The Preface of this volume recounted the formidable organizational and epistemological challenges faced by any systematic inquiry that aspires to be genuinely multidisciplinary, and the methodology of “functional specialization” elaborated by Canadian philosopher and theologian Bernard Lonergan with a view to meeting those challenges. Though he developed it for multidisciplinary theological investigation in particular, Lonergan envisioned functional specialization as potentially fruitful for any multidisciplinary scholarly or scientific investigation and, indeed, for the complete set of such investigations. ¹

The present chapter provides more details about functional specialization and about the effort by the Canadian Catholic Bioethics Institute to utilize it for the multidisciplinary study of a specific set of bioethical issues.

The Features of Functional Specialization

The features of functional specialization may be illuminated by comparing it with two other approaches. *Field* specialization organizes an investigation in terms of the *data* with which it
begins. Thus, for example, biology can be divided into botany, the study of plants, and zoology, the study of animals. Historiography regularly is segmented according to the periods it regards, such as ancient, medieval, modern, and post-modern. Religious studies frequently is split into the study of eastern religions and the study of western religions. Subject specialization, on the other hand, organizes an investigation in terms of the results it reaches, with different arrangements sometimes emerging because of basic theoretical differences between investigators. Thus, for example, religious studies often is partitioned into psychology of religion, sociology of religion, philosophy of religion, and so forth. Historiography can subscribe to linear, cyclical, or chaotic models. Biology can be structured along Darwinian or creationist lines. 

By contrast with both of the foregoing, functional specialization organizes an investigation in terms of the concrete process that, at their best, investigators actually go through in moving from data to results. It envisages that process as comprising eight distinct but interrelated sets of specialized operations or “functional specialties.” While it is beyond the scope of this introduction to present the functional specialties in detail, three points are especially pertinent here.

First, functional specialization distinguishes sharply between what one encounters only in a particular investigative situation, the situation’s empirical components, and what one brings to that situation, the situation’s pre-empirical components. The empirical components stand to the pre-empirical components like the respective lower and upper blades of a scissors; and the forward movement of the investigation is like the closing of the scissors’ blades. The most basic elements of what one brings—the radically pre-empirical components of the situation—are one’s philosophical presuppositions, one’s operative (if not always explicit) answers to two basic
philosophical questions. (1) What acts do I experience myself performing whenever I am at least apparently knowing? (2) Why, if at all, does performing those acts constitute valid knowing? Differences between various investigators’ operative answers to these two basic questions commonly constitute a fundamental, though often overlooked, part of their disagreements about particular investigative conclusions.

Second, functional specialization purports to show that in any area of investigation, from sub-atomic physics to Trinitarian theology, the correct answer to the first basic question is that acts of apparent knowing culminate in judgments—at least judgments of fact, and sometimes also judgments of value. Moreover, reaching a judgment is always a process of three or four steps: attending to data, forming a hypothesis about the intelligible unity of those data, affirming the reality of that intelligible unity (or denying it), and—where pertinent—affirming the goodness of that reality (or denying it). If any step of the pertinent process is omitted or poorly made, the judgment will be suspect. Still further, the correctness of this answer itself is supposedly confirmed by the answer’s concrete incontrovertibility. Any sufficiently self-aware investigator discovers that she cannot consistently reject it. Indeed, any verbal denial of the answer is inevitably undercut by her operational endorsement of it in the very making of that denial. For if she asserts, “Acts of apparent knowing do not culminate in judgments,” she engages in a process of apparent knowing that culminates in a judgment.

Third, functional specialization purports to show that the correct answer to the second basic question is that a judgment is cognitively valid insofar as it is made in a way that accords with one’s most authentic personal orientation. In other words, a judgment discloses reality rather than mere appearance insofar as it is a judgment that is faithful to the best in oneself. Genuine objectivity follows from authentic subjectivity. And just as with the answer to the first
basic question, the correctness of this answer is confirmed by the fact that one cannot deny it without operational self-contradiction.

Furthermore, functional specialization distinguishes sharply between the judgments deemed cognitionally valid by other persons and communities, whether past or present, and the judgments deemed cognitionally valid by oneself and one’s own community. And it holds that although the ultimate goal of an investigation is to reach judgments that accord with one’s most authentic personal orientation, careful study of others’ judgments is commonly an important step in successfully pursuing that goal.

The Advantages of Functional Specialization

Functional specialization has at least three significant potential advantages. The first advantage is that, by carefully distinguishing the various elements of the investigative process itself, functional specialization counters both oversimplification, the neglect of certain tasks, and confusion, the blurring of distinct tasks. Gathering data differs from formulating a hypothesis, both differ from affirming reality, and all three differ from affirming value. Again, it is one thing to learn that others have judged X to be Y, and it is quite another to judge for oneself that X is Y. Further, discovering the explicit import of another’s judgment is different from discovering the philosophical presuppositions that inevitably shape that judgment’s integral import, and both are different from determining one’s own agreement or disagreement with those presuppositions.

The second advantage is that, by carefully relating what it has distinguished, functional specialization displays the diverse investigative tasks as mutually complementary contributions to a common enterprise. Gathering data, formulating hypotheses, affirming reality, affirming value, discovering others’ judgments, assessing others’ judgments, elucidating philosophical
presuppositions, assessing philosophical presuppositions—functional specialization lays out just how all these different operations fit together. And thus it both restrains exaggerated ambitions and encourages appropriate exertions. It makes clear that no task that is actually just part of the total investigative enterprise can expect to satisfy the requirements of the whole. But it makes equally clear that the flourishing of the total enterprise requires the contribution of every part.

The third advantage, which follows from the preceding, is that functional specialization provides a way of meeting the organizational and epistemological challenges that confront any multidisciplinary investigation. Recognizing that an adequate multidisciplinary investigation can only be a communal enterprise, functional specialization articulates a technique of effective collaboration for the community of investigators. Organizing the enterprise in terms of neither initial data nor terminal results but rather the investigative operations themselves, it encourages individual investigators to devote themselves to one or another functional specialty, but expressly to envision their practice of that specialty as contributing to a common effort. Making explicit that the cognitional validity of an investigator’s judgments depends upon the investigator’s personal authenticity as a judge, functional specialization highlights that resolving disagreements over investigative conclusions is always in some way a matter of resolving personal differences between the investigators themselves; and it sets the stage for the constructive dialogues that foster personal development and, when necessary, change. And functional specialization thus gives investigators solid grounds for anticipating collective progress toward an outcome that notably transcends in both cognitional range and cognitional validity what any one of them is capable of achieving on her own.
A Group Experiment

The Guelph conference of 2002 was, in effect, the first in a projected series of group experiments in using functional specialization for the multidisciplinary investigation of bioethical questions. It was overseen by a Planning Committee that was headed by William Sullivan as CCBI Director and included Joseph Boyle, Barry Brown, Rory Fisher, John Heng, Jo-Anne Jackson-Thorne, and Michael Vertin.

In the first of the conference’s three stages, participants explored four related sets of facts about human genetics that are currently in the forefront of public awareness, the key bioethical issues that people commonly raise about those facts, and the main competing bioethical stances that people commonly take on those issues. These explorations proceeded through presentation and discussion of papers written at the invitation of the Planning Committee that considered the following issues: research in human genetics; clinical applications of such research; the commercialization of such research; and justice in the allocation of new and emerging genetic technologies. Group discussion of these papers was facilitated by at least one prepared response to each.

In the terms of functional specialization, this first stage was conceived by the Planning Committee as the effort of beginning to do justice to the “lower blade” of the “scissors” of bioethical inquiry in the particular area of human genetics. The actual papers largely met the expectations of the Planning Committee in this regard. The prepared responses, though quite illuminating in themselves, usually were less clear as illustrations of the “lower blade.”

In the conference’s second stage, participants explored the connections that exist at least implicitly between the particular bioethical issues and the competing stances on them, on the one hand, and certain general moral, broadly religious, and specifically Catholic issues and the
competing stances on them, on the other. And the dynamic of this exploration in turn led participants toward attempting to decide between the competing stances on each of these three levels and to articulate their decisions, though the limited time available and the personal character of such an attempt meant that it was only initiated and not completed. This stage of the work proceeded through presentation and discussion of papers written at the invitation of the Planning Committee that considered the following issues: relating particular and foundational stances in ethics; the character of moral value; relating foundational stances on moral value and religious value; and linking Catholic positions on particular ethical issues to foundational stances on the character of moral value and religious value. As in the first stage, group discussion of these papers was facilitated by a prepared response to each.\(^8\)

In the terms of functional specialization, the second stage was conceived by the Planning Committee as the effort of beginning to do justice to the “upper blade” of the “scissors” of bioethical inquiry. As before, the actual papers substantially fulfilled the expectations of the Planning Committee in this respect. The prepared responses, while quite perceptive as such, typically were not obvious illustrations of the “upper blade.”

In the conference’s third stage, participants returned to the topics of the first stage in light of the findings of the second. Insofar as one has begun to make and articulate one’s decisions between the competing stances on the *general moral, religious, and Catholic* issues, what do one’s stances on those issues imply for one’s decision between the competing stances on the *particular bioethical* issues of human genetics? By contrast with the earlier stages, the work of this stage was focussed not by papers written before the conference but by three relatively informal “synthesizing” presentations prepared after the conference’s first two days.\(^9\)
In the terms of functional specialization, the third stage was conceived by the Planning Committee as the effort of beginning to “close the blades” of the “scissors” of bioethical inquiry in the particular area of human genetics. Concretely, these “synthesizing” presentations constituted very important substantive contributions to the conference; but they were less successful as illustrations of the culminating methodological stage than had been anticipated. As the next section indicates, part of the reason for that difficulty turned out to be an ambiguity in the Planning Committee’s conception of that culminating stage. Indeed, the need for refinements in the conceptions of all three stages eventually became manifest.

**Three Desirable Methodological Clarifications**

The principal substantive results of the Guelph conference began to emerge with the conference presentations themselves. Those results stand out more definitively in the papers that, as refined by the presenters after the conference, make up the three Parts of the present volume.

It remains that a further group of results began to emerge in the “debriefing” discussions conducted with various participants by the Institute Director in the weeks and months that followed the conference proper. These additional results are methodological rather than substantive. They are conclusions that certain clarifications are desirable in the Institute’s conception and implementation of the method of functional specialization. Retrospectively, the clarifications would facilitate a more accurate portrayal of the underlying goal that the Planning Committee intended for the Guelph conference. They also would illuminate why, given the previous absence of such clarity, some participants were led to express puzzlement about how the conference’s three main stages hung together. Prospectively, the clarifications would
enhance the methodological precision of future multidisciplinary investigations the Institute might undertake, and thus improve the likelihood of their successful outcomes.

The chief desirable methodological clarifications are three in number. The first is that the initial step in the functionally specialized study of any bioethical issue is simply *delineating the opposed stances* on that issue. It is to grasp and articulate the opposed stances in their concrete totality, while not yet attempting to distinguish between their empirical and pre-empirical components. That is to say, the aim of the first step is merely to provide a relatively complete portrayal of the problem presented by the fact that different bioethicists hold different stances on the same bioethical issue. It is not yet to analyze those stances themselves in terms of the distinction between what each bioethicist *attends to* in a particular investigative situation and what she *brings to* that situation. At this stage, any talk of a “scissors” of inquiry, with its respective “lower” and “upper” blades, is premature.¹⁰

The second chief methodological clarification is that the second step of a functionally specialized bioethical study is *differentiating the pre-empirical components*. More amply, the second step makes explicit the pre-empirical components of each of the opposed bioethical stances, highlights that the oppositions between those stances often stem from the differences of their respective pre-empirical components, and determines which set of pre-empirical alternatives is the correct or “normative” one.¹¹ For some bioethicists suppose that their disagreements stem solely or at least primarily from *empirical* differences, differences between what they have *attended to* in particular investigative situations; and thus they suppose that the sole or at least primary way of resolving their disagreements is more extensive or intensive attending. The second step of a functionally specialized study undercuts that supposition by showing that bioethical disagreements often stem primarily or even solely from *pre-empirical*
differences, differences between what respective bioethicists have *brought to* particular investigative situations—at root, different operative (if not always explicit) answers to the two basic philosophical questions. Hence a necessary condition of resolving the disagreements is to identify the normative answers to those basic questions and to adopt them. The second step culminates with that identification and adoption.\textsuperscript{12}

It is only with the second step of a functionally specialized bioethical study that the “scissors” analogy becomes relevant; and the initial comparison is to the *opening* of two or more pairs of scissors.\textsuperscript{13} Opposed bioethical stances that previously seemed to be just empirical now become manifest as composites, like scissors, with each composite having not only empirical components or a “lower blade,” but also pre-empirical components or an “upper blade.” Disagreements that previously seemed to be just empirical now become manifest as disagreements that may be primarily or even solely pre-empirical—differences between the respective upper blades. And an essential requirement for resolving the disagreements now becomes manifest as the task of identifying and adopting the normative upper blade.

The third chief methodological clarification is that the third step of a functionally specialized bioethical study is *determining the normative stance* on the bioethical issue being studied. Rejecting in advance every bioethical stance, whose pre-empirical components are not normative, the community of investigators seeks out the bioethical stance whose empirical components most fully accord with the normative pre-empirical components. This third step is the *explicit closing* of the scissors of bioethical inquiry, where the previously identified normative upper blade now closes upon the lower blade, and the resulting closed scissors explicitly displays the normative concrete bioethical stance as a composite. While not violating
the abstract principles of logic, this closing of the scissors is not a logical deduction; rather, it is a
matter of concrete discernment, sagacious insight, and practical wisdom.\textsuperscript{14}

\begin{enumerate}
\item Bernard Lonergan, \textit{Method in Theology}, (London: Darton, Longman & Todd; New York:
\item In terms that may be familiar to some, Lonergan’s distinction between field specialization and
subject specialization is analogous to the scholastic distinction between a discipline’s material
object and its formal object.
\item For readers familiar with Lonergan’s writings, let me add a terminological note. Lonergan uses
the words “experiential” and “empirical” more or less interchangeably in reference to both data
of \textit{sense} and data of \textit{consciousness}—and, by extension, the investigations beginning with them.
I retain “experiential” in Lonergan’s sense, but I draw a distinction within it between “empirical”
and “pre-empirical.” On my terminology, an investigation is \textit{empirical} if it begins with (a) data
of sense or (b) data of consciousness insofar as they are \textit{conditioned intrinsically} by data of
sense. If an investigation begins with data of consciousness insofar as they are \textit{not conditioned
intrinsically} by data of sense, then it is \textit{pre-empirical}. (For example, an investigation that begins
with a red content I see is \textit{empirical}. An investigation that begins with my experience of seeing
a red content is also empirical. But an investigation that begins with my experience simply of
seeing—or hearing, questioning, understanding, judging, and so forth—is \textit{pre-empirical}.) Thus
my contrast between \textit{pre-empirical} and \textit{empirical} corresponds to the contrast often drawn by
Frederick Crowe between \textit{structural} and \textit{historical}. (See, for instance, Crowe’s \textit{Developing the
Lonergan Legacy: Historical, Theoretical, and Existential Themes}, edited by Michael Vertin
[Toronto: University of Toronto Press, 2004], 13-14, 154, 348-49, 354-55, 361-65.) Moreover, it
roughly though not exactly matches the contrast between *a priori* and *a posteriori* that is common in the broader history of explicit philosophy.

4 In fact, Lonergan also lists a *third* basic philosophical question: What do I know when I perform acts of valid knowing? However, he contends that one’s answer to this third basic question is already implicit in one’s answers to the first two basic questions. (See *Method in Theology*, 20-25; cf. 83, 238, 261, 297, 316.)

5 More exactly, the fifth functional specialty, Foundations. See *Method in Theology*, chapters 1, 5, 10-11.

6 See preceding note.


8 The last three of these papers constitute Part Two of the present volume.

9 More formal versions of these three presentations were elaborated after the conference. They constitute Part Three of the present volume.

10 What in this compressed account I am designating the “initial” or “first” step in a functionally specialized study actually encompasses the first three functional specialties, namely, Research, Interpretation, and History. See *Method in Theology*, chapters 5, 6-9.
Since the pre-empirical components are components of the bioethical stances, investigators who would successfully make the components explicit must have more than just passing familiarity with those bioethical stances themselves, though they need not be full-fledged specialists in bioethics.

What I am here designating the “second” step actually encompasses the fourth and fifth functional specialties, namely, Dialectic and Foundations. It is important to note that making explicit (in Foundations) the correct or normative pre-empirical components is radically a matter of objectifying the concretely given criteria of one’s own authentic subjectivity, a matter of articulating what Lonergan labels one’s “intellectual, moral, and religious conversion.” See Method in Theology, chapters 5, 10-11.

This is not to deny that the closing of the scissors is first in the line of concrete operations, as the meeting between the upper blade of one’s pre-empirical presuppositions and the lower blade of empirical data gives rise to a concrete stance on some particular issue. But in the line of objectification, the line of making explicit the components of the operational line, it is the opening of the scissors that first becomes manifest.

What I am here designating the “third” step actually encompasses the last three functional specialties not merely of theology but more broadly of integrated studies, namely, Policy-Making, Planning, and Execution. See Method in Theology, chapters 5, 12-14.