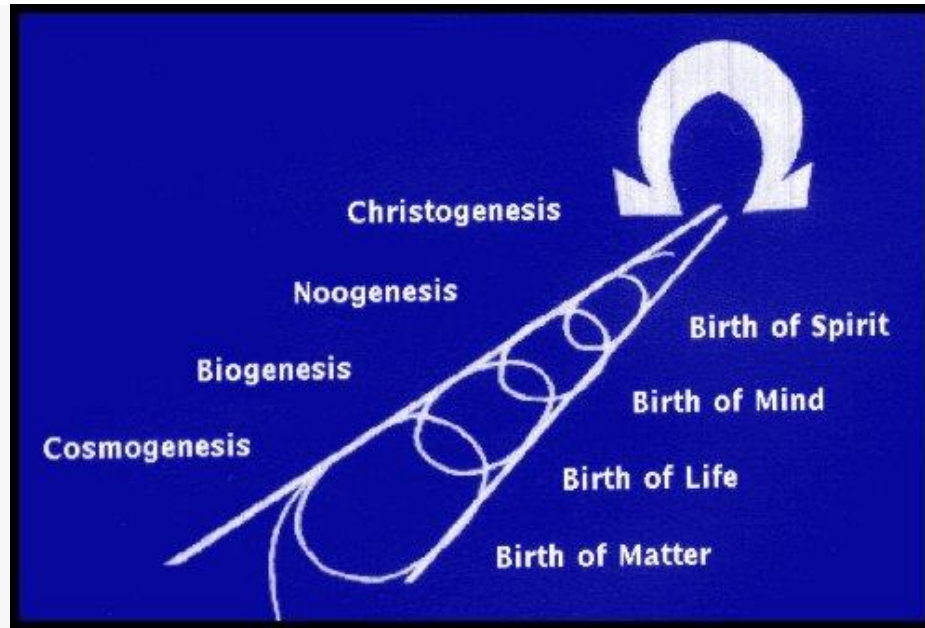
However, the Holy Father made it clear that assent to the theory of evolution did not alter the doctrine that God creates individual souls, thus the division between natural evolution and supernatural creation is maintained (Tagliabue, 1996).

This position posits that creation is ongoing. God's act in providing each newly created human being with a newly created soul, offers hope that these self-reflective beings, born into a universe that is aware of its awesome history and moved by its potential for realizing the good and the beautiful, will choose to co-create with God as the drama of the cosmos continues to unfold.

Such had been the hope of Teilhard de Chardin (1881-1955), whose search for meaning in the expanding universe took place during a time when his contemporary, Einstein, (1879-1955) imagined himself riding on a ray of light, and one of his younger colleagues, Georges Lemaitre (1894-1966) described the universe as an exploding cosmic egg, and later more scientifically as a primeval atom. The American astronomer, Edwin Hubble (1884-1953), discovered uncountable stars in "island universes" like our own Milky Way and measured the unimaginably rapid speeds at which they were rushing away from us. In particle physics, DeBroglie suggested a wave equation for moving particles, and such waves were observed a few years later by a variety of scientists. Teilhard's own work sifting the dust of the Earth and discovering human fossils was nothing short of mind boggling. Teilhard as a Jesuit priest was as dedicated to Jesus as Savior of the world as he was to empirical science as a way to understand the world. His great work was to bring a unified vision of the evolution of the universe into a Christian context, which he did using the symbols of the alpha and omega of the gospel of Revelation. He envisioned the universe as an ongoing genesis with Christ as the omega point toward which evolution is aiming.

The birth of matter in the big bang led to a physical and chemical cosmogenesis. The birth of life to the biogenesis of the biosphere, the birth of mind brought forth the noosphere, filled with thoughts. And most recently, with the human, the birth of self-reflective thought, and the compassionate spirit of Christ, the hope for the future. Teilhard understood this world as encompassing both nature and the supernatural guidance that draws it forward. Being is better characterized as Becoming. John Haughey (2014) explains: "Teilhard invented the word 'amorizing' to describe the foundational love that undergirds all forms of evolution. 'Humanity...will be led progressively to distinguish an 'amorizing' kernel of the transcendent in the centre of an Omega at first regarded as simply immanent". Dante's God as the love-force that illumines his mind and moves the sun and other stars, like Teilhard's amorizing force is poetic, but Dante was describing Paradise, not nature. Subsequent Catholic thought leaders like Bernard Lonergan, in his great work, *Insight*, deal with this systematically.

Although Teilhard's Jesuit superiors deemed his mystical ideas too revolutionary to be published, his insight was too exciting not to be discussed. Lonergan's systematics of the evolving universe, published in the 1940s in *Insight*, is based on Teilhard's model, which wasn't published until the mid-1950s, so I surmise that Teilhard's mimeographed clandestines were a fertile source of new ideas. Patrick Byrne (2014) explains how Lonergan, too, proposed a process Generalized Emergent



Teilhard's Evolutionary Spiral (from ch 8: The Consummation [Higher Ground](#) by Ann K. Elliott, 2000, published online.)

Probability that encompasses both natural evolution and supernatural guidance. Emergent Probability is the statistical rationale of evolution: an improbable event will eventually emerge given enough time. Lonergan points out that humanity has become the major force guiding evolution by putting insights into action according to our values and decisions, our free will for good or ill. And God's gratuitous bestowal of the supernatural virtues of faith, hope, and self-sacrificial love are essential for guiding the direction of human and earth's evolution toward the good, now that free-willing humans are more and more of an influence on the future of life on earth. This systematics is less optimistic than Teilhard's original vision, but more in line with a critical reality.

Teilhard's work was eventually published posthumously, just in time for the Second Vatican Council, where the supernatural goals of evolution found their way into the encyclical *Gaudium et Spes: The Pastoral Constitution on the Church in the Modern World* and so into the mainstream of Catholic education (Viney, 2014). This passage from *Gaudium et Spes* quotes and expands upon some of Teilhard's favorite passages of the gospels.

For God's Word, by whom all things were made, was Himself made flesh so that as perfect man He might save all men and sum up all things in Himself. The Lord is the goal of human history, the focal point of the longings of history and of civilization, the center of the human race, the joy of every heart and the answer to all its yearnings. (25) ... Enlivened and united in His Spirit, we journey toward the consummation of human history, one which fully accords with the counsel of God's love: "To reestablish all things in Christ, both those in the heavens and those on the earth" (Eph. 11:10). The Lord Himself speaks: "... I am the Alpha and the Omega, the first and the last, the beginning and the end (Rev. 22:12-13). (Pope Paul IV, 1965, Article 45)

The latter 20th century found the human community facing very serious challenges to its sustainability: As humanity's niche pushed more and more against the ecological boundaries of the

planet, new diseases, toxic pollution, loss of biodiversity, and changes in the climate system, stalled or even reversed progress. Searching for a critical understanding of how we'd got ourselves into this mess, and how to resolve it, the Passionist priest, Thomas Berry, an admirer of Teilhard, who named himself Thomas in honor of the saint, also considered how to build up and perfect what is old by means of the new. Thinking about the deep history of the Earth and the universe, we now know that human history constitutes a minute fraction of this 13.7 billion year drama. This new knowledge profoundly changes our understanding of Being, and of the relation of our being to the larger Being of the universe. I was attracted to exploring the notion of Being, encompassing both the natural and the supernatural, both everything I am conscious of as well as the known unknown, and the unknown unknown, and Being as transformed into Becoming by the evolutionary foundation of the universe. As a natural scientist recognizing my inchoate understanding of reality, I found a half-way house in pondering the meaning of the deep history of the universe, earth, and humanity that continues to expand the horizon of Being, revealing new areas of the once unknown unknown.

I learned that Fr. Berry read Rachel Carson's *Silent Spring* and wondered why people who thought they were doing good, inventing a spray to prevent malaria, inventing a chemical refrigerant that would prevent food from spoiling, ended up doing so much harm. They had failed to understand the larger order; they lacked knowledge of the deep history of the universe; knowledge that would have evoked awe and reverence for the immensity of time that was involved in creating the system they were tinkering with. The world mediated by meaning had failed them. Berry decided that effective care for creation begins with a better understanding of the universe, the world system. As Lonergan said about helping the poor: begin by studying economics, to understand the theoretical system describing the flow of money and goods. Berry and his students are attempting to expand Teilhard's Christian-based vision of evolution's goals, to a vision that can unite all of Earth's people to work toward a mutually-beneficial relationship with the Earth and the Earth community, which he describes as the Ecozoic. The Ecozoic differs from the Anthropocene, another suggestion for naming our current geological epoch, in that the Ecozoic posits the operation of God's grace in directing humanity toward the good.

Thomas Berry collaborated with his student, mathematical cosmologist, Brian Swimme, to write *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era*⁶ -- *A Celebration of the Unfolding of the Cosmos* (1992) and in 2011 Swimme and another one of Berry's students, Mary Evelyn Tucker, a scholar of comparative religion, co-authored *Journey of the Universe*, a short book, an hour-long documentary film, *Journey of the Universe: An Epic Story of Cosmic, Earth and Human*

⁶ Ecozoic Era: the etymology of Ecozoic is "eco-" derived from the Greek word "oikos" meaning house, household, or home, and "-zoic" from the Greek word "zoikos" meaning pertaining to living beings. Thus Ecozoic era is defined as the era of the house of living beings. It was coined by Thomas Berry while in extended conversation with Brian Swimme in the late 1980s. Swimme describes Berry's eureka moment: "When Thomas and I were writing *The Universe Story* ... we wanted to get the right name for the emerging era. We went round and round and round trying out possibilities. This was while we were working in motels or eating meals in restaurants or talking on the phone in between meetings. Then one night ... the phone rang ... and it was Thomas. He didn't say "hello" or anything. He just launched right into it. His voice was explosive with excitement. 'I've got it! It's the Ecozoic Era!' We both burst into laughter — our instant, mutual recognition of just how right this term was. It was the first time the word was ever thought of. It's an example of Thomas's geological consciousness." From: "Groping Our Way toward a New Geologic Era: A study of the Word Ecozoic," by Allysyn Kiplinger, spring 2010, accessed online June 5, 2017. <https://ecozoictimes.com/what-is-the-ecozoic/what-does-ecozoic-mean/>

Transformation, and a series of interviews with scientists and theologians. Tucker and John Grim now offer an online course, *Journey of the Universe*, through Coursera. The success of this collaboration between natural scientists and theologians in outlining a new cosmology based in science and infused with spiritual awareness, is exemplary of the role that this new understanding of the dramatic evolution of the universe can play in Catholic education.

Berry envisioned the great work of our generation at the start of the Ecozoic Era to redeem our relationship with the Earth, “to carry out the transition from a period of human devastation of the Earth to a period when humans would be present to the planet in a mutually beneficial manner” (Berry, 1999, p 3). This Great Work is inherently interdisciplinary. “The natural world demands a response beyond scientific insight. The natural world demands a response that rises from the wild unconscious depths of the human soul” (Berry, 1999, p. 55). A human being holds within its soul the deep heritage of the cosmos. Berry builds on Lonergan’s Generalized Emergent Probability in this explanation for the inherent complexification of the universe from the beginning up to the emergence of human consciousness.

If the dynamics of the universe from the beginning shaped the course of the heavens, lighted the sun, and formed the Earth, if this same dynamism brought forth the continents and seas and atmosphere, if it awakened life in the primordial cell and then brought into being the unnumbered variety of living beings, and finally brought us into being and guided us safely through the turbulent centuries, there is reason to believe that this same guiding process is precisely what has awakened in us our present understanding of ourselves and our relation to this stupendous process. (Berry 2015, p.137)

Can humanity rise to the challenge of integrating this understanding into today’s sciences including theology? Bernard Lonergan’s *Functional Specialities* suggest a method for generating the new policies and systematics needed for such a transformation. Research in the natural sciences continues to produce data about the early history of humanity, the Earth and the heavens. This deep history is filled with unanticipated insights, and offers humanity a new story of our deep connection to the universe.

Our challenge is to create a new language, even a new sense of what it is to be human. It is to transcend not only national limitations, but even our species isolation, to enter into the larger community of living species. This brings about a completely new sense of reality and value. (Berry, 1999 p. 42)

There is ample scientific knowledge for dialectic discourse and broadening the horizon of foundational values to include a wider range of beings beyond humans, to envision a dynamic universe of interacting natural and supernatural beings, to develop a deeper metaphysics of the future (Haight 2015 a & b). This new understanding of the evolution of the universe, earth, and humans, developed over the past several generations, and still on-going, is being analyzed by both scientists, to understand the underlying unity of their disciplines, and also by theologians such as John Haight, analyzing Church doctrine and systematics, “to explore what science could mean for our faith today, if we were to take its findings seriously. Sustained theological reflection on the fact that we live in a still-emerging universe could enlarge our vision of God and the world and still remain consonant with biblical hope” (Haight 2015b p. 13).

The Catholic university provides a platform for Lonergan’s *Functional Specialities* to be extended from Theology to the sciences, and most importantly, to foster interdisciplinary Dialectic toward a renewal of Foundations, Doctrines, and Systematics to create the world of meaning that the dialectic

about these new insights generates. Publications co-authored by theologians and specialists in the natural sciences would constitute the proof of the pudding. The arts also play a role, with new poems, plays, paintings and other artistic creations that communicate a scientifically sound “sacred book of nature” accessible to popular culture.

In the universe described by Swimme and Berry (1992) as “a communion of subjects rather than a collection of objects” (p. 243), the communion of subjects begins long before the appearance of human beings, in fact, within seconds after the great flaring forth of matter and energy that begins the universe story. When what we know as the laws of physics first became active, the universe witnesses the first acts of communing: quarks found companions and formed the protons, neutrons and electrons that we know from our chemistry lessons. Protons and neutrons bonded with each other to form the first atomic nuclei that we know from the top row of the Periodic Table of Elements.

Even from the first moments, our universe moved toward creating relationships. ...In our observable universe, various forms of bonding are inescapable. Even moments after the birth of the universe, the simple nuclei were brought forth, as protons and neutrons fused together into the first nuclei. This bonding is at the heart of matter. (Swimme & Tucker, 2011, pp. 8-9)

As the universe expanded and cooled, the rate of expansion was perfectly calibrated to bring forth a structured universe of long duration.

One of the most spectacular features of the observable universe is the elegance of its expansion. If the rate of expansion had been ... even one millionth of a percent slower, the universe would have re-collapsed. It would have imploded upon itself and that would have been the end of the story. Conversely, if the universe had expanded ... even one millionth of one percent more quickly, the universe would have expanded too quickly for structures to form. It would have simply diffused into dust, with no structures to bring forth life. (Swimme & Tucker, 2011, pp. 10-11)

The celebrated physicist, Freeman Dyson, was reflecting on the scientific theories developed to explain this startling result and how he might better understand it.

... he realized that he had come to feel at home in the universe in a new way: “The more I examine the universe and study the details of its architecture, the more evidence I find that the universe in some sense must have known that we were coming.” (Swimme & Tucker, 2011, pp.11-12)

What we know as the law of electro-magnetic attraction brought together the positively charged nuclei and the negatively charged electrons to form the first atoms.

We cannot fully explain why a proton is attracted to an electron...Nothing outside is pushing them together...Rather it is by their very nature that they are drawn to each other... The attraction between a proton and an electron is not just another disconnected fact about the universe. Attraction between a proton and an electron is a way in which the universe gives rise to ever greater complexity, which, after some fourteen billion years, includes us. (Swimme & Tucker, 2011, p. 13)

What we call gravitational attraction collected this dust of atoms into clouds to form a hundred billion galaxies, one of which is our Milky Way, each of which set off on its own adventure.

What caused the fracture of the initial cloud [of the flaring forth] into all these smaller clouds? For the power that breaks up this cloud is the power that sets the universe in a new direction.

Scientists have discovered that a series of waves passing through the universe was responsible for fragmenting the initial cloud. And the origin of these waves? This is the biggest surprise. These waves had their origin in the birth of the universe itself. In the initial flaring forth, the universe was pervaded with waves. These waves, which are fluctuations in the density of matter, grew as the universe expanded. Eventually they broke the universe apart so the galaxies might form. (Swimme & Tucker, 2011, p. 18)

Galaxies are the birthplaces of stars. Stars are the cauldrons that create all the chemical elements. The death of a star releases the dust that gathers itself into planets. Life was created on planet Earth.

Hidden in this cosmic dust was the immense potentiality for bringing forth mountains and rivers, oyster shells and blue butterflies. Such a process occurs over and over again in the unfolding of the universe: the self-assembling powers of the universe create new structures that allow new forms of creativity to emerge. (Swimme & Tucker, p. 18)

One of the most compelling ideas concerning these structures is their nested nature. Perhaps the largest dynamic structure in the universe is that of a galaxy. Once a galactic system has been evoked, we can find self-organizing stars within the galaxy. And once we have stars, we can find self-assembling planets such as Earth, with its own organizing substructures...Then and only then is there the possibility for a new self-organizing system, a living cell, to come forth. (Swimme & Tucker, 2011, p. 49)

Knowledge of the cell's origin remains speculative. Like the evolution of humans from among the primates, the "missing link" between the first cell and the myriad pre-cellular biochemical processes remains elusive. Scientists are seeking to understand the emergence of life on Earth according to the pattern of self-organizing dynamics that have appeared throughout the universe's evolution, suggesting that the universe may be "suffused with a vast array of these dynamics, and when the conditions are right, any one of these dynamics can be drawn forth" (Swimme & Tucker, 2011, p. 48). Evolutionary change is the fundamental principle of the universe.

Earth's long term communion with the Sun established conditions for the emergence of a flow of creativity in some early cells giving rise to photosynthesis, an astoundingly complex process that these primitive beings devised to directly feed on the Sun, and that nourishes all living beings⁷. The authors develop an analogy based on the unconscious development by which an infant adapts herself to her environment, as a way to imagine the process of genetic mutation and natural selection that took place during the evolution of photosynthesis.

As a poetic analogy to nature's groping creativity, consider an infant's development. With a creativity that is largely unconscious, the infant over time makes a series of adjustments to her situation, adjustments that will determine much of her life. For instance, if her mother speaks Chinese, she will eventually speak Chinese. If her mother speaks Spanish, the infant will learn that language instead, which means that she will be (unconsciously) sculpting her brain and shaping her facial muscles in particular ways that depend upon the language she is learning...In the best of situations, the mother bathes her infant with love day after day. The infant is filled with an unthinking desire to be and to live. Even before consciousness has stabilized within her, she forms herself in a way that enables her survival. In relationship with her parent, she changes

⁷ The exceptions are a few chemosynthetic bacteria, perhaps descendants of the first bacteria that "ate minerals" before the evolution of photosynthesis.

her brain, her body, and her consciousness, and she moves more deeply into a stream of nourishment helping her to unfold.

So it was when Earth emerged. It did not have an engineer's blueprint. Earth simply came forth in relationship with the Sun and its intense flow of energy and began to change. .. Before words, before brains, and before consciousness, there was the deep desire to exist, and the eventual discovery that it is only through relationship that we survive. (Swimme & Tucker, 2011, pp. 53-54)

Swimme and Tucker describe an evolutionary view of self-awareness, knowledge and learning. The self-reflective consciousness characteristic of human beings has its origin at the root of the tree of life, and its location in the complex membrane that surrounds each cell. Primitive unicellular beings are sentient, they attend to their experience, and make decisions at a molecular level to situate themselves in a good location and get themselves away from danger, to open or close the gates of their membrane by recognizing the molecules that come knocking. The survival of their line through billions of years of existence is testimony to the value of the knowledge encoded in their genes through generations of sentient experience and successful decision-making. Is this not intelligence in operation?

The membrane that surrounds unicellular beings, with its molecular gates and receptors is in many ways similar to the membranes in human brain cells that transmit neuronal signals. Thus the antecedents of human brains are found in the cell membranes of unicellular beings. The knowledge encoded in their genes is written in the same language as that encoded in all living beings. In this way life remembers its crucial accomplishments. The creativity that underlies human consciousness is remembered and re-created each generation through genetics (Swimme and Tucker, 2011).

So natural selection can explain the evolution of the human body, including the brain. But how does this knowledge explain the human mind, which assents to the supernatural order, "grace which is above nature, in faith which is above reason, in charity which is above ordinary human good will, and in merit for eternal life which is above any human deserts"? The work of systematic theologian, John Haught, develops a metaphysics of the future. It

situates *the whole cosmic story* within ...a worldview that identifies what is really real, fully intelligible, ideally good and maximally beautiful with *what is coming* from the future, rather than basing the reality of emergent phenomena solely on what is or what has been. (Haught, 2015a, p. 1)

Thus, the supernatural order exists not in a place, but in a time of hope. This hope is supported by the very dynamics of the universe itself. Berry writes of the dynamics of the universe as "guidance," something like Smith's invisible hand that guides the economic system.

There is reason to believe that this ... guiding process is precisely what has awakened in us our present understanding of ourselves and our relation to this stupendous process. Sensitized to such guidance from the very structure and functioning of the universe, we can have confidence in the future that awaits the human venture" (Berry, 2006, p.137).

Over the course of 13.7 billion years the beings themselves and the community of beings became more complex and more interdependent, creating a web of relationships that scientists are gradually discovering, although much remains unknown. Through gravitational attraction atomic particles grouped themselves into clouds of hydrogen which condensed to become cauldrons of nuclear fusion, creating new chemical elements that, upon their death seeded space with dust that coalesced by gravity forming planets, one of which, called Earth, formed a highly creative relationship with its mother

star, our Sun, and from this relationship brought forth beings that learned to survive in every niche of the planet, and eventually human beings, who wondered about their origin and destiny. They regarded their niche as a gift, and with the powers that they discovered in their intellect they developed doctrines to codify their relationships with each other, with their environment and with the mysterious power that creates and sustains the world through time. Today humanity's stewardship of the Earth has reached a point of inflexion as a result of our consciousness of the damage that our activities are causing, seriously disrupting Earth's natural and social systems.

We have considered Bernard Lonergan's GEM to renew the ideas of Saint Thomas by means of the concepts of critical reality, self-appropriation, and intellectual conversion, making explicit that understanding goes beyond just taking a close look. We have reviewed the progress of the natural sciences and Lonergan's work of systematics using Generalized Emergent Probability to understand how the supernatural order may guide humanity to redeem its relationship with the earth. Now we wrap this up by considering Pope Francis's encyclical, *Laudato Si: On Care for Our Common Home*, an assessment of humanity's housekeeping of the planet, materially, socially, and morally, and a map into the future, the era that Berry named the Ecozoic, when humans live in a mutually enhancing relationship with Earth and the Earth community.

Pope Francis writes, "I would like to enter into dialogue with all people about our common home." He began this dialogue by calling together authorities in a variety of fields and faiths: scientists, theologians and ethicists, social activists and development experts, to inform his thinking. Pope Francis signed his encyclical on a date with a history of solemnity. The Jewish holiday Shavuot celebrates the anniversary of the gift of the Torah, the books of Jewish law. Christians celebrate Pentecost as the anniversary of the descent of the Holy Spirit igniting Jesus's apostles to go forth and spread the gospel. The headings in Chapter 1, *What is Happening to Our Common Home?* show the sweep and solemnity of the crisis being addressed: *Pollution, Waste and the Throwaway Culture; Climate as a Common Good; The Issue of Water; Loss of Biodiversity; Decline in the Quality of Human Life and the Breakdown of Society; Global Inequality; and Weak Responses.*

This encyclical is a solemn assessment of the state of the world today, focused on ecology, economy, and equity. The most vulnerable beings, those already being harmed, including billions of human beings living in poverty, are those least responsible for creating the ecological crisis, and also the least able to fix it. While the encyclical is addressed to all people, special responsibility is assigned to those of us living in industrialized societies, to examine our lifestyle, our throw-away culture, and especially our relationship with the vulnerable, including the earth itself. This melding of scientific knowledge with moral concerns is foundational to Catholic education, and all of the 28 Jesuit universities in the US are finding ways to incorporate the encyclical into their curriculum (Tucker & Grim, 2015).

To assist this process, Loyola [Chicago] released a free online environmental textbook called *Healing Earth*, edited by Nancy Tuchman and Michael Schuck (2016). It informs students of critical environmental issues, but also challenges them to examine the ethical implications of these issues [and is available in English and Spanish]. (Tucker & Grim, 2015, p. 263)

This encyclical extends the tradition of Catholic Social Teaching by calling for an "integral ecology." Ecology as a scientific discipline is the study of animals, plants, and microbes in relation to their environment. Pope Francis refers to Saint Francis of Assisi to describe this new concept:

an integral ecology calls for openness to categories which transcend the language of mathematics and biology, and take us to the heart of what it is to be human... His response to the world around him was so much more than intellectual appreciation or economic calculus, for to him each and every creature was a sister united to him by bonds of affection. That is why he felt called to care for all that exists (Paragraph 11).

Integral ecology acknowledges a familial affection for Mother Earth, from whose elements we and all of her children are formed.

This concept, integral ecology, synthesizes and builds upon the work of former Popes, who have been addressing environmental issues as they have come into cultural consciousness. In 1970, Pope Paul VI addressed the United Nations Food and Agricultural Organization at the opening of their 25th anniversary celebration. This excerpt foretells the concept of integral ecology.

The progressive deterioration of that which has generally come to be called the environment, risks provoking a veritable ecological catastrophe. Already we see the pollution of the air we breathe, the water we drink. We see the pollution of rivers, lakes, even oceans - to the point of inspiring fear of a true «biological death» in the near future, if energetic measures are not immediately and courageously taken and rigorously put into practice. It is a formidable prospect which you must diligently explore in order to save from destruction the fruit of millions of years of natural and human selection. (Cf. Ceres, Revue FAO, vol. 3, No. 3, Rome, May-June 1970: Environment: les raisons de l'alarme).

In 1972 Pope Paul VI opened the UN Conference on the Human Environment in Stockholm with an address entitled, "A Hospitable Earth for Future Generations." It foretells the concept of sustainable development, elaborated in *Our Common Future*, which arose from this conference.

Pope Francis reiterates this theme, asking, in paragraph 160.

What kind of world do we want to leave to those who come after us, to children who are now growing up? This question not only concerns the environment in isolation; the issue cannot be approached piecemeal. When we ask ourselves what kind of world we want to leave behind, we think in the first place of ... its meaning and its values. Unless we struggle with these deeper issues, I do not believe that our concern for ecology will produce significant results. ...We need to see that what is at stake is our own dignity. Leaving an inhabitable planet to future generations is, first and foremost, up to us. The issue is one which dramatically affects us, for it has to do with the ultimate meaning of our earthly sojourn.

Pope Francis connects integral ecology with the notion of the common good including to future generations.

Once we start to think about the kind of world we are leaving to future generations, we realize that the world is a gift which we have freely received ... The environment ... is on loan to each generation, which must then hand it on to the next. (paragraph 159)

The encyclical is an impressive melding of science and religion, of invoking the supernatural order as a guide to solving problems in the natural world. It exemplifies Lonergan's critical reality, and serves as a guide into Berry's Ecozoic Era. John Haught's metaphysics of the future reflects the hope for

the future found in the Gospels and in Teilhard's Omega as the future to which evolution is aimed. We may imagine God lovingly beaconing all beings into the future.

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ANTHONY L. HAYNOR

On “Heritage” and “Achievement” in the Human Sciences

Abstract

The presenter’s personal odyssey in acquiring the “heritage” of his field, sociology, will be outlined in terms of the Functional Specialities of “foundations,” “doctrines,” “systematics,” and “communications.” In the next part of the presentation, attention will be directed to the development of a broader human scientific framework, one that is attentive to findings in evolutionary science, neuroscience, personalist psychology, comparative sociology, and behavioral economics, and examines various interpretive frameworks in dialogue with each other. Such a dialectic, it will be argued, would provide the best opportunity for the “achievement” of a more integrative horizon in the human sciences.

In his book, *Old Things and New: A Strategy for Education*, Frederick E. Crowe, S.J. identifies two processes central to the educational mission and to the development of intellectual disciplines: “the way of heritage” and “the way of achievement” (Crowe, 1985). The former refers to the traditions and practices that are passed down from generation to generation. “Conversion” into the intellectual community is given life, potentiality is actualized. The individual embraces a “world” (a “horizon”) that is embodied, and the fruits of intellectual work are then shared and reflected upon. One can say that the individual undergoes professionalization, which involves working within the intellectual horizon adopted and producing work that is grounded in the accepted practices of the professional community. The scholar is thus “socialized” into a professional community. The “way of heritage” represents development “from above downwards,” progressing as it does from “foundations” (assenting to a horizon) to “doctrines” (shared judgments of facts and values within the horizon of foundations) to “systematics” (the working out of inconsistencies and the movement toward internal coherence within the discipline) to “communications” (within the discipline and with other disciplines). “The way of achievement,” on the other hand, is development “from below upwards,” progressing from “research”—generating new findings—to “interpretation”—understanding the meaning of the findings—to “history”—having to do with the emergence of new horizons—to “dialectic”—addressing conflicts between horizons (Lonergan, 1971, Chapter 5). Crowe, in framing Lonergan’s eight Functional Specialities in terms of development “from above downwards” and “from below upwards,” highlights a distinction that the latter himself put forward (Crowe, 1985, pp. 1-2).

While the way of heritage serves the function of consolidating a particular disciplinary tradition, the way of achievement is clearly innovative in its basic thrust. The two functions are clearly to be seen as interdependent, as two processes comprising a complex iterative and interactive flow of intellectual labor (Crowe, 1985, pp. 22-29). The present essay is in a sense a narrative of my own personal intellectual odyssey as a human scientist, a journey that began within a particular “thought community” (Zerubavel, 1999), namely, sociology. But it is more an analysis of the state of the human sciences—their “progress,” their “decline,” and a path to their “redemption” (Lonergan, 1971, pp. 52-55). What heritage has been bequeathed to us, sociologists, as a gift? What has been achieved? What has not been

achieved? How can the dynamic iterative flow between the two processes be characterized? It is to these important questions that I now turn.

I have been a serious student in the human sciences for over four decades. Having grown up during the Vietnam War and the Civil Rights movement (and having a strong sense of social consciousness instilled in me by my father), I came to see sociology (after taking an introductory course as an undergraduate) as critical to understanding how society works, a precondition, it seemed to me, for human betterment. While majoring in sociology, I took courses in the other human sciences (psychology, economics, political science, cultural anthropology). However, sociology became my “foreground horizon,” so to speak, as a student in the human sciences (Lonergan, 1971, Chapter 10; Zerubavel, 2015). I then went on to graduate study in sociology, continuing to conduct various expeditions outside of my foreground horizon when I had the opportunity. The training received in a discipline, no doubt, reflects the particular orientations of the professors under whom one studies, and in a robust program there is an opportunity to engage with various perspectives both within and outside the disciplinary boundary. While at Rutgers University, I was exposed to systems theory, exchange theory, and phenomenological theory, and to a lesser extent Marxism. I studied in considerable depth the work of Talcott Parsons, Robert K. Merton, Harry C. Bredemeier, Peter L. Berger, and Irving L. Horowitz (as well as their progenitors). I suppose that a spirit of intellectual pluralism reigned or had considerable currency (not only at Rutgers but in most sociology departments during that period, and arguably, up to the present day). The main idea here is that sociology consists of multiple paradigms (on both the level of theory and method) that are in sharp tension with each other, if not, incommensurable (Ritzer, 1974). Pluralism at the level of “doctrines” tempered considerably any drive to resolve inconsistencies (systematics). This having been said, there were integrative moments in my reception of the sociological heritage. Berger’s sociology of knowledge attempted to integrate Durkheim, Weber, and Mead, often seen as “representing” differing sociological paradigms (Berger & Luckmann, 1966). In addition, there was the attempt of Harry C. Bredemeier (who was my dissertation advisor and most significant mentor) to develop an integrated social scientific framework that drew on systems and exchange theory, and even incorporated insights from Berger and Luckman’s social constructionist perspective (Bredemeier, 1978). While it could not be said that it was the express mission of the sociology program to resolve inconsistencies and tensions and move toward internal coherence, it must be acknowledged that opportunities were provided and intellectual resources made available for such inquiry to proceed.

Regarding “foundations,” I suppose that behind the disciplinary pluralism was the shared assumption of an irreducibly social nature of humankind devoid of bio-evolutionary underpinnings. Sociology as a distinct field of study was rooted in that belief, one to which all sociologists were in a real sense “converted” at some point in their intellectual development. The human condition was skewed decidedly in the direction of our sociality; to other possible foundational dimensions sociologists were more or less blinded (Campbell, 1996; Smith, 2015). The assumption of our sociality as being at the core of our humanity has had a profound galvanizing effect on the formation and transmission of sociology as heritage. While it blinded sociologists to alternative dimension of the human condition, it served to bind sociologists together as an intellectual community. Alternative foundational assumptions (to be considered below) were viewed as “taboo,” deserving of a pariah status. Sociology had its “home base” (Munch, 1993, Chapter 1) and any expeditions beyond it were circumscribed enough so as to not cast doubt on or threaten its bedrock assumption of human sociality. In fact, the intellectual forays attempted were such that the insights generated by them could be assimilated more or less seamlessly into the core sociological horizon, rather than subjecting it to possible rupture. Bredemeier’s integrative framework, for example, incorporated the Perceptual Control Theory of William T. Powers (1973), which

offered a theory of human action based on the narrowing of perceived discrepancies between ideal and reality states at differing levels of abstraction. However, our “internal controls” (his term) were seen as the product of the “social Skinner box” in which we find ourselves (clearly a sociogenic emphasis here). Neither did Berger’s framework deviate from the sociological creed regarding human sociality. For Berger and Luckmann, social institutions are the result of our being “instinctually deprived.” Here they drew heavily on Arnold Gehlen’s philosophical anthropology (Gehlen, 1988).

Before moving on to the “achievement” side of the intellectual equation, I would like to mention instances of “integrative” stirrings in my receipt of the sociological heritage. By this I refer to insights that cast the sociological horizon in a radically new light, and that set the stage for the “achievement” of an expanded, integrative analytical framework for the human sciences. “Achievement,” it seems to me, can only occur after one has seen the limitations of one’s heritage. It requires that one go on intellectual expeditions that serve to challenge the bedrock assumptions of one’s foreground horizon. This does not mean that apostasy is the ultimate aim here; rather one comes to see one’s foreground horizon (in this case a sociological horizon) as a component of an expanded cognitive map of reality, with its place secure within an expanded analytical frame of reference. In my receipt of sociological wisdom, many such integrative and expansionary seeds were planted and began to take root. First, Bredemeier opened my eyes to the points of intersection between sociology, on the one hand, and other thought communities. Specifically, I was exposed to “the free rider problem” and “the tragedy of the commons,” and “micromotives and macrobehavior,” ideas associated with public choice theory, and political economy (Olson, 1965; Hardin, 1968; Schelling, 2006). His introduction of “internal controls” set the stage for a fuller exploration of the self (the subject of my doctoral dissertation). Bredemeier also brought to light the intersection of sociology and ethics, rooting his cooperative social ethic in the work of John Rawls. I also received a heavy dose of systemic thinking as put forward by Ackoff and Emery, Alfred Kuhn, and James G. Miller, among many others. Bredemeier in his “transaction mode” analysis taught me that there were relational categories (market, legal-bureaucratic, cooperative, solidarity, and coercion) that cut across the human scientific disciplines (Ackoff & Emery, 1972; Bredemeier, 1978; Kuhn, 1975; Miller, 1990). Second, Berger opened my mind to the intersection of sociology and theology, raising the question of whether and how these horizons could be integrated or harmonized. This is a question that has preoccupied me ever since. In addition, his espousal of value-free sociology (following as he did in the footsteps of Max Weber) has given me pause, although I have never really appropriated this ethical posture. Third, there is the legacy of Talcott Parsons. Bredemeier and Parsons’ student at Harvard, Jackson Toby, exposed me to Parsons’ thought. Not only was Parsons fully committed to the integration of the human sciences, but at the end of his life put forward “A Paradigm of the Human Condition,” which included the “telic” realm, ultimate reality, as it were (Parsons, 1978). I marveled then and still marvel at the breadth of Parsons’ synthesis—a tour de force for sure, its deficiencies notwithstanding.

Certainly worth mentioning are my expeditions into intellectual territory outside of sociology. The two most important influences were Benjamin R. Barber and Robin Fox. I studied political theory with Barber, and found his advocacy of “strong democracy” to be quite compelling (Barber, 1984). This expedition from my disciplinary home base prompted an examination of the compatibility between Barber’s strong democracy and Bredemeier’s Rawlsian position. It is interesting to note that Barber (1989) wrote a powerful critique of Rawls in his volume, *The Conquest of Politics*. A strong interest in the integration of sociology and ethics was triggered by my exposure to the thinking of Bredemeier, Barber, and also Berger, for that matter, and this concern has pervaded my thinking and scholarship ever since. I took a course in “Anthropological Theory” with Robin Fox—of *The Imperial Animal* fame (Tiger & Fox, 1971). In this course I was exposed to E. O. Wilson’s sociobiology, the structuralism of Levi-

Strauss, the liminality theories of Victor Turner, and the social anthropology of Radcliffe-Brown and others (Wilson, 1975; Levi-Strauss, 1966; Turner, 1969; Radcliffe-Brown, 1957). Fox clearly bridged the gap between biological anthropology and sociological theory. Having been trained at the LSE in social anthropology, Fox (1989) knew Durkheim cold. While I found his work fascinating, it was seen by my teachers in sociology to be somewhat beyond the pale in challenging a rock-bed assumption of sociology—that as a species *Homo sapiens* is instinctually deprived, that we construct our social worlds with little help from biological priming. Biological anthropology challenges this assumption head on. My teachers in sociology were not prepared to seriously engage this emerging field of study, and they for the most part did not encourage their students to do so either. One could say that the biological anthropologist within me went underground, becoming a latent aspect of my ever evolving intellectual horizon.

A brief word about “communications” is appropriate before taking up the way of achievement in the human sciences. The fact of the matter is that there are not many viable communication outlets for work that breaks out of particular disciplinary molds. In graduate training, I do not recall events that brought together a Berger and a Bredemeier and a Fox to explore creative tensions or internal coherence within sociology. Clearly such encounters did not occur with scholars in related fields of study, whether political theory or biological anthropology. To be perfectly honest, I did not leave graduate school with a clear direction for my scholarship, given my integrative proclivities. The burden in a very real sense fell on me and those with similar dispositions to begin to pull the various strands together. Communication channels that could facilitate that dialogue were few and far between.

So, what can the human sciences “achieve” moving forward? How can the integrative seeds planted in some human scientists, at least, be translated into a more comprehensive and adequate understanding of the human condition, one that captures human behavior in all of its complexity and dimensions? We must begin with “findings.” What should sociologists and all human scientists be reading if they are at all interested in “achieving” integration in the human sciences? I indicated above integrative “stirrings” in my own graduate education (biological anthropology, sociology’s encounter with ethics, theology, political economy, and political theory). The work of Fox, Bredemeier, and Parsons, for example, continue to be of considerable import. But, what recent research merits attention by sociologists, or by anyone for that matter who considers himself/herself a human scientist? I suggest four categories of findings for starters. The first involves the co-evolution of human biology, human psychology, human culture, and social institutions. Research in this vein draws on evolutionary biology (e.g. Wilson, 1975), evolutionary psychology (Haidt, 2013), biological anthropology (e.g. Robin Fox), and comparative sociology (Diamond, 2013). The second category is neuroscientific research (Barrett, 2017). Exciting research on emotions, habits, and moral development has been conducted in the last decade or so. The third category involves research in personalist psychology, spearheaded by Notre Dame Sociologist Christian Smith. This line of research seeks to identify basic human goods (Smith, 2011; Smith, 2015). Finally, there is the research conducted by behavioral economists (Kahneman, 2013). Human scientists of all stripes need to be attentive to the groundbreaking research generated in these four areas.

The next step is to generate “interpretations” of this data. A critical piece involves the relationship among the biological, personality, and socio-cultural levels of analysis. Parsons (and his A-G-I-L scheme and “paradigm of the human condition”) certainly continues to be a useful resource. Other interpretative frameworks focus on environmental selection pressures (Sanderson & Alderson, 2004), manifest vs. latent dimensions in the human sciences (Klintman, 2016), complex adaptive systems analysis that focuses on processes of “emergence” (Danermark, 2002, pp. 59-66) and “synergy” (Corning, 2012), the “relational structures” theory put forward by Alan Fiske (1993), “civilizational

analysis,” which is the attempt to interpret empirical findings through a world-historical lens (see, for example, the work of Habermas, Fox, Diamond), and finally, Christian Smith’s personalist framework, which attempts to build the human sciences from the ground up (rooted in a conception of human goods), and adopts a critical realist viewpoint.

The “history” of the human sciences is still being written. A key question here is: “Are there identifiable “horizons” or thought communities that seem to be in the ascendancy?” That is, do particular interpretive frames appear to be winning out? As the history of the human sciences continues to be chronicled, we need to pay close attention, for example, to reductionist tendencies. To what degree is the human condition being reduced to one factor (e.g. environmental pressures, or genetic predispositions)? To what degree is what we observe explained by a concatenation of factors, connected to each other and embedded in a complex web of emergent processes. Given that the project of integrating the human sciences is, arguably, still in its infancy, one cannot point to a clearly dominant horizon. I suppose that the present situation is one of intellectual pluralism, with representation being given to the alternative explanatory frameworks outlined above. We cannot say that the explanatory landscape is completely devoid of reductionist thinking.

The project of integrating the human sciences requires a serious effort to synthesize findings in the various fields of study and generate an explanatory framework capable of accounting for those findings. In order for this to occur, it is necessary that a robust dialogue take place among the various “schools” of thought. Critically important issues need to be debated and addressed in this “dialectic” phase. Specifically, there is the issue of “free will vs. determinism.” On this question, many neuroscientists (Caruso, 2012) are pitted squarely against the personalist framework of Christian Smith. Is there a resolution, or is “pluralism” on this issue an inevitable fate? Then there is the issue of the naturalistic fallacy. Does the “is” imply or require an “ought”? According to evolutionary ethics, the answer is yes. Others are much more skeptical on this question, emphasizing as they do the naturalistic fallacy (James, 2010). There is no reason why an integrated human science must or should emerge from this dialectic encounter. Can the various schools of thought agree on anything that can serve as the basis for a “foundation” for the human sciences in the next iterative formulation and working out of “heritage”? The philosopher, Calvin Schrag (1980) has provided us with a possible foundational grounding for the human sciences moving forward. He argues that we embrace a “protophilosophical” and “protoscientific” stance, namely, that the human condition be apprehended on the level of basic common-sense experience implicating our embeddedness as persons and as organisms in a historical, societal, and cultural matrix that is ever evolving alongside our personhood and genetic constitution. Specialization for Schrag is not the cause of the failure of the human sciences to be more integrative; it is, rather, a symptom of not making that fundamental prescientific, and prephilosophical leap, one that is deeply rooted in our everyday life experience. Such a leap would establish a necessary “foundation” for the human sciences in its next phase of development.

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MELINDA D. PAPACCIO

Research: Lonergan's First Functional Specialty - Opening the Door to Truth

Abstract

Today's political environment shines a spotlight on the issue of truth that spills over into our classrooms. The concepts of fake news and alternative facts challenge the underlying premises of academic work, which is that research, done responsibly and objectively, reveals truth to us. Research isn't done in a vacuum but as part of the larger dialog going on in a discipline and that dialog is conducted for the common good, not simply for the academic community. An examination of the principles of Lonergan's Generalized Empirical Method in connection with the first functional specialty of research can be used to educate students to be better researchers and more responsible citizens.

In *Method in Theology* Lonergan tells us that attending to the data, to the facts, is the first step in the process of working for the common good when "from slumber we awake to attend," but we have to be willing to be awakened. Often we are not, especially when we must decide whether "the more attractive is truly good" (Lonergan, 1971, p.13). In a scene from the film, *The Matrix*, over dinner with Agent Smith, Cypher says, "You know, I know this steak doesn't exist. I know when I put it in my mouth the Matrix is telling my brain that it is juicy and delicious. After nine years you know what I realize? Ignorance is bliss" (Wachowski & Wachowski, 1999). Cypher is tired of being awake to the dark truth of human life inside the Matrix, preferring falsehood to truth because the lie is more "attractive." For him, the human good has ceased to have meaning. After nine years working with a small community of computer hackers to overthrow the Matrix which has enslaved mankind, he has now decided dedication to truth is not worth the trouble. He was awake to a hard reality. He'd rather slumber, and agree to imprisonment in the Matrix. He willfully rejects the truth. Here we see a perversion of Lonergan's paradigm; that we need to know what is true to know what is real and we need to know what is real to know what is good. By turning his back on truth, by volunteering to live a lie, Cypher renounces his personal authenticity and so violates his humanity. Coughlan explains that authenticity goes to the essence of what it means to be human: "Avoiding issues, closing our eyes to reality, turning a blind eye, burying our heads in the sand, refusing to inquire into some matter and so on, diminish our human authenticity" (Coughlan, 2008, p. 360). When we uncritically consume fake news we also turn our backs on truth, or fail to attend to the data, when it is presented to us, and so mark a decline in our own personal authenticity. We are happy to slumber in a world of lies if they fit our view.

What happens when we pick and choose what we want to believe, without regard to what is actually, verifiably true? Is Bernard Lonergan wrong to say that "deep within every human person is a drive to know, to understand, to see why, to discover reason, to find the cause and to explain...?" (Orji, 2013, p. 163). When we "willfully [refuse] to think intelligently... [when we seek] security by depending on others for answers [we] can discover on their own" are we violating or subverting this basic human drive? (Orji, 2013, p. 163). Why is it even necessary to ask such a question in America today, in a democracy in which information is widely available, where a thorough and efficient education is everyone's basic right?

We are struggling as a nation to move forward under the heavy weight of “fake news” and “alternative facts.” Before the election we came to understand that “fake news” was often posted by opportunists promulgating blatant lies to support a particular agenda, sometimes by crafty teens in foreign countries out to make quick easy money from American gullibility. Reliable news outlets helped us understand this. But now, post-election, those same news outlets on which we relied for information are being labeled “fake news.” Chess master and public critic of Russia, Garry Kasparov, says this is a key strategy of totalitarian regimes. They flood the public with so many conflicting stories that the populace gives up on the possibility of knowing what is true (Judge, 2017, p. 2). Lies have always been a part of politics, but how is it that today so many are willing to swallow lies that can be easily proved false? If education is our hope for a better future, what could be done to counter this trend, to cultivate in students a desire for truth, a resistance to snap judgment, a critical thinking habit of mind? Lonergan “[invites] us to search...for our own dynamic power of inquiry” (Orji, 2013, p. 165). This requires us to act, to seek, to desire to know, and it begins with inquiry, questioning. In the first chapter of *Method in Theology*, Lonergan discusses the Transcendental Method as an active process, “a matter of heightening one’s consciousness by objectifying it, and that is something that each one, ultimately, has to do in himself and for himself” (Lonergan, 1971, p. 149). It takes effort. It requires intentionality and has important moral implications.

I teach college freshmen to write college level research papers. With my guidance they learn how to follow steps in the process of developing a topic, locating scholarly sources using our library database, and integrating those sources into their writing. However, they can go through the motions of this process without ever developing a sense of responsibility to seek truth in their research efforts even if, especially if, what they discover contradicts their initial beliefs on the subject. The past year has shown me how important this actually is for their academic lives and beyond.

If the Transcendental Precepts (Be Attentive, Be Intelligent, Be Reasonable, Be Responsible) inform our thinking as we embark on the Functional Specialty of Research we are on a surer path toward the common good. But how do we engender an appreciation for these precepts, help students develop a desire for truth – “the Eros of the human spirit”? Lonergan rightly explains that research “is an enormously diversified category and doing research is much more a matter of practice than theory” and so he does not provide specific steps to follow when doing research (Lonergan, 1971, p. 149). At the beginning of a research assignment, we can take steps to help our students discern truth from falsehood, a reliable source from an unreliable one and the current internet phenomena of fake news provides us with plenty of material. My freshman composition students had to do an assignment in which they evaluated a source they found on the internet. For homework they responded to this prompt:

The health of a democracy depends on informed citizens, the free and open exchange of ideas, the pursuit of truth based on evidence, and critical thinking which cannot occur without truth. We need to believe that the truth exists and that we can know it. Truth is also crucial to research, which you are learning to do in this class. Your task for this exercise is to engage the first Transcendental Precept and “Be Attentive” to the data. Begin your search by googling any important issue (political, social, racial, or religious). Locate an online source which makes a claim that you sense is questionable. Paying close attention to the data it presents, make note of things that seem dubious. If possible, try to fact check the website and copy the link for that website into your post.

To my surprise, it was unexpectedly difficult for students to identify exactly why their “questionable” sources were problematic so it is especially important to focus on teaching students how

to attend to the data. Mistakes made at this point in the research process will skew their entire effort in completing the assignment. Unfortunately, with the ubiquity of the internet and the ease with which unscrupulous people can post misleading information or outright lies, the need for the ability to judge the validity of the data presented is essential. The need to question, to test assumptions, and seek verification is essential – actually, the desire to do so precedes the need.

Researched writing is often the vehicle that delivers important information to the public in a democratic society. It requires patient and thorough investigation, objectivity, fairness, clarity: intellectual standards essential to critical thinking, and to the health of a democratic system. It requires a commitment to truth on a deeply personal level. Teaching research skills is easy when compared to the task of moving my freshmen toward such a conversion. They are coming from a high school experience of researched writing which usually requires them to begin with a thesis statement, then to find sources to “prove it.” This would seem the formula for producing research that is essentially propagandistic, rather than investigational. More importantly, such writing requires little personal investment from them. When we teach research on the college level we must be working for an intellectual conversion of the high school student (Crowe, 1985, p. 14). In this shift the student joins the ranks of those who “research data; that is, they go looking for [data], and that in regard to very specific questions” (Crowe, 1985, p. 112). Thus the student “begins to see experience as a basis for raising questions, that is, experience now becomes data for understanding” and so begins to join in the “ongoing work of academe” (Crowe, 1985, p. 112). So to provide an example I return to the political phenomena referred to earlier concerning how we process information in our daily lives. I began with my own research questions: What is happening when we willingly resist the truth? Why do we accept statements that are clearly false, or can be easily fact-checked and proven false? Why are people willing to support someone who, they may even admit, lies constantly? To understand why truth is so critical we would do well to explore why lies are so dangerous.

Lies

Q: How do you know when an addict is lying? A: When he opens his mouth.

A good friend of mine who lost her forty-five year old son to a heroin overdose eighteen months ago once said this. She would try to help him financially, and otherwise, usually finding out later that he had been lying about whatever he claimed to need the money for. She lives with the pain of his death and guilt over believing his lies. While most might say that substance abuse is the chief problem of addiction, my own experience with addicts tells me that the habit of lying can be just as hard to kick. Even after getting clean, their recovery is usually complicated by the fact that family members and friends have trouble ever believing the addict again, which in turn causes his alienation and estrangement from others. Here we have a dramatic example of the destructive effect of lies.

Those who have had this experience have probably been caught up in lies for years. We want to believe the lies because we are invested in this person: we love him, he is part of our world, and we want to believe what he says. We want to believe and before we know it we are sick ourselves. We become “co-dependent” and in need of healing and therapy just like the addict. We’ve ingested a poisonous diet of lies and deceptions. The lies, and our willingness to believe them, have made us sick, turned our lives upside down. The addict lies because he needs to control us, to keep us from the sad truth that he is hiding and because his life is so out of control. He lies brazenly, constantly, impulsively, and compulsively. When we fall victim to the lie we tacitly, or sometimes unconsciously, agree to put our minds in chains. Human frailty often leads us to accept a lie as truth because the truth can be inconvenient, and complex, making the lie more to our liking, more “attractive” to us. But the truth is that the lies not only estrange the addict from the community of family and friends, they also traumatize

the human spirit, individually and collectively. It hurts to be lied to. Those who have been force fed a diet of lies will be afflicted with a soul-sickness that will deprive them of a sense of security in what is real and true, possibly for the rest of their lives. It is no coincidence that mankind's first sin, in the Garden of Eden, began with a lie and set into motion a cascade of human suffering through the ages.

While it has been customary to demonize the addict, the truth is that he suffers from a most serious and devastating disease. It is not a moral failing but an illness that corrupts body, mind, and soul. The United States is in the grip of an opioid epidemic, an addiction crisis that is taking the lives of 91 Americans a day from overdoses (Kounang, 2017, p. 1). We can lay the responsibility for this tragedy at the feet of the medical and pharmaceutical communities which agreed to treat pain as a vital sign, increasing opioid prescribing to shocking levels: while we make up only 5% of the world's population, we consume 80% of the world's opioids. Something went terribly wrong and it began with a half-truth, which is often more dangerous than a blatant lie. Researchers have recently discovered a five sentence letter written in 1980 to the editor of the *New England Journal of Medicine*, by Boston University doctor Hershel Jick, a member of the Boston Collaborative Drug Surveillance Program, and his graduate assistant Joan Porter, titled "Addiction Rare in Patients Treated with Narcotics" (Jick & Porter, 1980; see Attachment). This seems a suspicious, maybe even illogical, statement, considering that the highly addictive nature of opiates has been known for thousands of years (Homer refers to its use in both the *Iliad* and the *Odyssey*), and despite the well-known history of opiate addiction in our own country in the 19th century when many became addicted to this "miracle drug" and suffered in fear, silence, and isolation. Yet there it was, this very questionable, yet unquestioned, statement, published in a prestigious medical journal, like a bomb waiting to be detonated. This five sentence letter has been cited extensively for the past 38 years as proof that opiates can be used on a long term basis without danger of addiction, almost in defiance of the truth of its addictive potential. One study found the letter cited in published articles 608 times, 72% of those instances as support for the letter's claim that addiction to prescribed opioids is rare (Kounang, 2017, p. 1).

And so Pandora's Box was opened. People who were trained in the sciences were perpetuating a falsehood and the consequences were disastrous for millions of Americans. Why is it that the right, and obvious, questions seem not to have been asked? Why is it that the medical community apparently wanted to believe that this claim was true even in the absence of proof? As a result of this inattention to the facts, there are millions of families across America which have been shattered by addiction. These families are trapped in chaos, formerly unified but now broken into warring factions, their nuclear community sometimes completely destroyed. This can happen in societies as well. Lies, especially those inflicted on the public, submerge us in a dark world where the light of truth does not shine. Some might say that in this "post-truth world" our nation been thrown into chaos because the truth so often seems out of reach. Will we insist on uncovering it or give in to falsifiers and cease trying to know? For the common good, we cannot give in: lies destroy community because they rely on shared truth.

Pundits and politicians warn that we must insist on truth for the health of our democracy. There seems more motivation for journalists to redouble their efforts to be "objective, fair, open-minded and dogged" (*LA Times* Editorial Board, 2017, p. 1). This calls to mind the imperative of Lonergan's Transcendental Precepts: Be Attentive, Be Intelligent, Be Reasonable, and Be Responsible. Be Attentive: Notice what is happening, record and report with objectivity, collect the data. Be Intelligent: Ask questions, investigate, dialogue with others to better understand. Be Reasonable: Think analytically, consider opposing views, test assumptions. Be Responsible: Take action, do not be deterred, do not let go, do not lose hope. Intellectual conversion is possible.

Truth

Christ's pronouncement that "The Truth will set you free" (John 8:36) is often taken to refer to a very personal and intimate experience of God's truth that transforms us. In *Verbum: Word and Idea*, Lonergan points to Augustine's claim that "we know truth not by looking without but by looking within ourselves" (Lonergan, 1967, p. 73). Truth also has the potential to rebuild a community devastated by lies and deception. But, where do we go to find truth? Aquinas describes two types of understanding by which we grasp truth: direct and reflective. Direct understanding is akin to insight, while reflective understanding occurs when "one sees that one cannot but judge something to be so" (Lonergan, 1967, p. 12). This involves not a sudden realization but rather a realization of truth that comes as a result of contemplation, understanding acquired after consideration of knowledge acquired through investigation (Lonergan, 1967, p. 55). Far more than a purely intellectual act, this understanding is ultimately the "proper act of the human soul" (Lonergan, 1967, p. 218). The understanding of truth, then, reaches beyond empirical knowledge, to our innermost selves following an "intelligible procession from intellect to will" (Lonergan, 1967, p. 202). However, the "inner word" can prompt us "either to seek true peace of soul in repentance or else to obtain a simulated peace in the rationalization that corrupts reason by making the false appear true that wrong may appear right" (Lonergan, 1967, p. 202). Rationalization leads to self-deception, like that of the addict who must live a lie and must lie to live. However, falsehoods, rationalizations, or outright lies are far more consequential when perpetrated by people in power. In his *Divine Comedy* Dante put those who defraud the public in a deeper pit of hell than murderers because they do much greater harm to more people.

Throughout history conspiracy theorists have illustrated Dante's point. In their recent book, *Denying to the Grave: Why We Ignore the Facts That Will Save Us*, medical professionals Sara and Jack Gorman explore the phenomenon of conspiracy theories connected to medical issues. The scientist, they remind us, is called upon to test, question, and otherwise challenge the hypothesis rather than simply find evidence to prove its truth (Gorman & Gorman, 2017, p. 6). Their work demands fact-based evidence rather than anecdotal evidence. For this reason we tend to want to trust pronouncements from scientific sources which aren't always trustworthy. As a remedy, they propose we adopt a teaching "method that takes into account psychology and neurobiology and that offers guidance on how to encourage people to adopt a more scientific viewpoint" (Gorman & Gorman, 2017, p. 6). They recommend that students be taught to use the scientific method in middle and high school to prepare them to be able to "accept complexity and uncertainty, [and learn] to be skeptical and ... ask the right questions" (Gorman & Gorman, 2017, p. 13-4). It is more important to inoculate students against falsehood than we might think since it is human nature to resist factual information, especially if it reveals the complexity of an issue or situation. We typically do not want to take the time to learn about or consider complexity since "our minds gravitate naturally to clear and simple explanations of things, especially when they are laced with emotional rhetoric. We are actually afraid of complexity" (Gorman & Gorman, 2017, p. 13). Those seeking to persuade us with lies to follow their lead target our emotional rather than rational sides. Once the brain's amygdala is engaged through our emotional response to a claim, once our fears are called to the surface, the functioning of the prefrontal cortex is suppressed and we easily become "recalcitrant to the evidence that scientific inquiry provides" (Gorman & Gorman, 2017, p. 74). So, because critical thinking is not natural to us we need to be taught to do so, to apply intellectual standards to our thinking in order to avoid being taken in by those promoting falsehood. The Functional Specialty of Research both requires and can help enhance critical thinking. Helping our students engage with openness, and curiosity in research is also crucial to the development of a thirst for truth, and an understanding of our civic responsibility to promote truth in the public sphere. Since research is essentially investigation which aims at the discovery and articulation of truth for benefit of

the larger community, it must be engaged in a sincere search for what is real and verifiable, or the resulting discourse will be “a babel” (Lonergan, 1971, p. 247).

Education and the Functional Specialities

The Functional Specialities of research, interpretation, history, dialectic, foundations, doctrines, systematics, and communications lead us through a process that makes meaningful insight on important questions possible because they lead to thorough examination of an issue. Lonergan says there is a need for “critical reasonableness” which “doubts, checks, makes sure” that one has understood correctly, all of which are in service to the quest for truth which is the “Eros of the human spirit” (Lonergan, 1971, p. 13). Alluding to the Transcendental Precepts that enjoin us to Be attentive, intelligent, reasonable, responsible, the ultimate purpose of which is the human good, he says that in order “to know the good, [the human spirit] must know the real; to know the real, it must know the true; to know the true, it must know the intelligible; to know the intelligible, it must attend to the data” (Lonergan, 1971, p. 13). This brings us to the very important Functional Specialty of Research which, for Lonergan, means “assembling the data relevant to some particular question or problem.” (Lonergan, 1971, p. 127). Attending to the data with objectivity, collecting the facts whether they agree with our point of view or not, is the crucial first step in this process. When we transcend personal bias we can test the validity of our insights. This testing can call our initial impressions into question, and if we are being honest with ourselves “we wonder whether the more attractive is truly good” (Lonergan, 1971, p. 13). The uncritical consumer of fake news can illustrate what Lonergan was trying to tell us. Because we are often emotionally invested in our views, the falsehood can be “attractive” to us, and the truth is so “unattractive” that we may reject it out of hand. When presented with the possibility that our belief might be false we may shut down the discussion. We may refuse to exercise “critical reasonableness” and refuse to question, to “doubt, check, or make sure” because this “more attractive” data fits conveniently into our opinion on the issue. The greater good of attending to the data is not part of our thinking process perhaps because we do not understand how crucial it is.

Being attentive means being objectively awake, noticing, maybe recording, and even reporting on the facts that are presented. This is the beginning of research. We gather data, the data generates questions, we challenge our assumptions as we seek answers to those questions, we interpret the data, we judge, and make a decision based on our considered judgment of the facts. Our responsibility as human beings endowed with the gift of reason is to think with intentionality for ourselves and our communities.

Lonergan speaks of a process of progress, decline, and redemption which can happen on an individual level or a cultural level: “as individuals not only develop [during the stage of progress] but also suffer breakdowns, so too do societies” (Lonergan, 1971, p. 52). Progress occurs when we are true to ourselves, when, in communities, truth is a shared value. It occurs when we individually and collectively operate in accordance with the Transcendental Precepts: being attentive, intelligent, reasonable, and responsible, which is to say that we become self-Transcendent. We work for the common good.

Decline occurs when the Transcendental Precepts are “violated” and can happen gradually, imperceptibly, but usually involves some level of egocentric thinking. The path to decline can occur in any number of situations once the violation occurs. Lonergan says that on this downward slide “[e]valuation [of data] may be biased by an egoistic disregard of others, by a loyalty to one’s own group matched by hostility to other groups, by concentrating on short term benefits and overlooking long term costs” (Lonergan, 1971, p.53). Egocentric thinking is “in conflict with the good of order” and gradually erodes it away (Lonergan, 1971, p. 54). “Group egoism” is most dangerous and pernicious because it can

create its own self-perpetuating structures to establish “a market for opinions, doctrines, theories, that will justify its ways” (Lonergan, 1971, p. 54). Left unchecked, a stream of lies, whether on a small or large scale, can be promulgated, accepted without question, and perpetuated, giving birth to more lies until the truth seems unknowable and a sense of alienation from reality sets in. Once the decline begins, Lonergan warns, “such aberrations are easy to maintain and difficult to correct” (Lonergan, 1971, p. 53). The society in decline “digs its own grave with relentless consistency” as it cannot be saved by the clarifying force of argument because “argument has a theoretical major premise, [and] theoretical premises are asked to conform to matters of fact, and the facts in the situation produced by decline more and more are the absurdities that proceed from inattention, oversight, unreasonableness, and irresponsibility” (Lonergan, 1971, p. 55). “Absurdities,” now referred to as “alternative facts,” come to be known as facts: opioids, taken as prescribed, are not addictive. We need to beware of decline. Whether in our personal relationships or in our society at large, truth is essential. This shared value is what make relationships and communities possible in the first place.

Consider that researching, that is gathering data, fact-checking, attending to the facts is an act of self-transcendence. Like Cypher, often our thinking is egocentric. At times our “mind-forged manacles” are so strong we are unwilling to transcend our narrow view to even consider fact-checking ourselves. Research, gathering the relevant data, could help us make well-informed decisions, aiding our thinking process and provided a strong foundation in fact from which interpretation, weighing of pros and cons (or dialectic) could proceed. Despite the fact that we have unprecedented access to information today, we severely underestimate the value of research as an activity that promotes the human good.

To bring this into the college classroom, we need to meet our student where they are. Frederick Crowe explains that, prior to college, the student “accumulates experience ... [which] is taken into the mind as a receptacle; it is not organized, or oriented toward understanding in a fully conscious way” (Crowe, 1985, p. 14). Anyone who teaches freshmen can attest to the fact that that first year is painful because they enter a community that expects them to think on a higher level. They can no longer simply collect a response based on the data they find (Crowe, 1985, p. 112). They transition from a passive/receiving state to an information to be given back at testing. They are expected to seek out answers to questions and formulate active/outward-reaching state. This is but one step on the trajectory of the student’s intellectual conversion, as Crowe warns that our college students are “nowhere near the pinnacle of authenticity that would give immunity to bias” (Crowe, 1985, p. 117). Biased, or egocentric, thinking is detrimental to the quest for truth, as we saw earlier. However, the gathering of data requires some skill of discernment. Even while researching, students need to be questioning and thinking about the data they find. We can use the five sentence letter that set into motion today’s opioid crisis to illustrate.

Imagine a student researching a question about the addiction potential of long term opioid therapy before the “problem” of the letter was brought into the public domain. That student would very likely have found references to the letter in many scholarly articles available on the various library databases. In order to avoid making the same mistake that so many scholars made in their interpretation of the letter, that student would have to be diligent in getting to the bottom of its claim that addiction to opioids given long term is rare. The student would need to “attend to the data” which the letter purports to provide and consider the quality, source, completeness, and reasonableness of it. Without this the student would probably represent the same falsehood in her own paper, based on the fact that she sees so many repeating this claim as if it were truth. So what is the quality of the source? It is a five sentence letter, not a scientific study. Does claim make reasonable sense? How is it that under a certain circumstance the chemical is suddenly not addictive?

This short letter to the editor helped initiate a public health crisis that has devastated the lives of millions of Americans. Presumably, their intentions were honorable, yet irreparable damage was done because they provided incomplete or misleading information. That is no consolation to the families who have been harmed. Today we might say that this letter “went viral.” Scholars used it as evidence of a truth without questioning the very limited and flawed data it provided. Today Jick struggles to explain what was really meant by this statement from his letter: “We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction” (Hawkins, 2017, p. 2). For pharmaceutical companies which stood to make enormous profits on the proliferation of their opioids, this was apparently a very “attractive” bit of data. To scholars writing about their own studies of pain medications, there may have seemed no reason to question this data, especially since it was published in a prestigious medical journal and had been cited over and over by other scholars. Nursing and medical students were indoctrinated accordingly. And so the falsehood was disseminated throughout the United States, despite the very obvious fact that opioids are highly addictive. Not until years of overprescribing, over 183,000 (Hawkins, 2017, p. 2) in overdose deaths, millions of addicts who live with the disease, the children of addicted parents, the babies born addicted, the senior citizens who find themselves addicted, the towns and cities across the nation afflicted with the public health and street crime ramifications, has the data in that letter been questioned. The heartbreak is unquantifiable. Five sentences set this on. Canadian researchers studied the influence of this letter and concluded that the way the letter was used by subsequent researchers was the problem; that its contents were used inaccurately and so “helped to shape a narrative that allayed prescribers’ concerns about the risk of addiction associated with long-term opioid therapy” (Hawkins, 2017, p. 3). The hundreds of scholars who, they say, misused this information, are faulted. But the fact remains that Jick and Porter submitted this letter. Do they retain no responsibility for its impact?

Imagine what could have happened if Jick and Porter had applied Lonergan’s Transcendental Precepts. Being Attentive to the data they would have had to conclude that theirs was incomplete. Being Intelligent, they might have questioned their claim, tested their evident assumptions about the nature of these drugs and of addiction itself. Being Reasonable, they might have seen that they had not performed a conclusive scientific study and so their “findings” might not be correct. Being Responsible they should have realized the potential harm that could occur and decided against publishing such a statement. Hindsight is 20/20, but consider that when one attends to the data this letter provides one must consider intentionality. What was their motive in publishing it? A recent article claims that it was intended to “stimulate conversation among fellow researchers” and Jick himself complains that he is “mortified that that letter to the editor was used as an excuse to do what these drug companies did” (Hawkins, 2017, p. 3). Gorman and Gorman proposed that the scientific method be taught early on in school to inoculate the populace against uncritical acceptance of information, but those involved here were well trained in the scientific method. In fact, error and falsification in academia has become a more widespread problem than most might think. Retractionwatch.com, a website partially funded by the MacArthur Foundation that keeps track of retractions of articles on scientific studies, claims that retractions have increased ten-fold over the past decade and the Jick and Porter letter issue is there well documented (*The Retraction Watch Leaderboard*, 2017). The website keeps track of retractions by author, so far the highest number for one author, is 183 (*The Retraction Watch Leaderboard*, 2017). Clearly, a self-appropriated dedication to the truth and intention to work for the common good need to undergird all academic work. The Functional Specialty of Research is not an activity to be engaged in a mechanical way, but with full recognition of its profound potential effect on community.

Research, this first of the Functional Specialities, is a pivot point in our intellectual development. It turns us from the path of ignorance to the path of knowing. At its best it sets into motion, for the

researcher as well as the community her research serves, a process of intellectual conversion. In the academic context the ways of intellectual development articulated by Lonergan can be easily applied to the Functional Specialty of Research. In what is often referred to as “The Way Down” or “The Way of Heritage” the student is learning about what has come before, taking in data that is part of the existing tradition of his culture. She is taking in the heritage of data that has been established by her culture as important. When she does research to find out what others have said or discovered or thought, she is a student of existing wisdom and tradition. This can take the form of a literature review in the early stages of the research process. “The Way Up” or the “The Way of Achievement” involves the act of creating new knowledge which is ultimately the objective of academic research. She is collecting data in response to her own question and attending to that data, considering its accuracy and completeness, and possibly even allowing it to expand her personal horizon as she takes in this new data. In the process she is discovering not the intelligences that can be before her, but rather she is discovering her own intelligence. The Functional Specialty of Research seems to lie at the pivot point between these two important phases of development for the student. We might also note that the experience of researching is the starting point for intellectual activity. We don’t operate in a vacuum, generating thoughts independently of the community. Indeed, research is the act of engaging with the community in both directions, almost like a conversation: on The Way Down, we might say one listens to the voices of the past; on The Way Up we add our own voices to the conversation and push that discourse further to be taken up or responded to by yet another voice.

However, authentic movement in either direction presupposes engagement with the Transcendental Precepts, being attentive, intelligent, reasonable, and responsible, since their objective is the self-transcendence that makes it possible for us to act for the common good. The precepts help ensure that intentionality is directed not toward the personal interest, but toward the broader horizon of the human good, toward the true, the real, and the good. Without this true critical thought is not possible since critical thinking is ultimately moral thinking. Those researchers who did not misconstrue or misrepresent the Jick and Porter five sentence letter, but instead questioned its assumptions, and there were some, were doing just that. Unfortunately, they were in the minority and the common good was not served but rather thrown aside for professional and financial gain.

Truth beyond the Classroom

While Google has found ways to prevent the monetization of fake news stories, they realize that those who post them find another way (O’Brien, 2017, p. 1). Imposing external security measures can be helpful but will only go so far. If people will stop clicking, those who post will stop making money, and maybe the flow of fake news will abate. But, the best security against fake news is a population that not only demands truth, but is willing and able to seek it out, that will attend to the data by using the many research tools at our fingertips today. Lonergan’s Transcendental Precepts provide the method by which we can teach the generation coming up to be more conscious of their thinking processes so that they can develop into critical thinkers that will then go out into the world with a blueprint for acting for the common good in everything they do. We can introduce the concepts in our classes, and talk about them in terms of the subject matter of our courses.

In my *Christianity and Culture in Dialogue* class I do this during the first week. Throughout the semester, as we read through the core texts we try to observe how we can look at them through the lens of this process of Being attentive, intelligent, reasonable, and responsible. We consider the trial of Galileo and his “Letter to the Grand Duchess Christina.” Most students come to the text with the assumption that they will be seeing an example of the Catholic Church’s persecution of science. This is the message they get from our culture. It is also a provocative tag line from the popular film *Angels and*

Demons, often taken out of context considering the larger message of the film. As they read the text they bear witness to Galileo's intricate explication of the relationship of scientific inquiry and faith, the different objectives of science and scripture. Then we attend to the data: What was the historical context? What was the scientific context? Was the church united in opposition to Galileo's findings? What was the political context? What was Galileo's relationship to the church up to that time?

Eventually, *attention to the data* gathered in response to these questions and our subsequent *intelligent* discussion of it reveals a very complex situation to which the claim that the church is the enemy of science, is not a *reasonable* assertion. As a result we must conclude that it is not *responsible* to persist in supporting this claim, but rather we must refute it whenever we can because it perpetuates a lie. The lesson learned from this is twofold: that the story of Galileo is widely misunderstood to be proof that the church is the enemy of science, and that the truth can be known if one attends to the data.

Lies are perpetuated in our culture in ways that are unprecedented in history. Elections are won or lost on them. Our sons and daughters are marched off to fight and die because of them. Our health is sometimes compromised because of them. The list goes on. Dante understood it well when he put such liars in one of the lowest pits of hell. He is reminding us of something we desperately need but often take for granted: truth.

Research, Truth, and the Catholic University

In the apostolic constitution *Ex Corde Ecclesiae* ("From the Heart of the Church") Pope Saint John Paul II addressed the nature of a Catholic university education. In it he used the word "truth" 36 times, the word "true" 4 times, and the word "research" 44 times. Whether or not it was intentional, this is significant. Its introduction goes into depth about the church's relationship to education and truth. Later in the text research shares the spotlight with truth. The core purpose of a Catholic education is "a continuous quest for truth through its research, and the preservation and communication of knowledge for the good of society" (Pope St. John Paul II, 1990, par. 30). Through research the Catholic University both "serve[s] the public interest" and "develops culture" (Pope St. John Paul II, 1990, pars. 37 & 43), which must ultimately "serve the human person" (Pope St. John Paul II, 1990, par. 18). Scholars must be trained to engage in the "ardent," "selfless" search for truth, the "free search for the whole truth about nature, man and God" in a way that is "impartial...neither subordinated to nor conditioned by particular interests of any kind" (Pope St. John Paul II, 1990, par. 7). He directs the communities of Catholic universities worldwide to "have the courage to seek uncomfortable truths which do not please public opinion, but which are necessary to safeguard the authentic good of society" (Pope St. John Paul II, 1990, par. 32). Research helps humanity pursue truth. It is not to serve an agenda, but rather truth which, as Lonergan posited, is crucial to understanding the real and the good. That is to say, research must be done for the common good.

The many assaults on truth in our society today provide us with daunting problems to address but also many opportunities for redemption. As members of a Catholic university community and as students of Lonergan's Generalized Empirical Method, we are in a unique position to re-assess and articulate our identity and the special benefits it brings to our students. The singular blessing of institutions like ours is that we "hold a distinctive notion of the good... we seek the whole truth (not partial truth)" (Orji, 2013, p. 242). Lies can be deadly, but as the Jick and Porter five sentence letter demonstrates, so can incomplete truths. Lonergan's caution that we attend carefully to the data gathered in our research efforts puts us on a path to authenticity individually and collectively. One who is authentically human, who has achieved a level of self-transcendence, will work toward truth, for the human good, rather than personal gain, freed of the manacles of biased or egocentric thinking with

leads to inauthenticity. But these are complex concepts. Will our students be able to benefit from our research? A good first step is to articulate these concepts in class. Talk about the objective of a Catholic university education as one that develops the whole person, rather than a person who will do a particular job after graduation. Present the Transcendental Precepts in class. Apply them to the analysis of texts. Provide real-life examples of what happens when truth is not pursued in scholarly research. Look at the consequences of not attending with objectivity to the data. Recently, I heard a commentator talking about the “conspiracy theory of the day” say that, in such situations, his father would say, “In God I trust. All others must bring data.” And, I might add, we must attend to that data intelligently, reasonably, and responsibly.

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ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients¹ who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,² Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug
Surveillance Program

Waltham, MA 02154

Boston University Medical Center

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MARY ELLEN ROBERTS

Nursing and the Functional Specialities

Abstract

The philosophy of Bernard Lonergan has made a difference in my own life and the lives of my students. Knowing as a process is not simply “taking a look at what’s there” or “reporting what I feel about something” but a change in how I live and work. The Praxis program has enabled me to be more cognizant of who I am and how I as a nurse and educator teach my students. It has given me the tools needed to look at and examine situations differently. I am able to examine my own process of knowing as well as provide a profound understanding for others. This program has brought a richer understanding of Lonergan’s theory in relation to finding oneself and becoming closer to God. In my medical practice where I care for vulnerable populations in the inner city, I am able to care for and see my patients as a community of individuals who are in need of both emotional and physical care. These individuals are in great need of spiritual care as well. Applying Lonergan’s cognitional theory has given me the opportunity to change my courses in the master’s program. I initially did my ATM (Application of the Method) in one particular course, Health Promotion, which is taught to nurse practitioner students. This presentation will look at aspects of Lonergan’s thought and how the Functional Specialities relate to nursing in a graduate health promotion course.

The philosophy of Bernard Lonergan has made a difference in my own life and the lives of my students. Knowing as a process is not simply “taking a look at what’s there” or “reporting what I feel about something” but a change in how I live and work. By being part of the praxis program I have become more cognizant of who I am and how I as a nurse and educator teach my students. The Praxis program has enabled me to look at everyday life in a different light. It has given me the tools needed to look at and examine situations differently. I am able to examine my own conscious as well as provide a profound understanding for others. This program has brought a richer understanding of Lonergan’s theory in relation to finding yourself and becoming closer to God. In my medical practice where I care for vulnerable populations in the inner city I am able to care for and see my patients as a community of individuals who are in need of both emotional and physical care. These individuals are in great need of spiritual care as well.

The 4-fold process of Lonergan’s cognitive theory (experience, understanding, judging and deciding) has given me the opportunity to change my courses in the master’s program. One particular course, Health Promotion, which is taught to nurse practitioner students, is where I initially did my ATM (Application of the Method).

Health can be viewed within a context of wholeness, in which “health” is not the absence of disease but a state of physical, emotional, social, and spiritual wellbeing. While healthcare providers may subscribe to this holistic belief, the spiritual domain of health is less well understood. Yet nursing theorists (e.g. Watson, 2012) view understanding of one’s own spirituality to be central to caring for the spiritual needs of others.

Daly (2009) posited that “among Lonergan’s most important contributions stand his theory of cognitional structure, his Generalized Empirical Method (GEM) for human and natural science, and his theory of emergent probability to account for the evolution of the universe and the historical development of intelligent beings as part of the universe.” (p. 146). The compatibility of Lonergan’s theories is applicable within all areas of healthcare, and is illustrated within nursing by Perry (2004) who wrote:

“An epistemology of nursing wisdom should include the practical, the theoretical and the scientific integrated into a whole that is consistent with universal truth and moral order. The best way to unify nursing theory, science and practice is to integrate them within each nurse. Through the process of self-appropriation, each nurse can utilize common sense knowing that relates to each patient situation while incorporating the scientific knowledge that has been gained through research as well as theoretical knowledge based on universal values” (p. 73-74).

This philosophy is shared by other disciplines working in health care; therefore, an interdisciplinary course exploring spirituality and health using Lonergan’s GEM is appropriate. Emerging perspectives have suggested that health as depicted in conventional medicine is far too limited, adding that health is not just the absence of disease, but instead, the outcome of emotional and spiritual well-being as well as physical functioning. Viewing health holistically provides nourishment for attributes that contribute to personal competence and understanding the development towards the whole person with intellectual and moral maturity.

This ATM aims to provide students with empirical and theoretical evidence and opportunities to answer the question “what am I doing when I am knowing?” Several multidimensional facets of holistic health from a personal and spiritual perspective was explored. Emphasis was on the integration of body, mind and spirit. Techniques that were introduced include, but not limited to, mindfulness, reflection and other exercises to recognize the relationships between spirituality and health.

In this ATM students identified personal core belief systems and values and explored cultural aspects of healing, spirituality and ritual. Utilizing the Generalized Empirical Method (GEM), students learn about the spiritual components and the life-changing aspects of disease, chronic or terminal illness. Students are required to identify and write about a personal change that they want to make in their lives. Students write a 2 part reflective journal, (one part on the change they want to make and the one on spirituality in the context of Lonergan). The journal includes reflections on that week’s spirituality discussion (guiding questions are posted separately). This reflection encourages the change they are looking for and helps them to discover their authentic self. The focus on spirituality is coherent with new understanding of its import to health and efforts to adopt healthy behaviors.

Students have written on how this reflective journaling has brought them closer to God, has brought them back to the church and has brought them great strength when coping with a personal crisis. One student gave birth to her baby about eight weeks early. This student wrote that through the reflective journaling and the emphasis on spirituality and its relationship to conversion and dimensions of the human, she was able to reflect and “get through this very stressful time in her life”. Other students wrote about how this has helped them identify who they are, where they are going in the nursing profession and how this has changed how they view all patients of various religions.

In nursing the intellectual, moral and religious are closely related to caring for our patients. This interdependence gives us a holistic look at the care which we are to give. The circular nature of

research, interpretation of that research, historical perspectives of care and the dialectic gives us the basis for evidence based practice within the profession. This ATM gives students an opportunity not only in this health promotion course but also in looking at our diagnostic loop. Foundations correspond to the decisions we make regarding patient care and our own beliefs. Doctrines correspond to judgement - what is our judgement of the appropriate care to give? Systematics correspond to our understanding of the disease process, particularly of an individual patient we are caring for. Communications correspond to our experience: what experience do we have in caring for a patient with a particular disease state? What experience can be communicated to our patients in promotion of the health of populations?

Nursing as a Field Specialization can be divided and subdivided into: Evidence Based Research, Translational Science, Patient Values, and Clinical expertise/sub-specialization. It can be further divided into sub specializations such as: Acute Care, Primary Care, Health Promotion and Prevention, Mental Health, Rehabilitation, Children and Youth and the Aging. The primary focus of my ATM was on Health Promotion and Prevention.

Functional Specialization distinguishes and separates successive stages in the process from data to results, this helps determine what is meant. First one must choose a profession, then become educated in this profession and finally practice within the profession. This becomes an up—down way of thinking when one continues for advanced degrees/knowledge. Conversion can begin and understanding expands as nurses become more educated with higher degrees and with clinical experience. This personal conversion occurs within the profession. My ATM demonstrated this in the context of a personal change project. Within this assignment students also identified how this will change their practice, in teaching and informing students.

Applying the Functional Specialities to Nursing

Research: corresponds to experience, by researching within the profession we are able identify materials that are relevant to the practice of nursing at all ages. These include:

1. ANA Scope of Practice
2. ANA Code of Conduct
3. Research agendas of various Nursing organizations such as ANA, AANP, NAPNAP, and AAN
4. Critically appraised manuscripts, journal articles, evidence briefs, clinical practice articles.

Interpretation: corresponds to understanding, this is a way of those within the profession Interpreting what their authors meant in a historical context. What do the nursing historians say about practice? This interpretation, identifies the evolution of nursing practice by:

1. Who: (Founders, educators, practitioners, leaders in nursing)
2. How: Education (texts, practice experience, legislative changes, policy initiatives).

History: corresponds to judgment. Identifying historical trends in the development of the profession.

1. Basic History: From Nightingale to the Present Different practice areas, over various time frames
2. Special History: Consideration to culture, reimbursement, state and federal regulations, theoretical changes, community view of nursing
3. General History: a macro, not micro view of the profession, its evolution

Dialectic: corresponds to decision. It sets to explain:

1. Character, educators, practitioners, students, researchers
2. Oppositions,
3. Relations

Looks at many viewpoints of the above exhibited in conflicting movements, histories, and interpretations. Can examine the viewpoints of conflicting nursing leaders and organizations. Part of the ATM looked at the dialectic because of the self-reflection, students were required to examine and reflect on their character and how it can change by coming closer to their authentic self.

Foundations: corresponds to decision identifying what being converted means.

1. Knowledge
2. Skills

These occur in the educator, student and practitioner. The ATM examine the functional specialty of Foundations. It looked at both knowledge and skills.

Doctrines: corresponds to judgment. Expresses judgments of facts and value

1. Ethical Practice
2. Value Judgements concerning patient care

Effective educator, practitioner and student. In reflecting on spirituality students were able to look at their own ethical practice and value judgements.

Systematics: corresponds to understanding. Organizes the truths and values into a coherent document within the foundation of practice

1. Beneficence
2. Autonomy
3. Veracity
4. Non-maleficence
5. Fidelity
6. Justice

Communications: corresponds to experience. External relations and communications with interdisciplinary relations

1. Interdisciplinary
2. Practitioner /Patient communication
3. Educator/Practitioner/Patient communication
4. Practitioner/community

Interdependence of the Functional Specialities

Who determines interdependence within a profession? In nursing we integrate nursing theory, research and practice. Reflective understanding, authenticity and the human person is the subject of consciously developing unity within the profession. Two key elements emerge:

- a. Subject-object challenge of nursing inquiry and
- b. Common sense vs. scientific knowledge

Integration of nursing theory, science and practice may be achieved through self-transcendence.

My ATM on spirituality and the aspects of Lonergan's philosophy was developed based on an integration of the Functional Specialities looking at all aspects of the student as a person, clinical professional and the integration of spirituality. Students were successful and many commented on the positive experience of journaling and how much they had learned about themselves personally and as a professional. Many also said that they would continue the journals beyond the class requirement. I felt that this was a successful application and will continue in this class and will be carried out in other graduate level courses.

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LISA ROSE-WILES

Bernard Lonergan's Functional Specialities and Academic Libraries

Abstract

I apply the framework of Bernard Lonergan's Functional Specialities to academic libraries. This process helped to identify and situate the challenges that libraries face today. These largely stem from historical changes that align with the three challenges to higher education that Lonergan identified in *Topics in Education* nearly 60 years ago: "the masses", "the new learning", and "increasing specialization". Despite lofty Mission Statements and Strategic Plans (policy making and planning), the foundations of today's academic libraries are unclear, largely because dialectics surrounding those historical changes have not been resolved. This has led to considerable concern about the future of academic libraries. I use my analysis and experiences from a three year exploration in "Applying the [Generalized Empirical] Method" in a first year Biology course to suggest ways to help librarians foster student research skills and expand their intellectual horizons.

Introduction

My Praxis project in "Applying the [Generalized Empirical] Method" (ATM) involved being an "embedded librarian" in a first year General Biology class, working closely with another GEM fellow, Dr. Marian Glenn, over a three-year period (Rose-Wiles *et al.* 2017) My talk today will focus on my application of Lonergan's Functional Specialities to academic libraries, but I will integrate observations from my ATM that relate to some of the challenges facing academic libraries in the United States. Using the Functional Specialities as a framework helped me to clarify those challenges, especially their historical origins and allowed me to situate my ATM in a larger context. I cannot offer easy solutions to the problems facing academic libraries, but my analysis and my ATM work suggest steps we can take to begin addressing them.

Background: Academic Libraries

There are almost 120,000 libraries of all kinds in the United States, including about 4,000 academic libraries associated with colleges or universities. (American Library Association [ALA], 2015). Traditionally the library was the heart of any university, but libraries seem to be experiencing an identity crisis and loss of perceived value. The number of colleges and universities with libraries declined from 90% in 1998 to 82% in 2010 (National Center for Educational Statistics [CES], 2015a, 2015b).

Academic libraries are closely associated with or embedded within their parent institutions and support the university's mission as well as its curricular and research needs. These missions and needs vary across institutions, but despite the myriad of specialized functions and tasks that libraries and librarians perform, library services fall under two broad headings which I will describe simply as "materials" and "education". "Materials" encompasses obtaining, organizing, describing, preserving and providing access to information resources (traditionally books, but increasingly electronic resources). "Education" means teaching library users how to find, access and use information ("information literacy"), and increasingly how to use library-related technology. Both functions involve interacting

with faculty and students in many disciplines across the university, giving rise to the term “library liaison” which has largely replaced the older term “subject specialist”. I think Lonergan would have appreciated this idea of working across disciplines and trying to connect them through common core concepts.

I should distinguish between “Librarianship”, which is primarily a service-oriented profession (a Field Specialization) and “Library Science”, the subject matter or academic discipline of librarianship (a Subject Specialization). Essentially this is the distinction between librarians “doing what we do” and thinking and talking about it; of doing research and communicating the findings. “Library Science” should inform library practice and vice-versa because the practice and the discipline are intimately related, but this is not always the case.

So let me now attempt to place this “library science” broadly within the framework of Lonergan’s eight Functional Specialities.

Bernard Lonergan’s Functional Specialities and Academic Libraries

Research

Most librarians are “practical people ... immersed in the particular and concrete [with] little grasp of large movements or long-term trends” (Lonergan 1971, p. 360). A lot of library research is reporting how we adopted a particular technology or workflow. We spend a great deal of time and energy gathering assessment-driven data such as usage statistics (for example, how many people use the library services; how often books circulate, how many times online articles are downloaded) and cost per use analyses, reflecting our preoccupation with “Return on Investment”. Library research in the educational domain centers on promoting and improving information literacy. Much of this involves testing and assessing instruction techniques or technology, but librarians do draw on broader educational theory and/or cognitive theory. A few such as Carol Kuhlthau (2004) develop new theories or models of information seeking and processing or take a philosophical approach to reflecting on library history, development, function, social engagement, or mission. My own past research has been mostly practical, but since becoming involved in Praxis I have become very interested in these larger philosophical issues – thus expanding my own horizon as a librarian.

Interpretation

In the same way that library research tends to be pragmatic, librarians tend to interpret their research within a rather limited practical horizon. Much of the time we gather and interpret data in order to demonstrate our “value” to ourselves, our users, and most of all to administrators of our institution who determine library funding. But interpreting data can also raise interesting questions. Transactions at the reference desk are declining, should we reduce our reference hours or do more outreach? Print book circulation is decreasing, should we buy fewer books? Do these trends mean today’s students are doing less reading or research than their predecessors? And a related question of great concern for many librarians and the focus of my ATM: most students don’t know how to do research – how can librarians help?

History

The first academic institution in the United States was Harvard University, founded in 1638 and a copy of Cambridge's Immanuel College. There was a library but it had very few books and was rarely open to or used by students (Kilgour, 1972). No real research was done until the 1820's, and books "suitable for undergraduates were segregated in the librarian's office" as late as 1854 (Kilgour, 1972, p. 78). However, by the late nineteenth century libraries were becoming more open and some librarians had begun to offer instruction in using the library rather than simply providing books on request (Weiner, 2005). This shift from "guardians of knowledge" to "knowledge facilitators" (Matheson & Welch, 2012) was probably the biggest single change facing academic libraries, and one we are still grappling with today.

There have been many other changes in academic libraries in the last century, but I am going to focus on three that I find most significant. These fit very well with the three principle challenges to higher education that Lonergan identified in *Topics in Education* nearly 60 years ago (Lonergan, 2015). The first is the opening of higher education from a privileged few to what Lonergan termed "**The Masses**". From a library perspective this means no longer serving a small, select group of scholars but serving a large and diverse community of learners. This includes students pursuing professional or business degrees who may have little interest in classical liberal arts subjects or information literacy. We also have many first generation college students, English as a second language students, mature students, and students from many faiths and cultures. Many students come very poorly prepared for college level work.

I see this not just as a historical change but an ongoing dialectic that academic libraries must engage: how do we deal with this diversity, especially with limited budgets, staff and time. A compounding issue is a constellation of traits ascribed to the "Millennial" generation (Bourke & Mechler, 2010). I am wary of attempts to label an entire generation as "feeling entitled", "wanting instant results" and "obsessed with technology" but confess we see these traits in many of today's students.

To give some examples from my ATM, I found that many of our students have difficulty asking thoughtful research questions. They expect questions (and answers) to be given to them, or confuse "research question" with the more comfortable concept of "general topic" that they experienced in high school. In Lonergan's terms, they are reluctant to change their standpoint and move toward (philosophical) intellectual conversion by acknowledging that "knowing is a matter of raising and answering questions for intelligence" (Doran, 2011, p. 19).

Some students candidly admit to making strategic choices about how much effort to spend on assignments, or whether to do them at all, based on their "value" in terms of grade points. This is consistent with the corporate culture of efficiency permeating higher education today. In similar vein, many students will not read material or work through tutorials or practice exercises if they are not "worth points", even if the material would help them to do well on assignments that are graded. They prefer to restrict themselves to what they obviously must do rather than try to expand their horizons, a practice that librarians call "satisficing", meaning doing just what's "good enough" to succeed (Warwick *et al.*, 2009). These tendencies are reinforced by reliance on technology for instant communication and clear and immediate answers – why puzzle through a question when you can simply "Google" the answer? These attitudes are sadly incompatible with the research process, which is complex and

involves working through doubt and confusion (Kuhlthau, 2004). They also do not fit well with Lonergan's GEM or the concept of intellectual integrity (Cronin, 2001, p.18).

In talking about student attitudes to research and learning I have strayed into the second of Lonergan's challenges in Higher Education, "The New Learning". The shift from traditional classical education to more empirical science and social science subjects has escalated with the growth of professional degree programs and the growing corporatization of Higher Education. In the United States, Higher Education is Big Business. Many administrators see students or "library users" as customers to be wooed -- and at least some students and parents perceive themselves in the same way.

Another aspect of the New Learning is the shift from lecture-focused teaching to experiential or "active" learning, meaning more focus on the way of Achievement and less on the way of Heritage. This is exciting but it is challenging to find a good balance between essential subject knowledge and self-guided discovery. Librarians see this in the assignments students bring to the reference desk and the emphasis on doing research rather than reading assigned texts -- often with little experience or guidance on how to actually do that research.

Another significant historical change for academic libraries is moving from well-defined collections of print books, journals and manuscripts to an array of online information resources which we must teach our students (and faculty) how to navigate. There is an ever-increasing reliance on technology, a huge driver of change in the way that academic libraries operate. Many library administrators seem to believe that if we keep up with the newest and trendiest technology all will be well -- a view that is strongly encouraged by those who sell the technology. But technology is also part of "The New Learning" because it has permeated and changed the entire learning environment and expectations of library users in both positive and negative ways. Ease of access to information is wonderful, but sifting through, understanding and evaluating a vast number of search results and choosing those that are appropriate can be overwhelming, especially for inexperienced students. Technology does not address the underlying problem of students not knowing how to do research, and reinforces their expectations for immediate and uncomplicated results. In Lonergan's terms, both academic libraries and students are becoming subsumed to "technological possibility" rather than value-based achievement (Lonergan, 1971, p. 45).

The third big historical change, and Lonergan's third "challenge in higher education" is specialization. Our academic institutions are increasingly changing from well-defined and cohesive entities to a patchwork of specialized and often isolated units and departments. Academic librarians struggle to serve a growing number of specialists who know more and more about less and less, and students who find it difficult to transfer knowledge from one domain to another. I saw this quite often during my ATM -- students often seemed to encapsulate learning about respiration, for example, as something unrelated to blood circulation, and rarely connected the readings from the Core Curriculum courses *Journey of Transformation* or English 1201 to their experiences in science classes.

Dialectics

Dialectic can be divisive, leading to crisis (Lonergan 1971, p. 358) or healthy, leading to reconciliation, conversion, renewed foundations or policies (p. 365). The major dialectics for academic libraries stem from the historical "challenges to higher education". For example "do we open our resources to visitors" relates to historical changes in the openness of libraries and problem of the Masses. The perennial "do we give fish or teach fishing?" is a question about the New Education that

has many ramifications. What is the balance between the popular “meeting students where they are” (mimicking Google or Amazon) and teaching traditional research skills? Some librarians question teaching students how to use library databases and tools they will likely not have (or need) after they graduate. We disagree about how to teach across the disciplines, or even if we should, a question about specialization.

On a loftier plane, librarians argue about whether we should champion the pursuit of knowledge and truth (in Lonergan’s terms, demanding intellectual integrity and facilitating intellectual conversion) or concede the real world economics of education as a marketplace commodity, the Millennial Generation and the culture of “satisficing”. To quote from a paper that Mark Doorley from Villanova delivered at the 2007 Lonergan Workshop:

The university has become more of a tool of economics and politics than a center for the pursuit of truth. More and more, students come to the university as consumers. They are trying to find the least expensive and most efficient way to get the set of skills they need in order to operate successfully in the marketplace. Rather than come to university with the goal of self-appropriation, they come to prepare themselves to fulfill a task in the marketplace, a fulfillment that will enable them to become consumers to their hearts’ content. (Doorley, 2007, p.3.)

Meanwhile librarians argue with administrators and investors in the hopes of convincing them that libraries are important, effective, give good return on investment, support the university mission and deserve more funding. Increasingly it seems that academic libraries are no longer the heart of the institution, but instead are seen as an expense.

Foundations.

I am using “Foundations” here in the sense of being built from “a decision about whom and what you are for ... a fully conscious decision about one’s horizon” (Lonergan, 1971, p. 268). I believe that today’s academic libraries lack solid foundations. This is mainly because critical dialectics have not been resolved, but also because for many, the corporate culture in Higher Education has made competing for limited funding their overwhelming priority. This position may offer a shared Horizon, but it is a limited and limiting one, eroding rather than supporting a framework for Policies, Plans and Communication.

Doctrines - Policies

The [American Library Association Code of Ethics](#) proclaims that libraries “provide the highest level of service to all library users through appropriate and usefully organized resources; equitable service policies; equitable access; and accurate, unbiased, and courteous responses to all requests”. That sounds wonderful, but rather remote from the reality of library life; abstractly conceived rather than concretely operating (Lonergan 1971). Systematics should make this more relevant and intelligible.

Systematics – Plans

[SHU Libraries Strategic Plan](#) [We] “support excellence in academic and individual work, enable inquiry, foster intellectual and ethical integrity and respect for diverse points of view through user-focused services and robust collections. It’s beautifully crafted, but again it does seem rather abstract. Does it clarify and explain “policies” in today’s world, or simply echo their sentiments?

[ACRL Framework for Information Literacy for Higher Education](#) proposes that “librarians have a greater responsibility in identifying core ideas within their own knowledge domain that can extend learning for students.” This is closer to my premise that librarians have a key role in helping students to expand their horizons by engaging intellectually in the research process (beginning with asking through provoking questions) rather than pursuing the “utilitarian and pragmatic purpose” goal of getting a grade and passing a course (Doran, 2011, p.8). But still, does it clarify how this is to be done?

Communication

This is the province of library science: talking about what we do; how and why we do it, and what we should do. But academic librarians often do not communicate well with those outside the library. Many librarians publish meaningful and important work, but I doubt any non-librarians read library journals. It is important that librarians gain a wider academic audience, but it is vital that libraries establish firm foundations so that we can better communicate who we are and what we do.

The Functional Specialities, GEM, and the Way Forward

So what is the core function of academic librarians and libraries? Clearly we need to provide abundant (or at least adequate) scholarly resources for students and faculty, but providing resources is futile if those resources are not used. It is not enough to show students and faculty what resources we have and how to access them, we must show them why they need to use them, which becomes a dialog about doing research. Ultimately we need to foster intellectual conversion in our students. We need to guide them from “a naïve view of oneself and reality” ... toward “intellectual acts of understanding and true judgement” (Liddy, 2009, p. 2), so that “questions regarding meaning and truth are pursued for their own sake” (Doran, 2011, p. 8). This transformation is a long and often painful process, but we can make a start by igniting the sparks of curiosity that lead to good questions. Lonergan asserts that the desire for knowledge and truth is intrinsic in all of us, but it can be stifled by personal circumstances or cultural conventions. Librarians and teaching faculty can work together to engender a sense of wonder in our students, by helping them to see that the world is full of fascinating questions that understanding the scholarly literature can help them to answer. We need to make them comfortable asking fruitful questions and exploring them, and combat their desire to have questions and answers handed to them or made immediately and easily discoverable.

Together librarians and faculty can help to convince students that doing good research is immensely rewarding even when it is difficult, time consuming and frustrating, and encourage them to reflect on their experiences and expand their horizons beyond simply passing a test or getting a degree. I have learned through my ATM that students ignore what they see as “busy work” or assignments with little value, so we must design assignments carefully and make their purpose clear. We must also understand and nurture the critical relationship between lectures and readings as a conduit for foundational knowledge (the way of heritage) and assignments and experiments as experiential learning (the way of achievement). Crowe (1985) sums up this complexity with penetrating simplicity: “the integration of the two ways ... is of course the goal of education” (p.3).

We found using the GEM framework helpful in structuring students’ approach to research and writing, and we used it to design our grading rubrics (Figure 1). GEM can be used to frame library research and information literacy in any discipline, helping librarians to counter the problem of specialization (Figure 2). If we can convince at least some of our students to develop the habits of being attentive, intelligent, reasonable and responsible, it will have a positive effect on the next generation of

leaders and educators. If we acknowledge that the primary function of academic libraries is to foster student research in ways that encourage intellectual conversion, we will have made a great step forward.

The great challenge is convincing current faculty and administrators that this is a worthwhile endeavor. This is a challenge that Lonergan recognized when he referred to the “far more arduous task ... of persuading eminent and influential people to consider the advance both thoroughly and fairly” (Lonergan, 1971, p. 366). If we can do that, we may not achieve Crowe’s “Copernican revolution” but we might turn a few heads and hearts in the right direction.

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Figure 1: GEM Based Grading Rubric for Annotated Bibliography Assignments

Grading aspect	Exceeded expectations	Good	Satisfactory	Need significant improvement
Information sources (Data - "Experience")	>3 peer reviewed articles and good additional sources OR 3 peer reviewed articles and excellent additional sources (4 points)	3 peer-reviewed articles with no additional sources OR 2 peer-reviewed articles and good or excellent additional sources (3 points)	2 peer-reviewed articles, no additional sources or poor additional sources (2 points)	One or no peer-reviewed articles (0 or 1)
Annotation (Understanding)	Relevant key points for all sources provided and clearly explained, clear evidence of understanding the material (2 points)	Relevant key points provided and most are clearly explained (1.5 points)	Some key points provided but not clearly explained (1 points)	Relevant key points poorly explained, not explained or not provided (0-0.5)
Selection of sources (Judgment)	Specific reasons given for selecting all sources, clear evidence of reflecting on choices (2 points)	Reasons given for selecting all sources (1.5 points)	Only simple or general reasons given (1 points)	Only some or no reasons given (0-0.5)
Citations (Responsible / Action)	all citations listed in alphabetical order, correct APA style, no missing elements	Minor citation errors (1.5)	Significant citation errors (1)	Major citation errors or no citations (0-0.5)

Figure 2: GEM-based introduction to first year biology library research presentation

Researching your topic

Shallow – Surface Skimming



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Library Research – Dive Deep



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Our Research Framework: Bernard Lonergan's Generalized Empirical Method (GEM)

- Experience (be Attentive)
- Understanding (be Intelligent)
- Judging (be Reasonable)
- Acting (Be Responsible)



EXPERIENCE ⇔ be ATTENTIVE



The first step is to find information sources that will help you to research your topic and answer or refine your questions.

... Reading your sources (=> INFORMATION) will probably lead to additional questions and may even change your original questions – but that's fine. That's how research is supposed to work.

Aim to compile 6-12 sources that look interesting in a folder (I will show you how to do that).

UNDERSTANDING ⇔ be INTELLIGENT

So far you've probably just looked at the abstracts of the articles you have chosen, but for your recitation you need a deeper understanding of the material you will be presenting. So dive in to the full text, read the discussion and/or conclusion, note interesting points and look for tables or figures that you can use to illustrate your presentation.



JUDGING ⇔ be REASONABLE



Now you need to evaluate the sources you have gathered. Which will work best for your recitation?

- Which are the most relevant to your questions?
- Are your sources authoritative?
- Is the information up to date?

Did you include at least 2 peer-reviewed sources? (we'll see next week)

ACTING ⇔ be RESPONSIBLE

Now that you have chosen your sources, you will cite them in an annotated bibliography (due next week).

You are responsible for following the guidelines, presenting and citing your sources correctly – making ethical use of information.



DOREEN STISKAL

Reflecting on New Horizons: Perceptions of Graduating DPT Students

Abstract

Thinking and knowing are vital to student learning, especially for doctorally-prepared individuals to enter the field of physical therapy. This aligns with Mark Miller's commentary that our mission as educators should include the opportunity for students to experience conversions that require understanding of self in order to best relate to others. Physical therapy literature supports the use of reflection as a critical operation that allows novice practitioners to develop mastery and excel in professional core values and University precepts. By recognizing the conflicts within, students then should be better prepared for the future. Through this ATM (Application of the Method), aspects of intellectual conversion are assessed based upon select outcomes of the DPT program and the Seton Hall University missions. Additionally, the ATM is also designed to capture graduating students' concepts of self-appropriation and conflict identification as part of the dialectic to foundations pivot within the Functional Specialities framework.

Introduction

Each institution of higher learning in the United States defines its own mission and creates educational model(s) to support that mission. John Henry Newman (1899) stated the aim of a University education is for a transformation that results in an 'enlargement of the mind' in order for a person to function as a refined member of society (p. 130). Thus, the institution must ensure students will have learning experiences that contribute to significant human development through a variety of intellectual exchanges between faculty and students.

This University does this by gathering talented faculty to offer classes within a variety of majors, which allows students to gain the requisite exposure to new knowledge and principles that ultimately habituates into lifelong practices. The Seton Hall University (SHU) Mission Statement (2018a) continues to reflect Newman's comments he made more than a century ago:

"Seton Hall University is a major Catholic university. In a diverse and collaborative environment it focuses on academic and ethical development. Seton Hall students are prepared to be leaders in their professional and community lives in a global society and are challenged by outstanding faculty, an evolving technologically advanced setting and values-centered curricula."

This mission statement provides the undergraduate student an opportunity to develop oneself, through exposure to lines of thinking that are new and different. In the transition from secondary education to university level studies, students begin a shift from the 'way of tradition' to the 'way of achievement' (Crowe, 1985). Crowe discussed the way of achievement as the progress of a "...drive to understand, to learn the truth, and to respond to the deep, interior exigencies of our intelligent and rational and responsible nature." Thus, the collegiate experiences and challenging learning opportunities foster one's innate educational drives to appropriate new thinking and gain insight (Lonergan, 1971).

Institutions thus seek to determine outcome measures that capture how students graduate with predetermined core skills, or proficiencies, that serve them to advance as adults into new

horizons. Lonergan (1971) calls the line where there is a limit to one's field of vision as the structured resultants of achievements. The years of progressive study leads to opportunities for new careers, expanded roles, and further study. The broad breadth and depth in this liberal arts education is critical for students who wish to continue onto formal graduate education in order to become a licensed healthcare professional, i.e., a physical therapist (globally called a physiotherapist). Areas of concentration include development in the natural and social/behavioral sciences as well as English communication and mathematics/statistics. Success in these undergraduate courses, however, does not guarantee future achievement at a higher professional level of a healthcare practitioner, where the composite of the foundations must fuse into self-directed and patient-centered behaviors consistent with institutional and professional expectations at the time of graduation.

Lonergan (1971) purports that thinking and knowing are vital to learning. This is especially true for doctorally-prepared individuals wishing to enter the field of physical therapy. The executed ATM series captured student views just as they fulfill all their graduation requirements. In essence, the faculty-created experience sought to peek at how each graduating DPT student perceived a new horizon, the line between formal training and real world experience. Physical therapy literature supports the use of reflection as a critical operation that allows novice practitioners (Wainwright, Shepard, Harman, & Stephens, 2010) to develop mastery and excel in professional core values and University precepts (Hayward & Blackmer, 2010). This aligns with Miller's (2015) commentary that our mission as educators should include the opportunity for students to experience conversions that requires understanding of self in order to best relate to others. When recognizing one's "authentic self" and the conflicts within, students can then prepare optimally for the future as caring professional clinicians and aspiring servant leaders. This self-corrective process is both about knowing reality but also in the actions to help shape reality (Miller, 2013). Anecdotal reports indicated that our alumni are desired new hires over graduates from other regional programs. Yet as the program administrator, I did not possess adequate evidence to conclude if the program was truly graduating students that fulfilled all of our goals in the affective realm. This paper and presentation addresses my ATM and the levels of the GEM processes, i.e., the progress moving from experience through understanding and judgment to decision/action, to assess select outcomes of the DPT program and the Seton Hall University mission. Specifically, this highlights components of the on-going ATM project that will illustrate the alignment of my findings to the dialectic to foundations pivot within the Functional Specialities framework (Lonergan, 1971).

The Physical Therapy Profession in the USA

Physical therapists (PTs) are health care professionals in the USA who diagnose and treat individuals of all ages, from newborns to the very oldest, who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. PTs examine each individual and develop a plan using treatment techniques to promote the ability to move, reduce pain, restore function, and prevent disability. In addition, PTs work with individuals to prevent the loss of mobility before it occurs by developing fitness- and wellness-oriented programs for healthier and more active lifestyles. PTs provide care for people in a variety of settings, including hospitals, private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings, and nursing homes. State licensure is required in each state in which a physical therapist practices.

The American Physical Therapy Association (APTA) is an individual membership professional organization representing more than 95,000 member physical therapists, physical therapist assistants, and students. The vision statement: *“Transforming society by optimizing movement to improve the human experience”* speaks to the organization’s external focus on patient/client-centered care (APTA, 2017a). Using movement as a key to optimal living and quality of life for all, physical therapists’ interactions extend beyond health to every person's ability to participate in and contribute to society.

If this is the professional expectation, then the training of future professionals must be sufficient to prepare them to fulfill this visionary challenge. In order to provide the best possible health care, physical therapists must be competent in examination, assessment, evaluation, and the diagnosis of movement dysfunction. Once performed, physical therapists then develop, implement, and manage appropriate interventions based on current scientific evidence as well as the individual's psychological, physical, family, social, and economic circumstances. Physical therapists must continually evaluate outcomes of health care to determine if they are consistent with patients' needs in the context of the current health care system. These physical therapists must seek and evaluate new information and incorporate appropriate changes in practice. Lastly, physical therapists engage in educating patients and clients, their families and caregivers, the public, and other health care professionals who provide care for individuals with disabilities and chronic illness.

Given the above, physical therapy education should be designed to prepare clinically competent graduates who have acquired professional knowledge, skills, and values in an atmosphere that inspires commitment to self-directed, lifelong learning in order to solve clinical problems. DPT education, therefore, provides a coherent foundation in the scientific theory and knowledge underlying professional practice, criteria for evaluating new knowledge, and opportunities for students to engage in scientific scholarship. Physical therapy students apply newly learned skills related to professional behavior, oral and written communication, assessment and evaluation, treatment program planning and delivery, and scholarly activity to promote comprehensive healthcare. Education opportunities should also promote strong affective behaviors. Learning about how values, attitudes, ethical behaviors, and culture of the profession is critical so graduates will be prepared to provide compassionate, ethical care that adheres to the highest professional standards. The American Physical Therapy Association (APTA, 2017b) adopted this mission statement to support the comprehensive expectations of new graduates:

“The mission of PT professional education is to graduate knowledgeable, service-oriented, self-assured, adaptable, reflective practitioners who, by virtue of critical and integrative thinking, lifelong learning, and ethical values, render independent judgments concerning patient/client needs that are supported by evidence; promote the health of the patient or client; and enhance the professional, contextual, and collaborative foundations for practice. These practitioners contribute to society and the profession through practice, teaching, administration, and the discovery and application of new knowledge about physical therapy experiences of sufficient excellence and breadth to allow the acquisition and application of essential knowledge, skills, and behaviors as applied to the practice of physical therapy. Learning experiences are provided under the guidance and supervision of competent faculty, in both the classroom and the clinic.”

It is not surprising that so many elements listed above match the mission statement of Seton Hall University.

The linkage of mission statements to student learning is purposeful. The Commission on Accreditation in Physical Therapy Education (CAPTE) grants specialized status to qualified entry-level education programs for physical therapists and physical therapist assistants (CAPTE, 2017). The U.S. Department of Education and the Council for Higher Education Accreditation list CAPTE as a nationally recognized accrediting agency who ensures that all 230+ DPT programs in the United States provide quality education program, an external agency oversees the voluntary review process. Specialized accreditation is a system for recognizing professional education programs for a level of performance, integrity and quality that entitles them to the confidence of the educational community and the public they serve. Accreditation status signifies that the program meets established and nationally accepted standards of scope, quality, and relevance to a wide community of stakeholders. The eight Accreditation Standards provide guidelines for program delivery but also mandate uniformity across institutions. Examples of essential elements are the degree offered, measurement of student learning and graduate outcomes, and cohesion between program and institutional mission. The current model of physical therapist education in the USA is for post-baccalaureate training at a doctoral level (considered a clinical doctorate and not an academic doctorate degree), where a Doctor of Physical Therapy (DPT) is awarded following an intensive full-time program usually 3 years in length.

While we look at the external drivers of the educational process, the CAPTE standards value how DPT programs fit institutional mission. Our SHU DPT mission statement reads:

“The mission of the program is to prepare individuals to become Doctors of Physical Therapy, who are competent practitioners capable of autonomous and inter-professional care, possessing a depth and breadth of knowledge to support the best practice of physical therapy for optimizing movement and function throughout the lifespan. Graduates are prepared to be reflective practitioners to address the needs of society and to assume leadership roles within the profession and health care environment. As a program within a Catholic university, graduates learn to provide care with sensitivity and respect for all individuals within the communities they serve.”

The above statement illustrates how the program views the DPT student’s development when studying at a Catholic university in terms of both professional and society needs. We can see a clear congruency of all statements. As such, Seton Hall University’s Doctor of Physical Therapy Program received its candidacy status by CAPTE to begin education students at the doctoral level in 2001 and received initial accreditation after graduating its first class in 2005. To date, the program has a full accreditation status for a period of ten years (effective November 17, 2010 and ending December 31, 2020; SHUa, 2018).

Guaranteeing that the program meets the written mission statements is evidenced through the structured educational experiences built upon the prerequisite knowledge gained during undergraduate years. Our curriculum affords students opportunities to participate in experiences that develop knowledge, skills, and behaviors consistent with contemporary physical therapy practice as well as servant leadership. Seton Hall University’s DPT program includes didactic information plus experiential learning within the context of patient/client management, community outreach, research, inter-professional education, and diverse clinical practice environments. The curriculum emphasizes skill development for autonomous direct access practice, critical thinking, evidence-based approaches, and service learning to enhance the preparation for tomorrow’s physical therapist as a specialist whose domain is within the movement sciences.

All aspects of this curriculum plan address the program's ability to enhance the mind consistent with Newman's vision of a Catholic education and to foster intellectual conversion as per Lonergan's philosophy of education. Lonergan follows Dewey's model that human knowledge is a transition from a problematic situation to an improved one (Lonergan, 1993). This is achieved through reflection and action. Learning comes through mistakes as well as positive teaching (Tekippe, 1996). Lonergan further uses the term *intellectual conversion* to discuss the transformation of the mind as the break-through to a new level or horizon of awareness (Lonergan, 1993). This is the drive to know, and the University functions to nurture the dynamic human cognitional process (Tekippe, 1996).

The formal graduate level plan consists of specific interwoven experiences that will strategically allow for development toward professional competency and mission driven expectations. This model of experiential pedagogy supports development of skills, knowledge, and professional behavior in realistic settings (Hayward & Blackmer, 2010). As Crowe (1985) writes, the faculty cannot just provide content or 'parcels of information', the real learning occurs when students experience an 'evolution of inner resources that allows for self-realization' (Lonergan, 1971). The SHU DPT faculty's philosophy of education parallels his statement. The faculty state: "*We advance adult learning of the movement system by engaging students to become critical thinkers and skilled clinicians for their future role as value-centered autonomous and contemporary healthcare practitioners. ...We serve as agents of change modeling leadership and commitment to lifelong learning.*" This approach by the faculty supports the continued use of development 'from below' representing the way of achievement found in undergraduate learning.

The commitment to the students and ensuring their learning meets the institutional and professional expectations is high amongst the faculty. We recognize that many students lack the initial understanding of what it means to be a graduate student. Despite our entering students having significant undergraduate college years completed, they often realize too late the program's rigor and expectations. Nevertheless, those willing to embark on great transformation are the ones who best engage in self-assessment and succeed impressively. One DPT student noted in 2015:

"Day one, I walked into the classroom with my textbooks, notebooks, and laptop ready to type and write away, study hard, and dedicate four years of my life to be the best entry-level physical therapist at the conclusion of the four years. On that first day, I did not know how much I would actually learn about not only the profession, but also myself - the importance of possessing the core values and professional behaviors to succeed, the passion and empathy, and most of all maturity that I needed to succeed and be the best I can be".

This reflection underscores the success of the DPT program in meeting the mission and vision of a Catholic education. It also illustrates Lonergan's philosophy of education where knowledge and action intersect effectively.

The DPT Program and the ATM Project

At the time of ATM implementation, the SHU DPT program had a 4-year plan of study of 120 graduate credits. (One credit hour is the equivalent of 15 clock hours for lectures, 45 for lab, and 80 hours for clinical internship). The curriculum has six essential themes: foundational sciences, clinical and medical sciences/patient management, critical inquiry and research processes, professional roles, and clinical experiences. After exposure to the fundamental courses in the sciences, professional roles

and basic practice, skill development occurs in patient management courses through the introduction of simple to more complex conditions. During the last year, each student completes 24 weeks of terminal clinical educational experiences. These guided clinical days affords students hands-on opportunities to master essential skills under the direction of an experienced clinical supervisor. With 4 weeks remaining prior to graduation, students then enroll in their final Curriculum Integration Course. The capstone experience sought to help students prepare for their first job and to pass a national licensure board examination. This point in time provided an excellent opportunity to assess students perception as the contemplate entry into the workforce. There have been four iterations of the ATM project, with each subsequent year showing evidence of ongoing development. ATM assignments occurred during a condensed three-four week-long mini-session, occurring in mid-April through mid-May of 2014-2017.

The course description for this terminal learning experience states that the capstone course will synthesizes curricular threads and serves as the students' final preparation as autonomous practitioners of physical therapy. The course will also emphasize clinical decision-making and incorporate a systems review approach. Topics also include personal and professional development through service and lifelong learning; licensure, career preparation, and first employment considerations; and developing in areas of teaching, leadership and scholarship.

During my first year of implementation in this short 45-hour course, I wanted metrics on all of the seven student learning outcomes (SLO's) that fits the entire course description. As written in the 2014-2015 DPT Student Manual, this relates to the entire curricular process and reflects our educational mission. The curriculum prepares the graduate to:

1. *Be an autonomous Doctor of Physical Therapy who practices in a safe, ethical, and legal manner.*
2. *Use best practice in the delivery of physical therapy.*
3. *Be a critical consumer of the literature and producer of new information.*
4. *Serve all patients/clients with care, sensitivity and respect.*
5. *Become an active contributor and leader in the health care system and community.*
6. *Be an educator, consultant, and collaborator.*
7. *Accept the responsibility for continuous professional development.*

My intent has been to structure about 1/4 of the sessions with discussion that addressed learning within the affective domain. I believe that helping students to think about critically about themselves through a series of assignments benefited to establish their thinking about who they are as authentic individuals. Moreover, this would allow structured opportunities to revisit the GEM process of experiencing, understanding, judging, and deciding/acting. I could then discover if our students actually experienced intellectual conversions upon graduation.

Since this course called for learning that integrated all roles of the enter-level DPT practitioner, I chose to give two lectures on the professional expectations of new graduates. Students reviewed the DPT professional role statement, with highlighted key terms that also illustrates the themes of Lonergan's GEM (Lonergan, 1971) and the previously cited mission statements. Specifically this was

“Physical therapists (PTs) are health care professionals who diagnose and treat individuals of all ages who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. In order to provide the best possible health care, physical therapists must be competent in examination, assessment, evaluation, and the diagnosis of movement

dysfunction. Physical therapists develop, implement, and manage appropriate interventions based on current scientific evidence as well as the individual's psychological, physical, family, social, and economic circumstances. Physical therapists must continually evaluate outcomes of health care to determine if they are consistent with patients' needs in the context of the current health care system. Physical therapists must seek and evaluate new information and incorporate appropriate changes in practice."

The underlined elements above reinforce the graduate's need to be a reflective practitioner who can critically think and render independent judgments concerning patient/client needs that are supported by evidence. This language illustrates how our purposeful experiential learning experiences transform students far beyond the understanding of words found within textbooks or as parceled out by the instructors. Societal need for competent practitioners drive us educators to look beyond standardized testing to ensure that our students can consider the patient/client as 'whole' when determining the best course of action to maximize function and meet or exceed patient expectations. This concept reflects the World Health Organization's perspective on global healthcare delivery (WHO, 2017). More importantly, it fosters the notion of a therapist as a leader.

To be an exemplary physical therapist, one ought to embrace the principles of servant leadership. By adopting professional core values, students learn how to listen, reflect, and communicate to establish trust as the executive in determining a patient/client's healthcare plan (Gersh, 2006). The resulting confidence of the patient/client provides the practitioner with positive reinforcement that she/he truly possesses the necessary contemporary knowledge and skills when providing direction, implementing plans, and motivating individuals. Effectiveness in leading can only come from frequent self-appropriation; the process of reducing the ambiguity and confusion associated with uncertainty related to human health. The concepts of interiority (Lonergan *et al.*, 2005), i.e., awareness and self-knowledge, put in action through systematic reflection and discovery can be of value to students for them to reach truth, even when mistakes are made. This self-correcting process of learning is an integral component of the authentic self (Miller, 2013).

To measure if the SHU DPT students are truly reflective practitioners upon graduation, I created a written assignment that followed some in-class active learning tasks and select readings. Products created by students would provide a summative assessment of how well our graduating students meet the outcomes we set. My motivation to do this stemmed from the assessment requirements mandated by CAPTE for all accredited programs. Thus, this programmatic need drove my ATM at the start. At the time of the first implementation, I knew that I needed to make several modifications of the course components and the deliverables produced by the students. In previous years, students and I had in-class discussions about how they perceived themselves using a personal SWOT format. The "SWOT" is a tool developed from business management that helps organizations (and in this case, individuals) determine perceived strengths, weaknesses, opportunities, and threats. In addition, students followed with a written assignment that further advanced articulation of individual thoughts, weighted to 10% of the course grade.

Student submissions were not at the desired level I sought. However, instinctively I believed that this was an optimal course assignment to expand my ATM project. The enhancements led to ask questions about thinking, values, and behaviors. I increased the weight of the assignment (30%) and moved its due date to the end of the 3-week interval in hopes of getting submissions that are more robust. Alas, this was also when a case study and a final comprehensive written exam were occurring.

Unfortunately, there were a limited number of very good submissions in this initial year. On the other hand, several submissions appeared more reflective than previous. Students spoke to their reflection of key experiences and understandings. These early states of the GEM process were well described. Yet, students did not express thoughts on their judgments and values (latter steps in the way of achievement) now about the next steps in their lives (point of new horizons).

For the next year's offering, the entire course was revised, with a complete rewrite of the learning module and the related assignment in order to capture deeper student perceptions on just the last four programmatic SLO's. These topics refer more to affective behaviors and thinking rather than the cognitive and psychomotor skill sets easily measured through other mechanisms. In the second iteration, I looked at professional core values, servant leadership, and other personal factors that contribute to our students' perception of how they have been prepared to begin practice (the 'light') as well as the barriers and fears ('darkness') that may impede their successes. To do this, I enhanced my two lectures and active learning sessions. As examples, my new lecture illustrated more clearly the GEM model of experience. As an example, information on understanding and judgment linked with the concepts of planned action. Class discussion included activities that asked about 'How did they know?' 'What were their experiences?' 'What external evidence did they have to support their thinking?' 'What internal drivers influenced thought?' My goal was to get students who functioned in a very tight knit group, where the one shared 'common' goal was to graduate with this DPT degree, to consider what was each's own horizon and how moving forward would now be very individual. I was trying to have them capture themselves as individuals and "authentic" persons through significant reflection. This self-appropriation process could be a method that each could engage in as they continually reassess their personal lives and professional careers.

This enhanced learning module provided me with excellent essays. Submissions by students helped to recognize the value of such an assignment in my assigned courses. These three statements exemplify the appreciation of deep reflection:

"Returning to class after this journey of being in the classroom and then being in the real-world of affiliations, has allowed me to reflect on my growth. I appreciate that we have had this opportunity during our capstone class to reflect on this to self-analyze ourselves professionally and personally."

"Self-assessment and personal reflection are key components to understanding one's personal and professional development. How can I best represent myself to the world, particularly potential employers, if I do not know who I am myself? This was the question I was confronted with at the beginning of this class; a question I have been considering carefully over the past seven years of my life. Who am I? Why am I? Grammatically atrocious, but the more important question I have been trying to answer. I have an idea of who I am, and I have an idea of who I want to be. What I often reflect on is: How did I become this person? What choices have I made? What qualities do I possess? How have those qualities guided me on my current path? What are my long-term goals? Am I any closer to achieving them? Why? Or why not? These questions can be overwhelming and have a different meaning whether considered personally or professionally."

"One of the most important qualities of a new graduate about to enter the work force is the ability to self-reflect. Taking the time to reflect on past, present, and future events and

circumstances is insightful and forces one to open up mental doors that would otherwise have remained closed. Over the last couple of weeks, the capstone course has provided me with the opportunity and time to reflect on myself currently as a student, as well as reflect on my future as a practicing DPT”.

My assignment to the students incorporated many different aspects of what a professional physical therapist is required to be. Topics included looking at oneself using the SWOT; completing APTA documents about core values and professional behaviors; professional responsibilities such as direct access, skill and knowledge levels; and servant leadership. The assignment separated each segment and had several ‘prompt questions’ to help students to reflect internally. Expanding the lectures with a formal 1.5-hour lecture on reflection and using critical experiences as a means to self-evaluate as well as the in-class SWOT session, the assignment asked students to engage in some judgements of themselves. My goal was to try to help students to self-realize and see their ‘light and dark’. As Lonergan (1971) phrases it, help the students see the differences between the actual and the ideal. In addition, how planned action is important. For this segment, I assigned this:

Personal Awareness:

- a. *What are your strengths that will help you significantly as you begin practice? How do you keep these as strengths?*
- b. *What are the greatest personal challenges you face? How do you turn your weakness into strengths? How do you keep these weaknesses from threatening your growth and development?*

The students wrote very thoughtful and personal responses on this topic. Many provided commentary that was not shared in the open class format. Rather, I found students moving beyond the traditional list of strengths, e.g. “I’m a good communicator” and “I have good clinical skills” and traditional weaknesses, e.g. “I need more experience” and “I need better time management skills”. Instead, the narratives highlighted each person’s individuality; how they truly perceived themselves. These are some of the statements about strengths made by the students:

I had one of those “ah ha” moments where I said to myself, “wow, I truly know that this is what I want to do for the rest of my life, and I know I am going to be amazing physical therapist.”

“Asking anyone who knows me, I’m positive they will describe me as taking such pride in my (future) profession. In fact, I wear a heart charm on my necklace with the letters “PT” in it for physical therapy. It is one of my favorite gifts, and it really shows how much I love physical therapy and its influence on people, including myself.”

“During the DPT program, I was taught that you must ask meaningful questions in order to truly learn.”

“The final strength that I am going to list is I am an active listener. It is important that during the treatment session that the patients voice is heard. Patients are in a vulnerable position when they seek help for their impairment/limitations, and they want someone to give them their full attention.”

“The biggest challenge is going to be to not start coasting through my career, but to keep seeking learning and to never be satisfied.”

The collective group of statements confirm program graduates fully meet the University and program expectations written within the mission statements. Similarly, it reflects the perspective of a graduate from a Catholic University. One would not be surprised to see many students think similarly as they graduate. The more striking responses came when students discussed their 'weaknesses'. These students' excerpts below indicate how these students authentically revealed their limitations, doubts, misgivings, and stressors consistent with the intensity of the program and the transition to new unknowns. As Lonergan states, this is about the human person's conscious development and the self-correcting process of learning (Miller, 2013).

"I don't think that I've ever undergone so much personal growth as I have over the past 4 years of my life. Going through the program has been the most challenging task I have ever attempted. I have had a lot of things in my life change in the last 4 years; some for the better and some difficult events I had to push through. Someone once told me that you don't learn as much from your victories in life as much as you learn from the losses. I have had some setbacks that truly pushed me to work harder and to succeed in this program, and I have come out of the program stronger and more determined to succeed."

"I know for me personally it will be a big relief and a lot of stress off my shoulders just to get through graduation and officially have the degree. I have never been an academic person and have always disliked going to school; so the idea of going for a profession that requires a doctorate was intense for me; I never would have imagined myself going to school for a doctorate when I was younger. That is one of my regrets now that I am at the end of the program I feel like I did not enjoy or take it in as much because I was always playing not to lose in a sense. I did not seek as much enrichment opportunities as I should have because I did not want to try to put too much on my plate. I was always worried about just handling the classes and information that I was just learning that I did not seek more."

"It is important for me to address these weaknesses because they can have a very negative effect on your growth and development because you can be viewed as untrustworthy."

"Another area that I consider a weakness and a challenge is that I tend to procrastinate. I tend to enjoy being in stress free environments but yet I still seem to work best under pressure. I really don't like the added stress anxiety that procrastination can bring so it is certainly an area that I would like to improve upon."

"I, myself, did not want to involve myself in to many things with school and working throughout my Seton Hall career. Looking back there may have been some things I could have participated in that would not have killed me but without foresight I choose not to."

"Another weakness of mine is prioritization of goals. This does not have anything to do with prioritization of tasks within the clinical setting, but has to do with prioritization of my goals. As stated before that I am highly motivated to make myself better each and every day, but sometimes the high levels of motivation to learn make it hard to focus on one particular subject. I want to continue to learn as much as I can and this could be overwhelming to me at times, which is why it makes a weakness."

“My greatest personal challenge is self-confidence. In this transitional period from Student of Physical Therapy to new graduate as an entry-level Doctor of Physical Therapy, I do not yet have the absolute confidence to practice without mentorship.”

“The personal challenges that I face are related to this as well. I have been told that I sometimes wait too long to ask for help, although I have made efforts to change this and continue to take this into account. Another personal challenge is that I can sometimes be impatient for change so I must remind myself that it takes time and take a step back to realize all that must be addressed. Because I have strong beliefs, I think that I can be abrasive at time when making an argument. This comes from a scientific background in which evidence was needed and strong arguments were important. I realize that this can be off-putting in conversation and have been working to make sure that my communication is appropriate to the audience.”

“While I have been able to recognize my strengths, I realize that I have many weaknesses. Many of these weaknesses have been weaknesses of mine throughout my life and while I have improved significantly there is still room for progress. In general, I am anxious, especially with new or challenging situations, which often causes me to be indecisive and demonstrate a lack of self-confidence. This is not conducive to a positive environment for my patients or myself. At the same time, I also can be very particular with my work and outcomes and can even say, a perfectionist to a fault at times. This over analysis causes me to be inefficient many times, which impacts the whole system related to patient care.... If I am aware of my weaknesses, I can create strategies to overcome and manage my weaknesses.

“The greatest personal challenge that I face is my self-confidence and somewhat introverted personality. I have dealt with this challenge throughout my life and I have been making changes in order to improve upon them. I have been put in uncomfortable situations where I have had to stand up and fight against my instinct and sit back and watch and I have also forced myself in other situations to volunteer for things that have made me uncomfortable. I can try to turn these weaknesses into strengths by using my quiet watchfulness when listening to others and letting them speak what they need to but also add my own input when appropriate and not feel self-conscious about it.”

The use of the SWOT as part of the first elements of the assignment provided students an initial reflection on their authentic self and globally how this aligned with SLO's and general mission statements. Moreover, I also wanted to know how each graduate views his or herself directly with the institutional mission of becoming a servant leader. In addition to this being a direct outcome of the mission, the concept parallels Miller's discussions on individuals as incarnate carriers of meaning (Miller, 2013). He views this as the whole of a person, their character, words, deeds, and way of life that teaches something. It is the human self-transcendence that results in a desire to know but to also to embody and create truth, goodness, and love (Garofalo, 2016). In the final segment of the assignment, students were asked to consider this topic, which was designed similar to the first (in-class discussion and select readings to provide a basis for the essay assignment). The prompt questions were:

Servant leadership:

- a. Are you a servant leader according to 2006 article by Gersh? Or based on definitions from other resources?

- b. Are you simply a leader? Of whom?
- c. What does this concept mean to the profession? To Seton Hall, who holds this as part of its mission?
- d. We can lead from within as well as outward. How can you continue to develop as a leader?

The students' responses again showed excellent depth. They fully recognized themselves as leaders on some scale but also recognized that they have biases that can confound their abilities to act. The ethos of 'service' clearly underlies each response. The students indicate how attending this University alone fostered their beliefs and leadership skills. The professional PT courses furthered their abilities to emerge as leaders contributing to society either on a one-to-one basis or for larger community benefit.

"Servant leadership is essential as part of physical therapy because by showing our patients how much we care for them, patients should naturally strive to being the best that functionally they can be. Seeing the appreciation that patients have for that is also very rewarding. It's also in my heart personally to use my career as a PT to serve the marginalized and underserved. I think we have a great skill set and gift to help many others in need, so that they in turn can help others and society to the best of their abilities. I'm thankful to be part of a program, and really a school, that holds servant leadership as its mission."

"I think that I am more of a leader than a servant leader. I think that so far I have excelled in areas that have been more selfish or materialist. Being the captain of a sports team or applying for a graduate assistant position for monetary purposes are some examples of what has motivated me in the past. Servant leadership is an idea that puts other people first. My experience last year with this process, where I was one of the group leaders for the relationship between our class and the school that we were serving was a good one. I hope to continue these experiences in the future."

"In the article written by Meryl Roth Gersh, 'servant leadership is based upon the elements of trust, caring, empathy, and focus on others.' I embody these characteristics for the most part, but occasionally I find myself acting selfishly when I am constrained by time. Sometimes I choose my own well-being over others in my personal life. While this is a trait I am constantly working on improving in my personal life, I find that in the clinical setting I focus on patients' wellbeing than my own. My goal is to ensure that my patients are able to become independent and healthy so that they can live a good quality of life. Focusing on their goals and helping them to achieve these goals is what characterizes me as a servant leader in the field of physical therapy."

"Being a healthcare provider automatically makes someone a leader since patients rely and trust them with their health. Physical therapy is simply a leadership role, whether the actual person is a leader outside of clinic or not. When a physical therapist steps foot into the clinic, they become responsible for the wellbeing of other people in that clinic."

"I consider myself a servant leader, however, when I serve others without expecting anything in return. This aspect of servant leadership is what I always thought was the biggest difference between someone who just leads and someone who serves through the role of leadership. Setting aside extra time to help or educate patients beyond the patient's allotted time, or spending the time to listen to a patient who has concerns is what I consider a servant leader quality. Going beyond the clinic and into the community is what I would consider a physical

therapist servant leader. This is someone who utilizes his or her knowledge and the opportunities that have been provided to them in benefit those that are less fortunate. Seton Hall is a university that advocates servant leadership, and I think that this quality is demonstrated throughout our current graduating class. This is encouraging to me, as I anticipate that new graduates will promote the profession through not only leadership roles, but through community outreach.”

“When given the question of if I am a servant leader I will like to believe that I am. As a physical therapist the patients always come first. It is our job to be an advocate for our patient and provide compassionate and high quality care. We serve the patient first and lead second, in respect to the principle of autonomous care. At times we must be just a leader also in respect to paternalism. We are the educated and licensed practitioner and must lead our patients to improved quality of life. We can lead other physical therapists, physical therapist assistants, PT aides, or an inter-professional teams of OTs, speech pathologist or audiologist, it all depends on the situation. Seton Hall has prepared me to be a leader in any situation and for that I want to end this reflection by saying Thank You!”

“I believe servant leadership is a dynamic process, one upon which we are always improving, evolving into, and striving towards, for the enhancement of others and ourselves. My experience at Seton Hall University, the DPT, and my clinical affiliations were pivotal and transformational experiences that sparked a broader understanding of the role, responsibility, and importance of serving my patients, community, and society at large. On a daily basis we will be servant leaders to patients. Outside of clinic, it will be up to us as independent practitioners to promote a better society and improved healthcare for individuals on a grander scale.”

“Servant leadership is the quality of a mature practitioner. It entails developing the internal drive to serve the community. To be an autonomous practitioner also means independently seeking out leadership opportunities. Servant leadership does not have to be big acts of service. It may mean something as simple as advocating for a patient of lower socioeconomic status. As a servant leader, I will look for opportunities to assist patients and the community on an everyday basis. This will include large and small acts and developing an attitude of humility.”

“I had recent experience on a personal level as well. A few days after completing Internship IV my grandmother had a significant CVA resulting in hemiparesis to her left side. My education at SHU and experience working with patients with CVA allowed me to educate my family members on the effects of the CVA and what we could expect going forward. My parents were especially grateful that I was able to provide them the information in ways that they could easily understand.”

“By continuing to demonstrate the characteristics of trust, empathy, caring and focusing on others, I can continue to grow as a servant-leader in the profession of physical therapy. The Seton Hall University Doctor of Physical Therapy program holds this as part of its mission, stating that graduates are prepared to assume leadership roles within the profession upon completion of the program. I think this is an excellent concept to ensure that all graduates from the program are ready to be servant-leaders, not only in the profession of physical therapy and the healthcare environment, but in all other aspects of their life as well.”

“The concept of leadership and the importance of being a leader has been instilled in me throughout the program at Seton Hall and in the Seton Hall community as a whole. Servant leadership is a hallmark of our school and our profession, which is why I think Seton Hall, has been such a great home for this doctor of physical therapy program.”

The above confirms that the program faculty and the institution are providing experiences that shape our students positively. Newman would confirm that our graduates demonstrate the necessary ‘enlargement of the mind’ as they ready for employment. Lonergan would appreciate how students can effectively describe their authentic selves, yet think beyond personal needs to those of societies at this critical junction. They confirm their acceptance of all roles of the healthcare professional and as a servant leader.

I had initially thought to conclude this ATM given the outcomes I received. During the most recent two years, the Praxis group began greater immersion into the Functional Specialities. I was most interested in the fourth and last level of the ‘way of achievement’ upward toward deciding/action. The dialectic frame of the Functional Specialities deals with conflicts (Garofalo, 2016). Many of the quotes above show how students are evaluating the tensions and conflicts as they engage in new horizons as solo persons seeking their individual realities. The new horizons are very unclear, and show possible choices that students contemplate within the existing horizontal horizon (accepting a job at a center where a clinical internship was completed) or a leap vertically to a new horizon (new practice setting or place of residence). Reflective responses are truly personal and show the changes in views; conversions made as they retrieved the past and make judgments on good and not so good. The comments also indicate that the intellectual conversions were not sudden, but acquired over time in a slow process of maturation (Garofalo, 2016). The portents that these desirable learned behaviors will be continued.

In moving the ATM forward again, I adopted the notion of Lonergan’s 4 B’s to capture development (Lonergan, 2014). The course now incorporates learning activities that emphasized how students could ‘be attentive’, ‘be intelligent’, ‘be reasonable’, and ‘be responsible’. Miller (2013) uses similar terms to describe this process of conscious intentionality by matching the four levels with the respective main operation: experience (empirical), understanding (intelligent), judgment (rational) and decision (responsible). For these two student cohorts, I used the same reflective strategies to recall, group, and think about critical experiences and information. There was some shift in my in-class questions to assist students with a structure to consider each level as a means to form judgments and reach the truth. It is the last ‘B’ (be responsible) that I felt I wanted to capture more fully in my latest ATM assignment. I sought to add to something that would conceptually probe at level of decisions based on values, where we take action in accordance with an informed consciousness. Thus, I added the requirement of writing a personal mission statement. This task will help me to evaluate how graduating DPT students see themselves as authentic individuals who can act as the incarnate carriers of meaning. Furthermore, this would show how the graduates would express their view of the new horizon as they transition to their new careers. My hope would be that the students could begin to hinge from the ‘way of achievement’ into the next four Functional Specialities framework (‘way of heritage’).

By adding a new bullet to the “career planning” portion of the assignment, I sought to see how the students could build their mission statements. Specifically, students responded to this: *Create your 5-year vision and a professional mission statement. Discuss how these represent you and how will*

prepare for growth. The submissions aligned well with all the other mission statements. Moreover, it showed how students were moving from thinking of themselves solely as students and into their professional roles where professionalism and values-based cares is delivered in a patient-centered and community benefit model.

“I have developed a mission statement to be achieved in 2021: “To be the best I can be by continuously being a servant leader, autonomous practitioner, active listener, and life-long learner. Following evidenced based practice to guide my treatment sessions and providing academic learning to students as a clinical instructor or school adjunct, preferably at my alma mater, Seton Hall University.”

“My vision for 2021 is to be a therapist who strives to create opportunities to optimize health, wellness, and independence by providing compassionate care through education, innovation and collaboration. I will use my strengths to help me achieve these goals and not allow my threats to prevent me from achieving my goals.”

“My vision is that by 2021, I will be a doctorate of physical therapy with a board-certified specialty. I will serve patients with integrity, compassion, and professionalism with individualistic evidence-based practice. I will continue to expand my knowledge base to continue to provide up to date patient care. I will continuously look for opportunities to learn and to grow my profession as well as helping the community. I would like to work on bringing more awareness to the community doing things such as my in-service project that I did at the public library during one of my affiliations.”

“My professional mission is to become the best physical therapist I possibly can be in order to allow my patients to function to the best of their abilities in their daily lives. My mission is to be dedicated to excellence, learning, compassion, service to the community, and advocating for my patients, from examination through discharge planning and everywhere in between. My mission is to be an ethical, autonomous practitioner while at the same time working as a larger interdisciplinary team to achieve the best patient outcomes. My Vision 2022 and mission both align with the values of the profession as a whole as well as with Seton Hall’s mission. In terms of the profession, I strive to be autonomous, ethical, provide excellent patient care, and advocate for my patients which are all goals of the profession. I also strive to be a service leader and provide physical therapy services to underserved populations which align with Seton Hall’s mission of fostering servant leaders. I am already a member of the APTA and plan to belong to the organization throughout my career in order to stay current with topics and current events related to physical therapy so that I can promote and advocate for the profession.”

“My mission statement would be “Serving your health needs with the highest quality of care through physical therapy.” I believe this mission statement represents me as Seton Hall alumni because it shows that I am looking to serve the community, looking to make a difference with high quality physical therapy. It also shows I want to be the best at what I can be and make a difference in the community. These also align with the profession, as the profession wants us to provide high quality care.”

“My professional mission statement would be “Decrease pain, Increase Function” because that is my ultimate goal as a physical therapist. As a Seton Hall alumnus, I am expected to be a leader

and keep moving forward in the field of physical therapy. With that being said, I must continue to learn and expand my knowledge and skillset throughout my career. I will also serve as a mentor for future students and continue to promote the profession as autonomous healthcare practitioners.”

“In creating my own personal mission statement I feel it would go like this: “I will be dedicated to providing the utmost professional and beneficial care to my patients/clients that will improve their health status in a complete manner. I will advocate for each of their personal needs while also personally striving to do everything in my power to address their physical needs. I will strive to be a role model and leader in the community, while also helping all of those that are in need of my professional and personal services.” This personal mission statement lines up with the servant leadership mentality of Seton Hall University, as well as the professional development of the APTA. Being a graduate of SHU and a member of a professional organization like the APTA, I feel I am lined up for success and have been given an opportunity to improve my future career moving forward.”

“Therefore, my personal career mission is to motivate others to reach their highest potential. After typing my own personal goals in addition to my vision and mission statement, I realized that I have referred to Maslow’s Hierarchy of Needs and the five-level pyramid. I also realized that I am in the process of transitioning towards the top of this model (self-actualization) while also identifying certain barriers that will interfere with my ability to reach short-term goals set for myself. Therefore, as a soon to be Seton Hall Alumni, I believe my goals correlate well with the DPT Program Goals of demonstrating leadership within the healthcare system and community as well as an educator for future DPT students.”

As the course’s primary instructor, I have been amazed at how the very high functioning DPT students can lack confidence and exhibit trepidation as they prepare to graduate. The graduate student faces these true conflicts after an extended educational process (4 years beyond the usual 4-year undergraduate post-secondary model). Today’s millennial students struggle with conflict in general. Thus, incorporating discussion about the elements of the dialectic level, where conflicts and unknown can cloud new horizons, I believe that we as faculty can make as much of a difference in post-graduate alumni success as we do when students start the professional program.

This Praxis program has helped me provide much-needed learning experiences for our program graduates. The ATM project has provided me with rich data to support our student learning outcomes and ensure our external accreditor with robust evidence that we truly are meeting our mission. As Perry stated when describing nursing students, the self-transcendence and authenticity is important with students graduating into healthcare careers (Perry, 2004). Submitted work shows how each student can be an authentic practitioner, leader and future ambassador for SHU! Moreover, the essays are honest, personal accounts indicating conversion on many levels. While the intent has been mostly intellectual, conversion also occurs in the moral and religious frames. As one student wrote:

“It is also important to have core values to make you who you are as a clinician - to make you unique and set you apart from others. I believe my strongest core value is compassion. According to the APTA’s Professionalism in Physical Therapy: Core Values, compassion is defined as, “the desire to identify with or sense something of another’s experience; a precursor of caring...Caring is the concern, empathy, and consideration for the needs and values of others. “I have a very

caring personality where I ALWAYS put others before me and tend to be very empathetic. My patients really matter to me. They are not just another patient to me. I advocate for each one of them and understand hardships they endure just by listening to them. They are an individual with the same rights of you and I that need to be treated just like anyone else in this world. Everyone is made in God's image and I believe by caring for others, I am protecting God's image and I am an extension of what God planned for my to do in life.

Conclusions

This ATM activity helped to articulate what we mean by entry-level practitioners who demonstrate core values and use experience and evidence to make decisions consistent with DPT program and SHU missions. The application of Lonergan's approach of using reflection as a key to understanding fit well. The outputs from the students show to what extent they believe themselves to be servant leaders, engage in patient care that is values-based as well as evidence-based, and are willing to become lifelong learners and contributors to society. Through reflection assignments and the completion of standardized tools, I can measure their attitudes and beliefs consistent with their human and intellectual development. This is beyond what this traditionally measured through assessments of knowledge and skills. Using guided questions that helped them to reflect gave the students a context in which to answer. This, I believe, was an important piece to capturing the students' perspectives.

Students honestly know who they are, how they contribute to the profession as well as society. They expressed honestly about struggles, questions, redemptive actions, and the like. They also spoke about the future outside the walls of SHU and how Seton Hall as a university shaped them as professionals, community members, and individuals. It was clear that conversion on many levels occurred. Moreover, they show a proficiency for using the GEM model. Based upon results of this assignment, I can verify that our DPT students have the foundational knowledge of self and the requisite skill sets consistent with our SHU, SHMS, and DPT missions. Conclusively the DPT graduates truly have the mind, heart, and spirit of the University as they seek new horizons.

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GENEVIEVE ZIPP

**Applying Lonergan’s Functional Specialities to Create a Culture of Inquiry
within the SHMS School-wide Core Signature IPE Experiences**

Abstract

In today’s healthcare arena, healthcare professionals must practice team-based, evidenced-based, patient-centered care. The Academy, which prepares healthcare professionals must provide students a strong foundation to effectively practice patient-centered interprofessional care. To meet this need, academicians from across all health professions are employing diverse teaching and learning strategies to infuse interprofessional learning experiences into curriculums in order to support and develop evidenced-based patient-centered Interprofessional Practice (IPP). While healthcare professionals may possess differing theoretical frames of reference and content knowledge, they must work together on interdisciplinary teams with patients to deliver quality care (WHO, 2010). Members of the team must value each other’s skills and knowledge, develop consistent thinking across disciplines and strive for collective decision-making (WHO, 2010).

This paper will explore how the Center for Interprofessional Education in the Health Sciences has applied Lonergan’s Generalized Empirical Method and the functional specialities as the guiding framework for the IPE experiences at Seton Hall University.

Introduction

Today’s healthcare environment requires healthcare professionals to view patients as “individuals” and thus provide patient-centered care (World Health Organization, 2010). While, the Institute of Medicine (IOM) has defined patient-centered care as: “Providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions” (Institute of Medicine, 2013) confusion still exists amongst many healthcare providers as to how one can effectively carryout this task. Researchers at Harvard Medical School, Picker Institute and The Commonwealth Fund identified eight principles conducive to positive patient-centered care. The Picker’s Eight Principles of Patient-Centered Care (Gerteis, *et. al.* 1993), are:

1. Employing respect for patients’ values. Preferences and expressed needs.
2. Executing coordinated integrated care for the patient.
3. Providing appropriate information and education to the patient and their family.
4. Ensuring the patient’s physical comfort.
5. The provision of emotional support for the alleviation of fear and anxiety.
6. Promoting the involvement of family and friends.
7. The establishment of continuity of care and transition plans. and
8. Ensure health care access to all.

Central to ensuring that the eight principles of patient-centered care are achievable, the healthcare community has embraced the concept of interprofessional collaborative team-based practice. For many in healthcare the concept of interprofessional collaborative team-based practice is not new but has been reinvigorated and more clearly defined by the comprehensive health care reform law enacted in March 2010, commonly known as “The Affordable Care Act”.

Interprofessional team-based healthcare practice requires that healthcare professionals from diverse areas commit to working together using new theoretical frameworks, innovative tools, technologies and resources to address the individual patient’s goals and needs. For historically silo educated and practicing healthcare professionals, who have predominately functioned under what might be called an individual-expert model to now collaboratively critically think and problem solve for the good of the patient and the care team, challenges often emerge that negatively impact the execution of team-based care. The integrated clinical networks, patient-centered medical homes and transitional care models of today seek to address the challenges that might exist and support collaborative critical thinking and problem solving for the provision of more efficient healthcare services and thus better patient outcomes and satisfaction. While research to support this claim is emerging in the literature a fundamental question for many in healthcare has been, “where do healthcare professionals *initially* learn to function as evidenced-based, team-based, patient-centered healthcare providers”? The Academy, where students learn their “craft” is a logical place to start this learning process.

Since the Institute of Medicines (IOM) report in the 1970’s, the call for an interprofessional approach to health professions education has taken flight across the many healthcare professions. Yet a specific method for implementation has not yet been identified (Institute of Medicine, 1972). Regardless of the approach used, promoting evidenced-based, team-based, patient-centered care is the hallmark for all “interprofessional education (IPE)” experiences. IPE, once thought of as a phrase that might minimize or negatively influence a professions identity, is now a welcomed phrase used to describe the interdependency that exists between healthcare professionals who seek to address patient care issues. Recognizing the interdependency that exists among healthcare professionals working to provide evidenced-based, team-based, patient-centered care, the Academy is driven to prepare students to practice their craft as part of an effective healthcare team.

Recognizing that healthcare professional students attend the Academy to acquire their subject specialization, the content knowledge which defines their discipline and provides them the skill set to perform their “craft,” IPE experiences are often “added onto” existing curricula. Traditionally in the Academy, once content knowledge is obtained students seek to dive deeper into the material and identify what has been termed their “field specializations.” For example, the global education for physical therapy students requires that they are proficient in addressing motor control and coordination issues that would occur across the life span, but while in the Academy, they identify a field of primary interest diving deeper into, for example, geriatrics population, specifically patients suffering a stroke. This deeper dive into specific content material further develops one’s field specialization. Often with further specialization once practicing clinically, one becomes an expert in an area of practice. Specialization in practice can limit one’s abilities as a generalist. Whether or not one advances their skills into a narrowly defined “field specialization,” evidenced-based, team-based, patient-centered care must

be practiced. To ensure effective execution of this practice model, healthcare professionals must collaborate with other healthcare professionals to address complex patient healthcare problems as a team.

So how has the Academy sought to ensure that healthcare professional students learn the skills needed to collaborate with other healthcare professional to address complex patient healthcare problems as a team while learning their craft in the educational setting? In 2011, the Interprofessional Educational Collaborative (IPEC) via the Interprofessional Education Collaborative Expert Panel identified the IPEC Competencies for entry-level healthcare practice (Interprofessional Education Collaborative Expert Panel, 2011). The impetus for establishing a common core set of competencies that are relevant across professions was sought to:

1. Create a coordinated effort across the health professions to embed essential content in all health professions education curricula.
2. Guide professional and institutional curricular development of learning approaches and assessment strategies to achieve productive outcomes.
3. Provide the foundation for a learning continuum in interprofessional competency development across the professions and the lifelong learning.
4. Prompt dialogue to evaluate the “fit” between educationally identified core competencies for interprofessional collaborative practice and practice needs/ demands.
5. Find opportunities to integrate essential interprofessional education content consistent with current accreditation expectations for each health professions education program, and
6. Offer information to educational programs accreditors, professional licensing and credentialing bodies’ specific to interprofessional collaborative practice.

The IPEC Competencies encompass behavioral objectives across four domains 1) Value and Ethics, 2) Roles and Responsibilities, 3) Interprofessional Communication, 4) Teams and Teamwork. These domains link to the Institute of Medicine’s core competencies for all health professionals (IOM, 2013). Each domain contains eight to eleven specific competencies to be used by healthcare professional education programs when creating IPE learning experiences.

Developing and implementing interprofessional education (IPE) into existing ‘silo-based’ healthcare professional curricula can be challenging for academic institutions and their academic and clinical faculty. Thus, creating an appreciation and awareness of the importance of IPE experiences, for both academic and clinical faculty, as they relate to the development of patient-centered interprofessional practice (IPP) in today’s health care arena is paramount. While the Academy is ideally positioned to assist healthcare professionals meet the challenges of IPP, faculty preparation is critical to effectively and efficiently create meaningful and engaging IPE experiences that transcend the boundaries of the traditional ‘silo-based’ curricula often found in health science professional schools. The School of Health and Medical Sciences’ Center for Interprofessional Education in the Health Sciences (CIPEHS) recognized the need to engage and support academic and clinical faculty in the development of meaningful interprofessional education (IPE) experiences as we began our journey towards IPE some 7 years ago.

The Center, through its cross discipline-based voluntarily supported IPE Faculty Advisory Board, developed and implemented the Core Signature IPE Experiences which provides all SHMS healthcare

students with foundational learning experiences that explore the tenets of IPE. The Core Signature IPE Experiences engage students in sequential IPE experiences that are framed by the integration of both Lonergan's perspectives on Functional Specialities and the Generalized Empirical Method (Kane, 2014) and the SOLO taxonomy model of learning to ensure that our students practice acquiring the skills needed to effectively carryout patient-centered interprofessional health care.

Not surprisingly, when carrying out patient-centered interprofessional healthcare, conflicts often arise on healthcare teams because of varying perspectives amongst diverse healthcare professionals. Healthcare professionals must, however, learn to understand the relevance of another specialist's work and the interdependency that exists amongst healthcare professionals. Interprofessional communication is key to addressing these conflicts by confronting problems and difficulties that arise or have arisen from respective specialization perspectives. While the IOM Report and the IPEC Competencies speak to the importance of communication and teamwork amongst interprofessionals, they do not offer a common frame of reference from which to build strong IPE experiences that address and support communication development. In this paper, I seek to discuss how the work of philosopher Bernard Lonergan (1904-1984) on the process of "inquiry" and dynamic normative cognitional pattern provides a unifying theoretical framework for team-based interprofessional education underlying the Core Signature IPE Experiences at Seton Hall University.

Lonergan (1971, p.25.) in attempt to understand human inquiry asked three fundamental questions; 1. What am I doing when I am knowing? 2. Why is doing that knowing? And 3. What do I know when I do it? Insightfully exploring these questions, he identified a dynamic normative cognitional process common to all inquiry, Generalized Empirical Method. While, for some the inquiry process is explicit, for others it is implicit but regardless, the process is present. As healthcare professionals, we go through this process individually bringing our lifetime of unique and specialized inquiry to answer the questions. As part of a patient-centered healthcare team, we bring our individual inquiries to the team and must collectively reconcile the differences amongst healthcare team members. Independently or collectively working on a team to develop evidenced-based, team-based, patient-centered care plans, a shared tension associated with the inquiry process can emerge, which further drives the effort to understand, and thereby insights develop. While each insight offers understanding, the understanding may not be accurate. Finally, insights must be evaluated or judged against the data and determined to be correct before individually or as a team, we can "know." It is in our knowing that new questions emerge which further ignites this dynamic inquiry process, individually and as a team.

Unproductive divisions amongst healthcare professionals can limit the collective dynamic inquiry process and hamper patient-centered care practices. Lonergan (1971) discusses the inherent problems associated with Subject specialization (founded on traditional disciplinary boundaries), and Field specializations (division based upon data not content), and offers a third specialization, Functional. Acknowledging the presence of these three types of specialization has constituted a solid philosophical ground for working with many philosophical perspectives throughout the interprofessional education experiences (IPE) at Seton Hall University. However, the notions surrounding Functional specialization have been the key guiding framework for the IPE experiences developed at SHU.

Functional specialization identifies successive, distinct stages associated with the “process” of knowledge acquisition or “coming to know.” Lonergan suggests that in Functional specialization, a singular process of inquiry has multiple stages and each stage is itself a specialty. The stages identified correspond to four distinct levels of consciousness, “experiencing, understanding, judgement, and decision (Lonergan, 1971). It is these levels of consciousness which tie a thread amongst the health professionals as they seek to learn how to function as evidenced-based, team-based, patient-centered healthcare providers. The first step in the process of coming to know is attending to the data- experiencing. The second step is interpreting the data- understanding. The third step is examining the data based upon the history, what was occurring in time - judging enlightened by history. The fourth step seeks to obtain and understand diverse viewpoints and conflicts- dialectic process in search of decisions based upon the hypothesis which best fits the data.

Reaching a decision through the dialectic process is influenced by what Lonergan called our “horizons.” Horizons are our *a priori* assumptions, beliefs and understandings that we bring to the dialectic process. As different healthcare professionals work to promote patient-centered care practices team members horizons maybe opposing and negatively affect the process. When oppositional horizons exist, we as part of the team in this case are forced to search for what is true and good. Not surprising, what guides us through this four-stage process is our individual “authenticity.” Lonergan (1971) defines authenticity as our sustained effort to be “attentive, intelligent, reasonable and responsible,” in search of insights. Providing healthcare professional student’s experiences that engage them as part of an interprofessional team through the process of knowing we believe is imperative to promote evidenced-based, team-based, patient-centered care professionals. Thus, exploring the application of authenticity is key to fostering meaningful interprofessional educational experiences for SHU health professional’s students.

In this next section, an illustration of how the Center for IPE in the Health Sciences at SHU has applied implicitly Lonergan’s Functional Specialities to create a culture of inquiry in our school-wide Core Signature IPE Experiences. The Core Signature IPE Experiences at SHU include five separate experiences placed along the students learning continuum (Table 1). The Core were designed to create experiential learning opportunities that foster individual student’s development of quantitative and qualitative skills necessary for effective collaboration among healthcare providers to ensure the highest quality of patient-centered care. The Core’s objectives for each student across all professional programs are that each student will:

1. Demonstrate an awareness and appreciation of interprofessional collaboration and teamwork supporting patient centered interprofessional healthcare.
2. Demonstrate an awareness and appreciation of communication skills supporting patient centered interprofessional healthcare.
3. Demonstrate an awareness and appreciation of values and ethics supporting interprofessional patient centered healthcare, and
4. Demonstrate an awareness and appreciation of differing roles and responsibilities of health care professionals supporting patient centered interprofessional healthcare.

Each of the 5 Core experiences uses Lonergan’s philosophy as a theoretical frame (Table 2) when creating learning experiences. In this paper, I will discuss in detail the Core Signature Experience 5

experiential learning environment, “Exploring Interprofessional Teamwork and Collaboration through a Community Partnership” which is the final IPE experience offered.

Exploring Interprofessional Teamwork and Collaboration through a Community Partnership

Core 5 is a 3-hour interprofessional learning session arranged into three phases. Pre-clinical Health Science Students (approximately 225 students from educational programs in athletic training, occupational therapy, physician assistant, physical therapy and speech language pathology) prior to their full time clinical experiences (year 2- spring) come together in a large banquet style hall. Students are pre- assigned to IPE tables of no more than 10 students from across professional backgrounds for the event. To begin the event, IPE student table groups engage in an icebreaker activity during a brief dinner. One of the faculty advisory board members for the Center acts as the event master of ceremonies and welcomes the students to the event, and shares with them the event learning objectives.

In Phase 1, an expert clinical partner from a major rehabilitation center in NJ unfolds a video case of a patient who has suffered a brain injury and explicitly presents the therapeutic interventions used by each team member working with the patient during their rehabilitation stay.

In Phase 2, IPE student table groups are assigned to work in their teams on a learning exercise, which requires:

1. IPE student teams to engage in insightful, collaborative dialogue to address problem-based questions available at their table specific to the cases.
2. IPE student teams collaboratively develop a POC (plan of care) mind map. The mind map focuses on a central overarching team based goal and profession based objectives that each team member perceives are important to address from their professional discipline.
3. Upon completing these exercises, students self-reflect upon the role they played in the group and then share their perceptions with the group seeking affirmation or conflict resolution via team discussion.

In Phase 3, specialists from the healthcare team (AT, OT, PA, PT, SLP, and Nursing) who worked with the patient during her rehabilitation stay individually provide their perspective on the case and POC. IPE student table groups then share their Goal and Objectives mind maps with the panel of experts to determine how realistic and relevant the goals and objectives set by the IPE student teams were.

Students also receive at the start of the event the following narrative overview of the patient’s status for further clarification.

Prior to admission:

The patient was a healthy 26-year-old female who was a graduate student studying criminal law and living in a NYC apartment with her sister. It was reported that she participated in social alcohol use and occasional cigarette smoking. She was independent in all mobility and activities of daily living. Her past medical history is significant for ADHD, thalassemia minor, depression and panic and anxiety disorder.

History of Present Illness:

On December 9, 2012, the patient had complaints of sudden generalized neck pain one hour after awakening which lead to unresponsiveness. Upon admission to the hospital, she was found to have a left intraparenchymal and intraventricular hemorrhage with emergent EVD placement and a posterior fossa atrial venous malformation (AVM) and left cerebellar hematoma. The patient underwent embolization, AVM evacuation, and craniotomy during hospitalization. The patient's hospital course was complicated by pancreatitis, ventilation dependent respiratory failure status post tracheostomy, hydrocephalus status post VP shunt placement and PEG tube placement. At admission to Kessler Institute for Rehabilitation (KIR), she was considered to be in a minimally conscious state, however emerged from this state shortly after admission. She was also ventilator dependent for a short period before she was weaned.

Physical Therapy Intervention:

From a physical therapy standpoint, the patient presented with deficits in motor control, strength, balance, and endurance. She presented with antigravity strength in her lower extremities, however she was limited by apraxia and impairments in isolating and coordinating movement. She had difficulty producing smooth movement patterns, as well as initiating, grading and terminating movement. The presence of tone in her hamstrings and gastrocnemius also contributed to challenges with fractionated movement. The physiatrist in charge of the patient's care at KIR administered Botox injections to the hamstring and gastrocnemius muscle groups to reduce her spasticity. The aforementioned deficits resulted in the patient requiring total assistance for completing functional mobility skills such as transfers and ambulation.

Physical therapy sessions included task-specific training in activities such as lateral transfers, sit to stand transfers, mat mobility and gait training. The patient participated in sit balance training to build trunk control/strength and body awareness in order to improve her ability to complete transfers and activities of daily living. Transitions such as moving supine to and from prone and quadruped were utilized to address flexibility, segmental dissociation, building trunk control, lower extremity strength, and coordination and body awareness. The standing frame was utilized to address postural retraining and standing tolerance. The patient is a prime candidate to participate in locomotor training (body weight supported treadmill training) which would encompass several key principles of motor learning including task specificity, repetition, and intensity.

At the time of her discharge from KIR, the patient was able to complete mat mobility skills with moderate assistance. She required maximal assistance for lateral transfers and sit to stand transfers in the parallel bars, and was able to maintain static standing in the parallel bars for three minutes with minimal to moderate assistance. Therapeutic gait training was incorporated into therapy sessions, however required total assistance and was not functional at that point in time.

Occupational Therapy Intervention:

From admission until the time the patient left the hospital, her orientation status was impaired, despite this specifically being addressed in each session. OT intervention initially targeted sustained attention to task, following one-step commands, addressing routine problem solving and comprehension.

Vision was immediately addressed because the patient was observed to be keeping one eye closed for many hours throughout the day. This action could have resulted in additional problems therefore; the immediate intervention introduced was alternating eye patching. The final solution included the patient seeing a neuro-optometrist, and the result was that prism lenses were placed onto her glass lenses. Treatment activities during therapy sessions included scanning and convergence exercises. At discharge, the patient had noticeable improvements in visual attention and fixation as well as tracking in a horizontal plane.

Upper extremity function was another area of focus in OT sessions since the patient's admission. She continued to have proximal weakness in both upper extremities throughout her inpatient stay, however did gain active distal movement. She was able to feed and groom herself with minimal to moderate assistance using a Balance Forearm Orthosis, which her mother purchased for use at home. This device served multiple purposes, as the patient used it to work on computer skills and in conjunction with pet and art therapy (which were some areas of interest to her). In the areas of self-care, the patient required maximal to total assistance for upper and lower body dressing as well as total assistance for all functional transfers.

Speech Therapy Intervention:

Upon admission, the patient presented with profound cognitive-linguistic deficits as well as profound cognitive deficits. Language skills, both expressive and receptive, and cognitive skills were nonexistent. During the course of the patient's stay, these deficits began to remediate and eventually receptive language and expressive language were considered functional at a basic level, with moderate assistance required. The patient's expressive language with regard to speech was severely dysarthric and apraxic, and could be characterized by having poor respiratory support, poor vocal stamina, and gross misarticulation secondary to her apraxia and articulator weakness. As such, therapy for these deficits targeted functional oral motor exercises for the articulators, education and exercises for increased respiratory support, i.e. diaphragmatic breathing, and development of a functional vocabulary for expression of basic needs, i.e. "yes" "no" "help" etc. The patient was also taught compensatory strategies to use during speaking to improve clarity, including over-articulation (exaggeration), final consonant emphasis, and slowing the rate of speech. To augment communication, the patient was educated for use of an alphabet board as well as simple iconography, which she selected by pointing. To this end, we were moderately successful with this method but, secondary to the patient's visual as well as upper extremity motoric deficits, we could not always rely on this method.

In terms of swallowing, the patient initially presented with profound dysphagia, and was NPO for all solids and liquids during the initial few weeks of her admission. Eventually, a baseline videofluoroscopic swallow study (VFSS) was performed which showed severe oral dysphagia and moderate pharyngeal dysphagia. As such, initial dysphagia therapy included gross oral stimulation with toothettes as well as thermal-tactile stimulation with iced swabs to the posterior oral cavity to elicit swallow responses. Once swallow responses were being triggered with regularity, ice chip trials were initiated. Secondary to oral apraxia and weakness, the patient did require assistance for lip closure and mastication but eventually swallows were triggered. Therapy continued and a follow-up VFSS several weeks later showed improving function. At that time, therapeutic trials were initiated with puree solids and nectar-thick liquids, in

small amounts (3-5cc). The solids and liquids used for these trials were foods that the patient had always enjoyed. Temperature and texture were modified throughout to obtain maximal results.

Cognition and Behavior:

The patient's cognitive and behavioral impairments influenced her participation and progress across all the therapy disciplines. The deficits in cognition improved during her hospital stay, however continued to influence her functional capabilities. She continued to have challenges with following multi-step commands, as well as impaired attention, information processing and problem solving. The patient had pre-existing struggles with depression and anxiety, and following her brain injury, this manifested in behavioral limitations including frustration, depression, and lack of participation. The patient required frequent re-orientation, redirection, step-by-step instructions, and increased time to process information. She benefitted from having her therapy sessions conducted in a quieter environment with limited distractions. When she demonstrated frustration with a particular activity, the therapist sought to change the task or modify the task to make it more successful before increasing the grade of difficulty. Canine assisted therapy and art therapy were two special programs offered at KIR that the patient participated in for motivational purposes. These sessions were tailored to specifically address the patient's goals (i.e. patient would work on short sit balance while engaging in play with the canine). The presence of the patient's mother during sessions also contributed to motivating the patient to participate in activities.

Family training:

The involvement of the patient's mother in therapy sessions was a key factor with regard to motivating to participate in therapy sessions as well as a necessary component of discharge planning. The mother was educated in the areas of cognition and behavior, and specifics regarding how to redirect and motivate the patient to participate in activities. The patient's mother was engaged in hands on training throughout the hospital stay in preparation to be able to care for her daughter at time of discharge. In physical therapy, she participated in assisting her daughter with transfers, bed mobility, positioning, weight shifting for pressure relief in her bed and wheelchair. She was educated on how to assist her daughter with performing her home exercise program. From an occupational therapy perspective, the patients' mother was trained in how to assist with ADLs, vision exercises, and with cognitive strategies as well as was given personal feedback regarding having good body mechanics (i.e. bringing the bed up higher when assisting her daughter with a dressing change). She was educated on providing the patient with extra time to problem solve and sequence activities, and the importance of having her glasses applied as soon as she gets up in the morning.

The patient's mother was intimately involved with speech therapy sessions and treatment. She was educated on all aspects of intervention and worked with her daughter during "off therapy" times on oral motor exercises, alphabet board use, reading, as well as oral care, oral stimulation, and swallowing therapy. The mother encouraged the patient to verbalize her comments or requests and was educated to cue the patient to use her compensatory strategies.

As a concluding part of the event, students are asked to complete an on-line survey, which further explores student's perceptions regarding the event, their participation on the team, and how they attempted to answer the three fundamental inquiry questions; 1.What am I doing when I am

knowing? 2. Why is doing that knowing?, and 3. What do I know when I do it? -- specific to the development of the POC.

This author, in collaboration with other faculty who participated in the development of Center IPE events at SHU, implicitly used Lonergan's philosophy, of Functional Specialities to develop rich IPE learning experiences. Health science educators can build upon this work, use the Functional Specialities framework described in Table 2, and explicitly develop their own interprofessional educational learning experiences.

Conclusion

As we continue to develop and refine IPE experiential learning opportunities at Seton Hall University the Centers faculty advisory board clearly supports that the commonality that exists across healthcare professionals is the need to use "inquiry" to promote, develop, and provide evidenced-based, team-based, patient-centered care. Creating a culture of inquiry within our IPE experiential learning opportunities in the Academy is paramount as learning experiences are but an "invitation to an intellectual journey." Bernard Lonergan who wrote on the Generalized Empirical Method (GEM) and self-appropriation suggests that one's ability to get to know themselves in the deepest sense via true understanding is a means for knowing and understanding all other disciplines. As part of the interprofessional community of learners, educators must promote students intellectual journey with personal effort, involvement, and self-reflection to insure that transformation of one's self emerges. Armed with deeper insight, students can begin to engage in interprofessional dialogue which seeks to disperse academic "silos" for the emergence of a common ground for effective patient-centered care.

Developing rich and meaningful interprofessional learning opportunities is not only paramount for students, but for healthcare professions and the patients they serve. Interprofessional practice environments need insightful inquisitive healthcare professionals to meet the needs of our diverse populations. The School of Health and Medical Sciences' Center for Interprofessional Education in the Health Sciences (CIPEHS) IPE model infuses the GEM as a common inquiry process that can support all healthcare student's intellectual insight development, self-appropriation and thereby create an IP culture of inquiry in the Academy that can prepare them for interprofessional evidenced-based, team-based, patient-centered practice.

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Table 1. *Core Signature IPE Experiences* presented in sequential curricular order throughout the health science programs curriculum and expected global outcomes.

Student Cohort	Core IPE Experience	Expected Global Outcome
New Health Science Students (year 1 -Fall)	IPE Core Signature Experience 1 “New Student IPE Orientation- Empathy in Healthcare”	<p>Create an awareness of the role of empathy in healthcare</p> <p>Create a foundational awareness of our Schools perspective on IPE</p> <p>Create an awareness of the impact IPE has on IPP</p> <p>Create an awareness of the impact of verbal and non-verbal communication</p>
Year one didactic level Health Science Students (year 1- Fall)	IPE Core Signature Experience 2 “Impact of Medical Errors and TeamSTEPPS”	<p>Increase awareness of the importance of addressing medical error management in healthcare by promoting effective collaboration and communicate on patient centered care teams</p> <p>Provide an opportunity for health professional students to collaboratively engage in discussion and reflection specific to the impact of team structure and practices when working on patient centered care teams</p>
Year one didactic level Health Science Students cohorts (year 1- Spring)	IPE Core Signature Experience 3 “Fostering an Inclusive Athletics Environment for a Young Adult with Autism”	<p>Foster communication and teamwork across the professional programs faculty and students</p> <p>Explore the clinician’s role as the patients advocate across professions</p>
Pre-clinical Health Science Students (prior to their full time clinical experiences) (year 2- Fall)	IPE Core Signature Experience 4 “Interprofessional Collaborative Practice: A Parental Perspective on the Therapeutic Process”	<p>Increase awareness of the importance of building partnerships in healthcare and promoting effective collaboration and communication on patient centered care teams</p> <p>Provide an opportunity for health professional students to collaboratively engage in discussion and reflection specific to the value of developing partnerships in the health care arena and the impact of verbal and nonverbal communication of team members to the patient’s outcome.</p>

<p>Pre-clinical Health Science Students (prior to their full time clinical experiences) (year 2- Spring)</p>	<p>IPE Core Signature Experience 5 <i>“Exploring Interprofessional Teamwork and Collaboration Through a Community Partnership ”</i></p>	<p>Promote and apply critical thinking skills across IP student groups for the evaluation of and development of an evidenced based patient plan of care</p> <p>Promote and express insightful dialogue amongst and across IP student groups, faculty and master clinicians</p> <p>Promote an awareness and appreciation of the existence of interdependence that exists amongst health care professionals when working under a patient centered care model</p> <p>Promote an awareness of the necessity for life-long learning for practicing clinicians in the health care arena</p>
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Table 2. Applying Functional Specialities to Seton Hall University IPE Experiences- Interprofessional Inquiry for patient-centered care practice.

Functional Specialities	Description of process undertaken in the execution of the IPE experiential learning activities
Research	Identifies what material is available on management of head injury client
Interpretation	Interprets what master clinicians say about management of head injury client
History	Identifies historical trends in the way different professions engage in management of head injury client
Dialectic	Explore the different viewpoints of professions management of head injury client
Foundations	Identifies conversions present in terms of knowledge and skills across professional disciplines specific to the management of head injury client
Doctrines	Identifies facts and judgements of values concerning the management of head injury client
Systematics	Organizes the truths and values into a coherent whole based within the horizon of foundations of practice across professional disciplines for interprofessional practice specific to the management of the head injury client
Communication	Formation of relations & communications across interdisciplinary professionals for IPP

The research and preparation of these papers reflects the authors' affiliation as GEM Fellows of the Praxis Program of the Advanced Seminar on Mission, the Center for Vocation and Servant Leadership and the Center for Catholic Studies, Bernard J. Lonergan Institute at Seton Hall University.



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