## Catawba Faculty Colloquium Presentation:

# An Approach to Integration: Teaching Integrative Thinking in the Honors course "Philosophy & the Integration of Knowledge"

- A) Preliminary remarks
- B) Goal of the course
  - 1) What is integration
  - 2) Levels of integration
    - a. Low level example
    - b. Somewhat higher level example
    - c. Level that PIK aims for
      - i. Highest levels
    - d. Theory over fact
      - i. Examples
    - e. Integrative theoretical ideas
      - i. Example #1 from PIK: religion, politics, and chemistry
      - ii. Example #2 from PIK: philosophy, optics, and art
  - 3) Why is integration needed?
- C) Content and Structure of the course
  - 1) content
    - a. Range of subjects
    - b. Variety of levels of integrative thought
    - c. Willing to go beyond established scholarly thought
    - d. Risks
    - e. Why the 20<sup>th</sup> century focus?
    - f. integration of knowledge (and integration of the culture)
    - g. philosophical ideas as highest level of theoretical ideas organizing & governing the culture
  - 2) readings
  - 3) assignments
- D) Results of the course
  - Comments from student evaluations
  - Alumnae input

-----

#### A) PRELIMINARY REMARKS

In the recently approved curricular "White Paper", the faculty at Catawba approved "integration of learning" as a learning outcome for all majors. We will need to understand and agree on what "integration of learning" means. Perhaps it will help us to consider a course I have been teaching that directly aims to achieve a profound integration of learning. This presentation is about that course: its goals, its content & structure, and its results. The course is entitled "Philosophy & the Integration of Knowledge", or "PIK" for short, and will next be offered in the fall of 2011. To save time I will focus more on the integration of knowledge part and less on the philosophy part. Some recent alumnae from that course are also here to speak about it and to answer questions. Let me introduce them:

Cindy Cook, a senior math major & Felicia Youngblood, a senior music major, and Kendra Joyner, a senior religion & philosophy major, are Honors students working diligently on Honors theses.

Although the course that I will be discussing is a 3000-level advanced Honors course, versions of this course have been successfully taught as lower-lever college courses and even as courses for gifted high school students. So, the approach employed in this course has wide applicability. If you are interested in the history of the course, I can address that in the q-and-a or one-on-one afterwards.

#### B) THE GOAL OF THE COURSE

The goal of PIK is to integrate knowledge. But what do we mean by "integration"? Perhaps we are most familiar with racial integration or with psychological integration; but we can also speak of integrating learning. This topic does not receive sufficient attention, which is unfortunate since it is of great importance. So, let's start simply. To integrate is to bring together in order to unify, to tie together or connect, to make a whole out of parts. One approach to integrating learning is to teach how to integrate ideas or concepts or areas of knowledge. Let's call this approach "the integration of knowledge" or "integrative thinking".

There are many possible levels of integrative thinking; teaching of any kind often works to achieve integration on lower levels. Take a concrete case first. Say that you come across the concept of a tiger, which is new to you, and so you are unsure what to think. What is picked out by that unfamiliar concept "tiger"? It becomes clear if you understand that a tiger is a large, wild, striped member of the cat family. Simply clarifying an unfamiliar concept in terms of familiar concepts places or fits the unfamiliar concept into a larger framework of intelligibility. We often teach new concepts this way.

Consider a more abstract example of a somewhat higher level of integration. Once scientists developed a new physical theory called quantum theory, they have to fit that theory with the existing physical theory that they already accept. By doing so, they will be integrating new material into an established subject. The search for a unified field theory or unified theory of everything is also an attempt to achieve a high-level integration of theoretical material.

So, in general, we can find broader ways of thinking that connect and make meaningful what otherwise seem fragmented or unconnected ideas or concepts or knowledge.

What level of integrative thinking is PIK interested in? And how does it teach integrative thinking? Though PIK is concerned with various levels of integration of ideas, it is most concerned with a very high level of integration. PIK seeks to find ideas that cut across disciplines and that provide a common structure and direction to some set of disciplines or even to all the disciplines.

PIK teaches integrative thinking from the ground up. It seeks ideas that are influential and even transformational in a given discipline, and then asks if those same ideas or similar ones function also in other disciplines. The relevant ideas here are not low-level facts, but rather theoretical ideas in the discipline. For one thing, there are too many facts, even too many important and relevant facts, for students to learn. And it is not merely that we have only a very limited amount of time to work with. The growing avalanche of data, of facts, of raw (and even filtered) information threatens to overwhelm those whose attention is on the particulars. Manipulating facts blindly, as when one learns a procedure without understanding the theory behind the procedure, is intellectually deficient and deadening. The theoretical ideas that PIK focuses on rise above the many facts to organize, govern, and make sense of them. These theoretical ideas include not only acknowledged "theories" in a discipline but any ideas functioning on the theoretical level, i.e., abstract ideas that help organize and govern all or parts of the discipline. A "theoretical idea" could include some movement in a discipline or in the culture, say, an artistic movement. A slogan captures this emphasis: "theory over fact."

Take some examples of theoretical ideas. When we read a literary work in PIK, we are not interested in the structure or content per se--but rather how the structure or content reveals broader ideas that shape the literature, theoretical ideas such as deconstructionism or minimalism or the theater of the absurd. When we study social thought, we are not interested in a particular social structure or social phenomenon per se—but rather how that structure or phenomenon is influenced by broader ideas, theoretical ideas such as what it is to be human or the relationship between humanity and technology. When we study visual art, the year Salvador Dali painted "The Persistence of Memory" is less important than those features that tend to appear in surrealist painting, which in turn are less important than what characterizes the Surrealist movement and what about the culture is being expressed in surrealism. In each of these examples, the focus is not on the particulars, not on the concrete data, but instead on the intellectual context, the theoretical context, that gives meaning to the particulars. This approach helps students find the motivation to attend to the particulars, be they literary works or social phenomena or stylistic features.

PIK particularly looks for very high-level theoretical ideas that are operating across some set of disciplines and perhaps across the entire culture, and these ideas indicate a common structure and direction to our various ways of thinking. Let's consider one or two examples of integrative thinking.

**EXAMPLE #1**: Here is a ground-up example of integrative thinking, a 3-part example from the 16<sup>th</sup> and 17<sup>th</sup> centuries about religion, politics, and chemistry--Protestant theology (i.e. religious theory), democratic political theory, and the scientific theory of chemical elements:

PART #1] In the early 1500s, a new way of thought shook up and divided the Catholic Church. A wide variety of people protested and rejected the religious authority of the Roman pontiff (the Pope) and the Catholic Church's hierarchy of bishops and priests. These protesters, or Protestants, which essentially means troublemakers, held that the authority to interpret Scripture ought to be at the level of the worshipers or at least at a level of an institutional church more responsive to the worshipers.

[OPT] E.g. Baptists. Two fundamental principles structure their denomination:

- 1) Priesthood of the believer: They rejected the idea that there should be priests who have authority to dictate the truth or falsity of religious matters to their worshippers. Each worshipper, each believer, should be as a priest, with the authority to find his or her own responsible interpretation of religious matters. Even the minister (note: no longer called a priest) would be essentially another worshipper, with no more religious authority than any other worshipper, and the minister's task would be more like that of a guide.
- 2) Autonomy of the local church: Each church should be free to reach its own understanding of religious matters, should be able to set its own policies, and should not be told what to believe or practice by some other local church or by some higher body.

In other words, religious authority was to be decentralized and placed more or less in the hands of the ordinary people.

**PART #2]** By the late 1600s, a democratic political theory had been developed and had achieved some acceptance. The English philosopher John Locke wrote his famous 2nd Treatise of Government, and it was a key writing at the time. It profoundly affected the English revolution in the late 1600s that gave representative government its first huge boost, as well as influencing the French and American revolutions of the 1700s that aimed at an even higher degree of political freedom and popular political representation.

There was a long movement to strip political authority from kings, i.e. from the top of government or the State, and show that political authority instead resides in the lower levels of the State, namely, in the people. Instead of the State being conceived of like a body whose parts (the people) are supposed to serve the whole, a new conception of the State emerged: the State as a community of the parts, with the State designed to serve and protect those parts.

So, political authority was placed in the hands of the people. They could constitute or dismantle a particular government or even an entire political system.

**PART #3]** In the 1600s, the English chemist Robert Boyle was the first to articulate a modern conception of chemistry. The new modern concern in chemistry was to found a "science of discovering the composition of [mixed] and 'compounded' bodies in such a way that we can produce them at will and foretell their mutual interactions." Boyle developed "the [modern] conception of the chemical element...: a substance 'perfectly homogeneous' and not, so far as we know, capable of further *simplification*." It was Boyle's (and other's) work to found the science of chemistry on this theory of chemical elements that led to the atomic theory of chemistry that we still accept today.

Substances were taken to be composed of amounts of one or more chemical elements. In other words, the elements were the basic substances, out of which everything else was formed. Elements were the basic chemical unit.

AN INTEGRATING IDEA -- the idea of atomism. People were the religious atoms; people were the political atoms; and elements were the chemical atoms. The most basic reality, according to atomism, is at the level of the atom, whatever the subject. The larger wholes that are part of our world--a church, a State, a chair--are built up from and rely on their smallest parts or units or "atoms". A subject matter can be understood and appropriately organized by treating the wholes as composed of parts. The parts are the basic reality; the wholes are simply compounds or collections of the parts. The only way to understand a subject is analytically, in a bottom-up manner, by looking to the parts that comprise something and that account for its nature and its behavior. In political theory, religious theory, chemical theory, look to the parts.

**EXAMPLE #2**: Another ground-up example of integrative thinking, another 3-part example, this time from the 18<sup>th</sup> and 19<sup>th</sup> centuries about philosophy, optical science, and visual art.

PART #1] In the 1700s, the Scottish Enlightenment philosopher David Hume developed the view that all of our perceptions of the world take the form of appearances, what he called :impressions". There are simple perceptions or impressions and complex ones. The simple ones are, for example, impressions of color, taste, smell,--ways that the world appears to you that cannot be simplified or distinguished any further. You can have an impression that says "red" or one that says "sweet". Complex impressions can be divided into simple ones. An impression of an apple can be divided up into an impression of a red color and an impression of a sweet taste, etc., so an impression of an apple is complex.

Hume contended that all our perceptions either are or are built up from simple impressions. And all our thinking and reflection uses only the data from perception to reach new thoughts or new conclusions. But now here is a problem that arises for Hume. If all we have available to us for data about the world is appearances, i.e. impressions, how can we confirm that the appearances that we are aware of in fact put us in touch with an external world? All we are aware of directly is our impressions or our thoughts which are based on impressions. We do not have direct access to the external world per se. And while practically speaking we may not choose to ignore the apparent external world around us, nevertheless when it comes to justified knowledge, we have no justification for the belief that there is an external world that corresponds to our impressions. If there is an external world of objects, we cannot in principle have any knowledge of it.

**PART #2]** In the 1800s, the new optical theory contended that vision basically is the perception of light rays reflecting off of surfaces and that differences in the kind or intensity of these light rays determine what we see. In other words, in vision we are directly aware of light only. We are not directly aware of the surfaces light reflects off of. To put it crudely, we see light, not the objects lit.

[OPT] "Physicists, such as Helmholz [and note the title of one of Helmholz's major works: *Physiological* Optics], made discoveries about the component prismatic parts of white light, and pointed out that the sensation of color has more to do with a reaction in the retina of the

eye than with objects themselves. The color wheel also demonstrated that two separate hues of a wheel at rest are fused by the eye into a third hue when the wheel is in rapid motion. And when all the colors of the spectrum are rotated, the eye sees them as tending toward white."

Here's an important theoretical commitment worked out in the 19<sup>th</sup> century: the color of objects we see is simply a function of the effect of vibrating frequencies of light rays on the eye (and on the brain), which implies that color can no longer be taken to be in real things.

PART #3] In the middle to late 1800s, some painters came to believe that

"form and space...are not actually seen but implied from varying intensities of light and color. Objects are not so much things in themselves as they are agents for the absorption and refraction of light. Hard outlines, indeed lines themselves, do not exist in nature. Shadows, they maintained, are not black but tend to take on a color complementary to that of the objects that cast them. The concern of the painter, they concluded, should therefore be with light and color more than with objects and substances. A painting, according to [these so-called] impressionists, should consist of a breakdown of sunlight into its component parts. ...They intended to paint not so much what is seen but how it is seen." The impressionist painters moved away from the traditional approach of representing objects as they are in themselves. They painted small dabs or dots or swirls of color, combined to give the impression of an object seen in some light.

So, here is an example employing Hume's philosophical theory of the mind, 19<sup>th</sup> century optical theory, and the artistic theory behind Impressionism. Anyone see a connection between these theoretical developments in philosophy, painting and optics? Can we find any cross-disciplinary idea or ideas to help account for or make sense of these various intellectual developments?

AN INTEGRATIVE IDEA: In each of these subjects, one finds a weakening of our belief in an objective external world of objects that we can have sensory experience of and therefore have any knowledge of. Now I don't mean by this that we are starting to bump into things. But when we follow out the apparent implications of our deepest intellectual commitments about the world, we are led to doubt the possibility of knowing an external world. We believe we are cut off from the world; we come to doubt objectivity-- i.e., we come to doubt that there is a world, independent of our experience of it, that we can discover through our judgments and experiences. Philosophy, optics, and art--all rejecting objectivity in their subject matters.

-----

Before we go on, any questions or comments? Did you follow the move towards integration of the three theories? I'll point out that some have claimed that atomism is a philosophical plank in our modern Western world view, often called scientific materialism or scientific naturalism. And in the second example, some have claimed that a commitment to subjectivism is an unavoidable implication of our modern Western world view. By carefully and thoroughly locating the integrating ideas of our time, we can elicit the larger structure of thought we operate within, our very world view. PIK aims, as I said, for a very high level of integrative thinking.

.....

Why do we need integrative thinking? Several reasons, of which I'll mention only three.

First, it overcomes our fragmented understanding of knowledge and culture. Education itself has become increasingly fragmented, and people have a more disjointed and impoverished understanding of themselves and their world. A 1991 Association of American Colleges report entitled <a href="The Challenge of Connected Learning">The Challenge of Connected Learning</a> notes the specialization and isolation of the academic disciplines and calls for students to "develop the capabilities to enter, negotiate, and make connections across communities of discourse both within and without the academy" The report notes the profound lack of integration in education and in the culture.

Second, integrative thinking meets the need to understand what is learned, a need to place learned material in a context that makes sense of it. By emphasizing the interrelationship of knowledge, PIK helps students grasp even the largest context: the overall culture and the dominant world view it embodies. Students educated in an integrative fashion find learning deeply meaningful. Indeed, students have reported experiencing an educational epiphany and an intellectual turning point because of this course of study.

Third, by its pedagogical approach PIK encourages students to be intellectually active using integrative thinking. Our culture has not generated much widely accepted knowledge about the integration of knowledge. The search for integrating ideas is largely uncharted territory, which allows students to participate actively in the process of generating knowledge. In this way, PIK is more like a seminar than a lecture course. The course becomes a community of teacher and students engaged together in exciting inquiry, struggling together to find connections across the range of subjects. The effect on students is to open them up intellectually, introducing them to genuine intellectual inquiry about important matters not already settled. Students develop a greater awareness of ideas around them and a greater desire to participate in the knowledge enterprise and in the ongoing culture.

### C) THE CONTENT AND STRUCTURE OF THE COURSE

PIK examines the gamut of disciplines: scientific, social, humanistic, and artistic. Other areas that might be or seem to be outside that range, such as business or law or medicine, are also fair game. So too are insights from lived experience, the way we live and experience our lives from within.

PIK tries to find any ideas and concepts that seem to have integrating power on any level: within a discipline, across a small range of disciplines, across the entire range of disciplines.

PIK does not simply follow already established integrative thought backed by the credentials of professional scholars. It leads students in a creative and intellectually responsible search using the combined intellectual powers of teachers and students.

There are risks in covering such a wide range of disciplines, risks in entertaining such a wide range of levels of integrative ideas, and risks in pursuing integrative thought beyond the bounds of scholarly thought. Let's briefly address some of these risks.

One risk with covering this wide a range of subject matters is that the student would gain at best a brief taste of a subject, insufficient to provide a basis for understanding it, much less for making connections between subjects. To counter this problem somewhat, I purposely restrict the focus of

the course to the 20<sup>th</sup> century and now into the 21<sup>st</sup> century (the past 100 years or so). We address earlier centuries, particularly earlier centuries in the modern era of the West, but only to prepare students to understand material from the last century or so. This restrictive focus allows for a somewhat richer and more responsible examination of the disciplines.

One risk with seeking integrative ideas on many levels is that students might be inclined to find relatively low-level integrative ideas only, the low-hanging fruit, if you will. I acknowledge that one might learn integrative thinking somewhat by remaining on its lower levels, but our intellectual needs and curiosity push us toward higher and higher levels. Indeed, to restrict integrative thinking to lower levels constrains one's thought and stifles one's intellectual powers. In learning integrative thinking well, then, one must work toward a defensible integration of all knowledge. After all, if the full range of our knowledge does not fit together in one logically unified whole, we will be intellectually split, fragmented, and our view of the world will be split, fragmented. This sort of intellectual schizophrenia is highly destructive. So, in PIK, I encourage students to expand the scope of their integrative thinking. I am fine with students starting out by safely remaining on lower levels of integrative thought; they might need to cut their teeth there. But sooner rather than later I ask students to find ideas with even greater integrative power. I ask them to find ideas that cut across disciplines, and ideas that cut across all disciplines.<sup>i</sup> I try to model such thinking myself, as do some of our readings.

One risk with going beyond established scholarly thought is that some integrative ideas that a class discovers would not stand the test of more powerful and sustained critical scrutiny. I find this a risk well worth taking. The point is not to come out with cutting-edge research that would stand up to scholarly standards. The point is to teach students how to engage responsibly in an important way of thinking in which they need practice. PIK is a highly successful way of teaching students how to engage in integrative thought, how to think broadly and synthetically in a fruitful, responsible manner.

Why choose the 20<sup>th</sup> / 21<sup>st</sup> century as the focus?

- 1) By focusing on the present, and the recent context of the present, we address the real need we all have to understand and belong to the times we live in. But it is always more difficult to understand one's own times. We can place the 1600s in the context both of what came before and what came after, and we have a temporal distance from the 1600s that allows for insightful hindsight. Whereas for the present, we lack both the full context (since we lack knowledge of the future) and the needed temporal distance. We therefore have only a limited ability to gain a transcendent perspective on the present; it is correspondingly difficult to discover the meaning of our own times.
- 2) Much primary and secondary schooling does not even try to make the most recent and advanced thought of our times available to students, much less make such thought intelligible to them. Even college does not always do this. Yet contemporary thought affects our lives.
- 3) The 20<sup>th</sup> / 21<sup>st</sup> century is perhaps the most difficult century to understand. It is rife with contradiction, ambiguity, paradox, abstract and concrete precision, extreme specialization, unparalleled pace of change, lack of a unifying intellectual center, etc.
- 4) The most recent developments in a discipline often contain challenges to what has until then remained unquestioned, including fundamental assumptions in that discipline. Students

confronted with contemporary thought are thereby encouraged to examine the new and the unfamiliar, and this has two valuable consequences. It contributes to students being open to critically examining everything; and, it works to engage students' creativity and imagination when they find the edges of our ways of thought and push at them.

-----

Take a look at a copy of the most recent syllabus scattered around. PIK begins by our discussing what integrative thinking is and how it occurs on various levels, from concrete to more and more abstract, from narrower scope to broader and broader scope, up to the entire knowledge enterprise. We consider some philosophical ideas that seem to be the highest level ones governing the culture, and how the shift in those ideas demarcates our modern Western civilization from the medieval Western civilization. We discuss the need to engage in integrative thinking on any level, but the higher the better. We note that no textbooks cover quite this ground, how the culture often does not seem to value this sort of thinking, and the burden that places on us. But also, we note the freedom that gives us, to try, to make mistakes, but to get better about our synthetic judgments.

Then we take up a small-scale example, in which we briefly focus only on modern physics and modern visual art; this allows us to try our hand at integrative thinking together. The course then opens up to cover a very wide range of subjects.

Often, material needs to be presented in lectures. Even then, Socratic questioning keeps students active and engaged. There are also times for guided discussion, sometimes led by students.

Readings are numerous and include a very wide range: fiction, poetry, non-fiction; short, medium, long; easy, medium, difficult; academic, semi-popular, popular; scienc, dance, sociology, etc. Generally, students read materials—and sometimes write a short essay on the reading-- before the subject is discussed in class. This forces students to confront the material, allows me to gather how much they are learning and where they may need help, and prepares the student for discussion.

Students have a major oral project that requires them to present and clarify a range of material and then to motivate and moderate a discussion and/or question-and-answer session.

Short essays, usually about a page, provide opportunities to explore complex ideas, find integrative ideas in a subject, and find integrative ideas across subjects. Their limited content makes them manageable; their limited length makes them safe for students to tackle writing.

A film that illustrates major ideas from the course serves as a relatively concrete basis for students to try to find and apply course ideas. "Koyaanisqatsi" has sometimes served well.

A longer paper at the end gives students a chance to develop their own ideas at length, in a way that employs integrative thinking.

Lastly, a final exam, often preceded by a list of broad essay questions given out before the end of the course. I encourage them to study together. By this time I want them to put the course together in their own minds. To that extent, the preparation for the final has significant pedagogical value in understanding the course. Taking the final can also further learning. I view all of the assignments in this way: they help me assign a grade, but their greater value is helping the student learn more.

#### D) RESULTS OF THE COURSE

- 1) Openness to the value of and meaning in a wide range of disciplines
- 2) Awareness of the need to think synthetically: that there are important connections between ideas waiting to be discovered
- 3) Awareness of deeply-rooted ideas shaping large parts of, if not the entire, knowledge enterprise
- 4) Awareness that the culture has a dominant worldview within which we think and know and act, a worldview that needs to be critically assessed.
- 5) Understanding the intellectual enterprise as a cooperative endeavor
- 6) Understanding liberal education not simply as teaching what is known but connecting what is known, and showing the present boundaries of our knowledge, and motivating the need to examine those boundaries.

Perhaps it's more compelling for you to hear the assessments of students who took the course. I'll read you some assessments now, and then our alums here who are eager to talk with you.

- a) "Because of P.I.K., I can look at our society and think and understand this world on a much...clearer level. I feel more aware of problems, reasons, causes, and even am able to articulate possible solutions. This course feels like the only meaningful part of my education, coupled with anthropology. This course has completely changed my view of our world."
- b) "The course has...helped me to broaden my education. Things that we have learned in this class just aren't taught enough today. This class adds a little culture to your life."
- c) "I learned that our modern worldview has really caused our culture to become fragmented and purposeless. This class helped me see connections I had never seen before.... I think that I will be able to make connections that I otherwise wouldn't have thought of. This class has affected my outlook on life, and life in general."
- d) "The fun thing about this class during this particular semester is that it was relevant to all my other classes: drawing, music, and intro to religion. I was "making connections" all over the place. This class also gave me a better understanding of why things are the way they are and where it'll go in the future."
- e) "This class gave me new insight and connections from one discipline to another. This has helped me better understand the evolution of knowledge. In fact, I use what I've learned to question, challenge, and evaluate what I'm being taught in other courses."
- f) "I have learned more life-altering, earth shattering information in this coarse than in any other I've taken in college. More than anything, I learned to appreciate subjects I normally could care less about, and connect each and every subject we learned. As a person living in the 21<sup>st</sup> century this course contributed to my life and my liberal arts education. The class affected how I think. It taught me why I think the way I do, and alternate ways of thinking. It affects how I think about life and the culture around me."

Now to our alums....

#### NOTES:

First, a brief aside: the recently scrapped FYS2 course already employed an approach to the integration of learning, using E. O. Wilson's ideas in his book <u>Consilience</u>. To summarize a complex book, Wilson argues that we can find relatively simple "natural laws", by which he seems to mean scientific laws, that underlie many sciences and that perhaps can also under humanistic thought. I applaud Wilson's attempt to integrate ideas across disciplines. But I take strong issue with his scientism, the assumption that modern natural science is the only authoritative approach to knowledge and thus the only authoritative approach to our understanding of reality. I deny that his kind of integration can extend usefully into the humanities and into the fine arts, and (for that matter) I would argue it extends at best only part way into the social sciences. The approach I take in my course attempts to find ideas, not natural laws, ideas that are part of culture, part of our thinking. And the ideas sought in this course aim at encompassing all the major sectors of thought (natural science, social science, humanities, fine arts). In other words, the approach to integration in this course is much broader and less biased than Wilson's approach.

During this work, one confronts ideas and concepts that are genuinely philosophical. At the highest level of organizing and governing ideas in a culture, we find deeply located assumptions and presuppositions about what powers of knowledge we have and what realities we can possibly know. That is, we find epistemological and metaphysical assumptions and their corollary ideas. These are the basic commitments within a world view.

We should not be surprised that philosophical ideas arise in our integrative thinking. We operate within a more or less coherent conceptual system, a system of concepts and assumptions and presuppositions, that determines in advance what form our knowledge and even our experience will take. For example, we would not explain the movement of some object by referring to the action of a ghost. It is not that it is false that a ghost moved the object; rather, it is not even a possibility that a ghost moved the object. Ghosts are not sanctioned under our world view. The concept of a ghost is a superstition, i.e., a pseudo-concept. All our knowledge and thought and experience takes place within a more or less coherent framework of thought. Any apparent knowledge claim must fit into that framework of thought, that conceptual system, or, as in the case of the ghost-explanation, be excluded from the realm of real possibility. Even knowledge generated in different disciplines must fit within this most comprehensive framework of thought; all knowledge must fit together on this highest philosophical level. So, when we carry out this highest kind of integration, eventually we run up against the framework of ideas, the world view, within which we think and experience and have knowledge. Without a grasp of those intellectual forces, one will have difficulty understanding why the culture and its different sectors develop as they do.

So, although PIK is not a philosophy course, it nevertheless relies on and explores philosophical thought essentially and not incidentally. Philosophy has an essential role to play in the integration of knowledge or culture. Its role is not an exercise in the history of ideas, as Collingwood claimed. A central task of philosophy is to elicit and critically assess ways of thought that inform our age and our lives, up to and including the dominant world view of our culture. Unfortunately, many philosophers these days have a truncated view of philosophy that does not acknowledge philosophy's rightful role in integrative thought; both higher education and philosophical education suffer due to this misconception of the philosophical enterprise.