

inclusion of "Readings for Extension and Enrichment." This addition found at the end of each chapter cites references that reinforce the content of the chapter and provides the reader with an excellent resource to follow up on issues raised in the content.

In conclusion, *Teaching from the Inside Out* is a work that lives up to its title. Beauchamp and Parsons have helped us understand that teaching is more than technique and more than an art. Their unearthing of what teaching *is* helps us understand that teaching *is* a way of being that comes from who one is. This work does indeed meet their hope to celebrate teaching, restore pride in teaching, and above all reflect their love of teaching.

Perspectives on the Unity and Integration of Knowledge.

Garth Benson, Ronald Glasberg, and Bryant Griffith (Eds.).

New York: Peter Lang, 1998, 296 pages.

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Is knowledge possible? In the face of so naked a question, the most expert thinker may flounder, and therefore the quest for the answer must begin by conducting an inquiry into the essential nature of what is to count as knowledge and what might justify a claim to have achieved it. This is problematic, because to understand knowledge, it must be done *vis-à-vis* knowledge. The inquiry is further made complex as the verb *to know* is used and demonstrated in a variety of ways, while there is also a variety of forms of the noun *knowledge*. What is needed is to list the common features of knowledge; to decide whether knowing consists of being in a special state of mind; to discuss the method to be used to pursue it; and to decide what knowledge and its many forms give us a right to. No single source is responsible for all knowledge; the various acknowledged sources are all complementary although most thinkers choose to make one source more basic than the others. However, in the tradition of philosophers who see everything not in isolation but as part of a whole, the forms of knowledge, their sources, and the kinds of understandings they permit are all relevant to how we envisage knowledge. The present volume is devoted to the exploration of the idea that there exist many perspectives for a "unity via integration" (p. ix) of knowledge. On the surface, the 15 papers pursue an interdisciplinary integration, yet this is not simply a call for a solution to a specific problem within epistemology, but the universal problem of knowledge itself.

The authors do not succeed in laying out a definitive method for the concision of knowledge; instead they offer a discussion of the problems and questions that fragmentation brings to the whole idea of knowledge and how the lack of such unity impedes the understanding of their individual disciplines. This is the primary step in understanding, for if we are to offer a viable

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solution to a problem, then we must first clarify the questions we are asking. Eighteen authors with diverse approaches to understanding reality offer either pragmatic or esoteric suggestions for the (re)unification of what has been dismembered by time and by the proliferation of information.

The editors, contributors themselves, have organized the papers under three general perspectives: the scientific, the theological, and a combination of the pedagogical and technological. Supporters of the first perspective examine knowledge fragmentation and the role that science plays in that fragmentation and discuss the idea of knowledge and how knowledge is possible from the view of the scientist. The second section contains essays that consider the ecumenical movement in religion. Integration from this perspective means the bringing together of various spiritual outlooks, identifying the knowledge that such consciousness represents, and noting its importance to human development. The possibility of theological rapprochement forces the authors to juxtapose one area of knowledge with another, to encourage tolerance of ideas in a nonfragmented context, and to address the relationship between religious and nonreligious interpretation of reality. The final group of papers addresses the possibilities that are open to pedagogy through the process of integration of the experiences that are the foundations of both the forms and the ways of knowledge.

Of great value to the philosophy of education (which by its very nature implies a unity, a wholeness of knowledge) is the introductory essay by Allen R. Utke and the concluding paper of Ronald Glasberg. The first stimulates thought about the idea of consilience of knowledge, asking, "Why do we need to (re)unify knowledge today?" (p. 2), and the latter explains that the value of unifying knowledge rests in a type of "cosmic consciousness" that "represents the final goal of every knower—that is, to know the whole" (p. 268). Utke identifies two components of human nature, which he terms URAM (*Ultimate Reality and Meaning*) and IRAM (*Immediate Reality and Meaning*). "Those who stress the importance of URAM in their lives could be termed unifiers of knowledge," because they seek the ultimate meaning and purpose of life in a holistic sense. "Those who stress the importance of IRAM ... might be termed diversifiers of knowledge" and seek meaning in life through a reductionistic sense. Their questions are based on *how*, whereas the questions of those who stress URAM pivot around *why* questions (pp. 2-3). The human need to know, however, must consist of knowing both why and how, which represents the integration of the various components of human nature. As Garth Benson concludes in his essay "The Integrative Role of 'Why' Questions in Science," "it becomes possible to recognize knowledge for what it is—a unified human creation ... There is a unifying thread that runs through human understanding" (p. 62). I believe that it is the tension between IRAM and URAM that drives learning forward by creating doubt and resulting in conflict and skepticism that is necessary for knowledge *to happen*. In a second contribution (pp. 85-103), Utke offers Michael Faraday and his 19th century work as a possible historical model for (re)unifying knowledge and points to how Faraday's work was directed by a "quest to strike some individually appropriate, integrated, holistic balance between being disciplinary, theoretical, interdisciplinary, and pragmatic" (p. 98).

The publication of these essays, four years after their presentation at the 1994 founding conference of the Association for the Unity and Integration of Knowledge, coincided with the release of Wilson's (1998a) *Consilience, the Unity of Knowledge*: a grand, coherent conception for the synthesis of all ways of knowing. Wilson reminds us that enlightenment thinkers knew a lot about everything, today's specialists know a lot about a little, and postmodernists doubt that we *can* know anything at all. But Wilson, in the role of a 20th century counterpart to Faraday, argued against this latest trend and held that we can know what we need to know and that we will discover that underlying all forms of knowledge is a fundamental unity. Wilson searched for the proof that everything in our world is organized in terms of a small number of fundamental natural laws that comprise the principles underlying every branch of learning. The research reported in the chapters of *The Perspectives on the Unity and Integration of Knowledge* are driven by a similar desire.

Most of the essays reach the conclusion that the key to arriving at understanding, and understanding as used here is close to *meaning*, is to attempt to link the sciences and humanities, which is possibly the greatest enterprise of the mind. Reality must be viewed as a seamless whole. Understanding reality is knowledge plus something else, placed in a context calling for action. The action as exercised in the unity of knowledge is the appraisal of that knowledge and the application resulting from the elements in the appraisal process, that is, a rapprochement of thought and action. The present fragmentation of knowledge and the chaos that has resulted from it, are not reflections of the real world but, as Wilson (1998b) suggests, the "artifacts of scholarship" (p. 41).

Another expression that signifies the unity in knowledge is *enlightenment*, a term that Glasberg defines as "an awareness of the unity and the interrelation of all things" (p. 73). The perspectives examined are all underscored by the idea that the pedagogical enterprise is at the heart of enlightenment, and it is gained from wholeness brought about by the rapprochement of the different forms of experience. Although lurking in the unvoiced assumptions of each author, what is overtly missing is a dedicated discussion about the fact that creative interdisciplinary teaching is the task of *philosophical teaching* in all the disciplines. Such emphasis is needed in order to cultivate the ability and the kind of attitude on the part of students and teachers that will enable them to conceive of philosophy as the medium of interdisciplinary research. Philosophy must work as an intellectual catalyst among other subjects—a mediator between humanities and sciences (Jung, 1998). Sociologists, ethnologists, psychologists, historians, educationalists, philologists, and specialists in other fields can no longer restrict themselves to empirical research, but must reflect about their subjects in a philosophical manner.

In a complementary train of thought, Peter Staples notes that the world has become a "single place," and as this points to the fact that integration of knowledge is indeed necessary, then "we must also familiarize ourselves with each others' stories, our knowledge about ourselves and who we are" (p. 119). The various forms of knowledge are but different *languages* with which to discuss our understanding of the universe; we must all learn to either speak *all* the languages so that we can all understand each other, or we must integrate the languages into one universally understood way of speaking. Glasberg

suggests that we adopt the idea of “a metadisciplinary terminology by which differences can be transcended” (p. 284). The volume is a heroic attempt at the latter and at the same time reminds the reader that what is equally important to making knowledge a possibility is to understand the questions we are asking in the various contexts, and focus educational pursuits on how they are in fact similar. Interdisciplinary education is about finding answers to those questions by attacking them from many different perspectives and to demonstrate the dependence of one perspective on all the others.

The volume’s contribution to this new version of the ancient debate about how knowledge is possible is the presence of diverse voices. Independently, the papers naturally contain a predilection toward each contributor’s professional background, but together the essays have a coherent thesis and appeal equally to those who come to them from the philosophical, the theoretical, or the practical perspective. The essays, by virtue of the format for which they were produced, cannot fully develop the ideas presented, but they are written for fellow scholars and are well referenced, thereby inviting further and deeper inquiry. The volume has accomplished the task of introducing an authoritative understanding of the complexity of the question and challenges the reader to search for his or her own answers to what constitutes the unity of knowledge. It will serve well those educators in every field who wish to emphasize the importance of interdisciplinarity and reflective dialogue and who are looking for an authoritative platform from which to pursue the process of knowing.

References

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