Unified, Insular, Firmly Policed, or Fractured, Porous, Contested, Gifted Education?

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Much like medieval, feudal nations, professional fields such as gifted education can take shape as centralized kingdoms with strong armies controlling their compliant populations and protecting closed borders, or as loose collections of conflict-prone principalities with borders open to invaders. Using an investigative framework borrowed from an interdisciplinary group of scholars in the social sciences and humanities, four scholars of gifted education analyzed four different analytic levels of our field (practice, research, theory, philosophy) to discern whether gifted education is unified, insular, and firmly policed, or fractured, conflict-ridden, and porous. Each disciplinary structure generates unique advantages, disadvantages, and implications for scholars and practitioners.

Do some leaders in the field of gifted education operate like medieval monarchs, controlling and protecting their intellectual serfs while occasionally laying siege to enemy thought castles? Coleman (2003)

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raised this intriguing notion when he used insightful metaphors to perceive several uses of theory in our field. Interestingly, analyses of several academic disciplines in the social sciences and humanities have revealed similar, feudal-medieval dynamics. The structure of a discipline can affect the methods of scholarly investigation and the ways in which researchers move toward fundamental discoveries. For example, prevailing thought frameworks, or paradigms, can shape and confine the questions scholars raise, the methodology they are allowed to employ, and the interpretations of findings (Akeroyd, 1990; Ambrose, 2003; Borland, 1990; Coleman, Sanders, & Cross, 1997; Kuhn, 1970). Analyzing an academic field to see if it is fractured, porous, and conflict-ridden, or unified, insular, and strongly policed can provide a unique panoramic vision of the field, which can reveal investigative problems and opportunities. Ambrose (2006) recently applied these studies of unified-insular and fractured-porous disciplinary structures to the field of creative studies, discerning some ways in which scholars and practitioners in that field can align themselves more productively with Torrance's (1995) recommendations about excellence in creative work. Looking for these structural conditions in the field of gifted education may clarify some of the barriers to progress we face in attempts to unearth the nuances of high ability.

Additional insight becomes available if we carry out these analyses of the field's structure from four different vantage points or levels of analysis: the levels of practical application, research, theory, and philosophy. Most academic fields incorporate these four levels. The work of professionals strengthens when each level is recognized and the four levels are integrated (Ambrose, 1998b).

In our inquiry, each of the investigators has done considerable work at one of these four levels, and each has served as a journal editor, nurturing and growing the scholarly literature in gifted education. Consequently, we feel well positioned to carry out this broad-scope analysis of the field.

The following questions guide the analysis:

1. Is the field fractured and porous at one level of analysis while showing unity and insularity at another?
2. Is the field moving toward or away from fragmentation, unity, or interdisciplinary porosity?

3. Is it productive or harmful for the field to be fractured-porous or unified-insular at one or more levels?

The analysis and subsequent interpretations are arrayed as follows. In the first section, we describe the results of an interdisciplinary analysis of the structure and dynamics of four academic disciplines from the social sciences and humanities: economics, political science, English studies, and analytic philosophy. Additional insights are provided by some related thoughts from the field of cultural anthropology. The results of these analyses provide the model for our examination of gifted education. In the second section, we provide a metaphorical model representing the field of gifted education as conceptual territory: a partially explored island inhabited by four kinds of professionals including practitioners, researchers, theorists, and philosophers. We use this metaphor to analyze gifted education from four different levels of analysis, beginning with the state of theory in the field, followed by research trajectories and methods, and then practical application, which includes curriculum and program development. Analysis of gifted education through several philosophical lenses concludes this section. Finally, we explore some implications and provide some recommendations for future work in the field.

Evolving Academic Disciplines: Their Structures and Dynamics

Noting that academic disciplines have been evolving over time, and that this evolution tends to receive little scrutiny, historians Bender and Schorske (1997) initiated a collaborative, interdisciplinary analysis of the structure and dynamics of four disciplines from the humanities and social sciences. The analysis contrasted pluralized disciplines such as English studies and political science with tightly unified disciplines such as analytic philosophy and economics.

The pluralized disciplines tend to be internally contested, inclusive of diverse ideas, and in the process of reconceiving their fundamental conceptual frameworks. For example, in the past several decades, English studies saw a proliferation of study topics and theoretical perspectives that had no precedent in the mid-20th century

(Abrams, 1997). Some other scholars seemed to notice these attributes in disciplines outside the scope of the Bender and Schorske analysis. Cultural anthropologist Clifford Geertz (2000), for example, claimed that, "One of the advantages of anthropology as a scholarly enterprise is that no one, including its practitioners, quite knows exactly what it is" (p. 89). In short, pluralized disciplines are somewhat nebulous at any given time.

In contrast, the unified disciplines are firmly bounded, well policed, and reflect confidence in their conceptual foundations. For example, unlike English studies and political science, the disciplines of economics and analytic philosophy are much more resistant to postmodern challenges from feminist and multicultural perspectives. They retain strong consensus about key concepts and theories while remaining resistant to theoretic evolution.

Scrutiny of the evolution of the disciplines over time reveals some interesting patterns. For example, from 1945 to 1960, positivist theoretical currents pressured the disciplines to strive for analytic precision and epistemological certainty, and all four complied to varying extents. Later, social activism in the 1960s and 1970s fomented by the Vietnam War and other sociocontextual influences pressured the disciplines once again. Some disciplines responded more readily than others. The differences between the responses of English studies and economics are revealing. English studies was the most pliable because "the moral claims of ethnic and gender minorities occasioned a virtual revolution in the definition of the discipline's aims, scope, and methods" (Bender & Schorske, 1997, p. 9). In contrast, economics maintained an arms-length distance from social problems, tenaciously preserving its core assumptions and methods. At times during these evolutions a single school of thought ascends to prominence and pushes to the sidelines investigative trajectories that don't fit its core assumptions. Such epistemological and methodological hegemony occurs much more readily in the unified disciplines.

Evolutionary patterns suggest that the categorizations of disciplines in the Bender and Schorske study likely will transform over time. The pluralized disciplines may become even more fragmented, or they may move toward some forms of inner consensus. Currently unified disciplines may continue their calcification or they may begin to splinter. As an example of the latter case, Kreps (1997) suggested

that the field of economics, while currently unified, is showing signs of contestation and fragmentation. Its core assumptions that economic systems are prone to full-equilibrium states, and that economic actors make fully rational decisions, are being shaken by proponents of theories that emphasize nonequilibrium states. Revealing the traditional boundedness and unity of the field, Kreps described economists' default response to earlier criticisms of the canons of hyper-rationality and equilibrium: "Until recently mainstream economists mostly shrugged their shoulders at such attacks and claimed that the alternative was theoretical anarchy—ad hockery run amok" (p. 92). But Kreps also claimed that economic thinking is facing considerable pressure from increased work outside the canonical models and from increases of interdisciplinary borrowing from biology, sociology, and psychology.

Exploring the Conceptual Continent of Gifted Education From Four Levels of Analysis

Academic disciplines require energetic work at four levels of analysis to remain productive and vibrant (Ambrose, 1998b; Ambrose, Cohen, & Tannenbaum, 2003). These levels are portrayed metaphorically in Figure 1. Here, the field of gifted education is shown as an island continent with theoretical valleys, philosophical mountain peaks, and farmland of varying fertility. Four kinds of professionals work on this continent. Practitioner-colonists till the practical soil, developing gifted programs, designing curricula, and implementing instructional strategies. Research surveyors use their incisive quantitative or qualitative empirical methods to map out the conceptual terrain of the field in hopes of making the work of practitioner-colonists more efficient and coherent. Theoretical expedition leaders bring groups of followers into new conceptual valleys in search of more fertile conceptual soil. Finally, philosophical mountain climbers ascend various philosophical peaks (e.g., Mt. Utilitarian, Mt. Existential, Postmodern Peak, Mt. Phenomenology), trying to gain panoramic views of the island continent, hoping to discover new conceptual terrain that may include more promising theoretic valleys and more fertile practical soil.

The field of gifted education will operate better if it embraces the work of all four of these professionals, and if all four are in
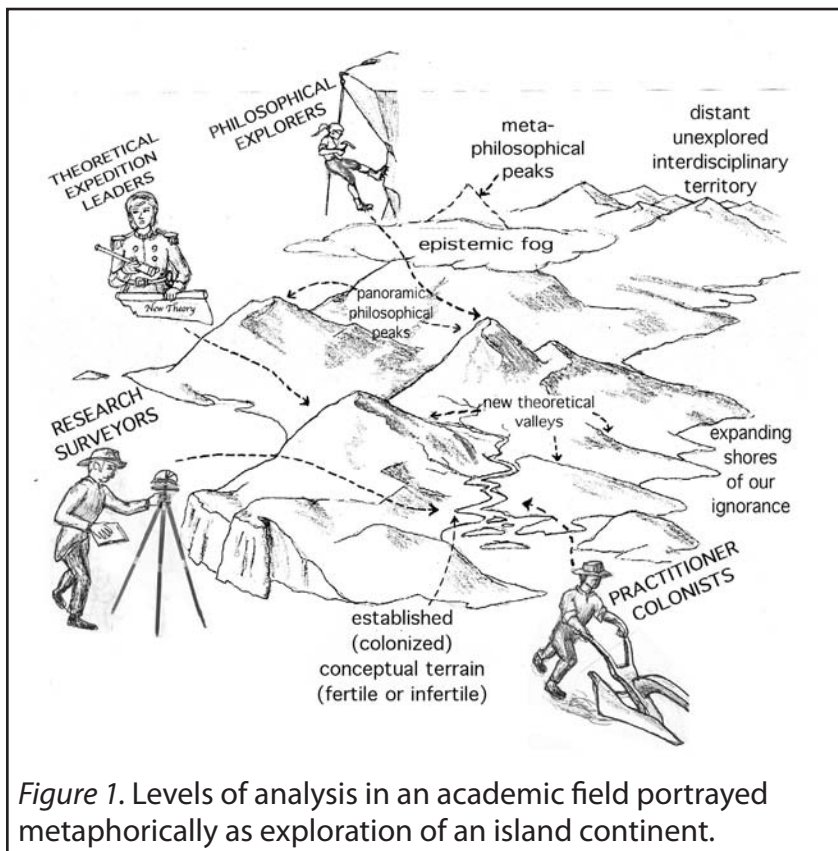
PHILOSOPHICAL EXPLORERS

THEORETICAL EXPEDITION LEADERS

New Theory

distant unexplored interdisciplinary territory

meta-philosophical peaks

epistemic fog

panoramic philosophical peaks

RESEARCH SURVEYORS

new theoretical valleys

expanding shores of our ignorance

PRACTITIONER COLONISTS

established (colonized) conceptual terrain (fertile or infertile)

Figure 1. Levels of analysis in an academic field portrayed metaphorically as exploration of an island continent.

communication with one another. Practitioner-colonists can organize their tilling more efficiently by following the contours mapped by research surveyors. Practitioner-colonists and research surveyors might find more fertile conceptual soil if they follow theoretical expedition leaders into new valleys. The colonists, surveyors, and expedition leaders all might benefit from the work of philosophical mountain climbers whose detail-poor but panoramic views from a height reveal new mountain ranges in the distance. But these contributions are not all one way, from macro-philosophical to micro-practical. Those at the ground level can lack a grasp of the big picture, so they need guidance from colleagues who enjoy panoramic views. Correspondingly, those viewing the field from a height lack understanding of fine-grained, practical detail, so they need guidance from those close to the ground. For example, the practitioner-colonists intimately know the fertility of their

local classroom soil plots, metaphorically speaking, and knowledge of this fertility can guide the surveyors, expedition leaders, and mountain climbers. Action research can provide much of this guidance. In addition, research surveyors can inform the theorists. Just as the contours on an incomplete map can guide explorers, the work of our research surveyors can suggest productive directions for new theoretical expeditions. Finally, all in the field can benefit from forays into the distant interdisciplinary terrain from which they might derive new ideas and methods. Each of the analyses in the subsections to come arise from the work of these four residents of the gifted-education continent.

The State of the Field at the Theory Level

If the beginning of our field arbitrarily is set as the start of the last century, we have had 110 years to generate and refine theoretical ideas. Relatively little theoretical activity has gone on or is going on today. Theories are present in the literature; few are directly geared to gifted and talented populations, and rarely are attempts made to test them.

The primary question of this section is how does theory function in our field? As Ambrose (2006) has asked more specifically: Is gifted education unified, insular, and firmly policed, or fractured, conflict-ridden, and porous from a theoretical vantage point? The answer is yes, some of both, not either-or.

This section explains how we arrived at this conclusion. A discussion of theory in gifted education requires definition of two nebulous concepts: gifted and talented, and theory. Gifted and talented is a field concerned with the development of persons who are gifted and talented through the life span, with particular attention to young persons and the areas of identification, education, and training.

Defining theory is a more complex matter. A theory orders ideas so that the relationships among events, persons, and settings can be understood with more clarity than without it. Theory implies a system of some sort that explicitly states relationships among events, persons, and variables that can be studied. Theory contains carefully crafted propositions about a phenomenon. Theory is neither truth nor an eternal explanation. Theories in science are created to be useful, to be discredited, and to be replaced by better explanations. A useful

theory increases our understanding, fires our imagination, and pushes scholars to think deeply and clearly. It generates new questions that provide a basis or heuristic for long-range inquiry, which may lead to improved practice and to a better theory. A useless theory attempts to explain everything about a phenomenon. Informal, tacit "theories" held by individuals are opinions so we do not consider them in this section; however, we address their influence on research in the next section. Theories in the social sciences such as education, psychology, and sociology are unlikely to move to an axiomatic form as in the physical sciences. Finally, theory is not the exclusive property of either quantitative or qualitative researchers.

Cataloging Theories/Models

Many searches have been conducted using theory as one descriptor. In preparation for this article, earlier searches (e.g., Borland, 2003) were replicated and were augmented with a Google scholar search. The results were essentially the same—a list of theories with a few additions. The theories and their sources were read to determine how they were used as scholarly events. The list divided itself into two groups: theories/models unique to our field and theories from outside our field. The latter is the biggest group. All of the theories have multiple citations, so only the theorists' names are provided here. They are broadly categorized here to aid explanation. Some examples are: multiple intelligence theories (Sternberg, Gardner); developmental theories (Feldman); learning/developmental theories (Ericsson, Bloom, Vygotsky, Bandura); creativity theories (Sternberg, Gruber, Torrance); motivational theories (Gottfried(s), Csikszentmihalyi, Rea); social-psychological theories (Festinger, Goffman); and personality theories (Dabrowski and Piechowski, Erikson, Maslow). These theories are brought into the field because they have potential for explaining and answering questions pertaining to advanced development, high ability, domain-specific creativity and development, genius, prodigious behavior, and other phenomena. The theories are infrequently used to design a research study with samples of gifted or talented people to test the theory's assertions. Significant exceptions are research done by Sternberg and Feldman. More commonly, other scholars introduce the listed theories as possible explanations for behavior of gifted persons in

varying contexts. When the theory is carefully integrated into the discussion, it is useful and credible. When the theory is simply inserted, it amounts to name-dropping. The latter is the more common use.

Locating theories unique to our field is difficult. To be placed in this category, early publication of the theory should be concerned with giftedness. Most theorists are secondarily concerned with our field and primarily focused on their phenomenon of interest. Torrance's life's work is so broad that he might be reclassified into this group. Coleman and Cross (1988) reworked Goffman's theory of stigma to the field of giftedness and talent to understand the adaptive behavior of gifted children. Coleman (2005) created another theory that is unique to the field, which focused on social life in a residential program. Unlike other theorists in this paper, it is a radically inductive, grounded theory intended to increase understanding of a bounded phenomenon with no claim that it applies to other settings.

Much of the most influential work in our field has a theoretical side, but does not meet the definition of theory. Instead of theories, those used in much of our literature fit the pattern of models, based on descriptions from Marx (1963), because they are primarily concerned with validating the claims of a model and not with the purpose of increasing our understanding of a phenomenon. Examples of well-known models are the Differentiated Model of Giftedness and Talent (Gagné, 2003), the Schoolwide Enrichment Model (Renzulli & Reis, 1985), the Talent Search Model (Stanley & Benbow, 1982), and the Integrated Curriculum Model (VanTassel-Baska, 1998). These models have not stimulated the emergence of theory.

Returning to Ambrose's questions and this explanation from a theoretical standpoint, theories do not emanate from our field. Using the definition proposed earlier, which delineated the broad issue of development and the narrower, more practical issues of identification, education, and training, the developmental issues are where the theories seem to lie (and this is outside the field) and the latter practical issues are where the models reside (and this is inside the field). That is why our field is model-driven, theory laden, and atheoretical.

Are we unified, insular, and firmly policed from a theoretical vantage point? We are not unified in that we have no theory or small group of accepted theories that capture the field for most of us. Thus, we cannot be insular theoretically, nor do we have a theoretical base

for policing ourselves. Reading the journals in our field quickly reveals that theory is rarely the foundation for scholarly progress.

Are we fractured, contested, or porous from a theoretical perspective? We are not fractured theoretically, but the models split us into interest groups. In this sense we are internally contested as driven by our models, but it is not really a theoretical split. We are porous, that is, pluralized, inclusive of diverse ideas. We are so porous we have neither a way to exclude theory, nor a way to bring new theory into our field, nor a way to decide what needs to be reconceptualized.

What does the future hold for theory? If past is prologue, then we will continue in the present vein. We have few examples of long-range, theoretically driven research in our field. Ambrose (1998a, 1998b, 2003, 2006, 2009) has encouraged us toward a more theoretically oriented direction. The substantial practical orientation that pervades the field likely works against the development of theory. The models might be expanded into testable theoretic propositions. For example, the data around the talent search model could be reorganized in this manner. Right now, it is too ambitious to anticipate comprehensive theory. Another promising path would be to use observation and inference to build middle ground theory explaining behavior in smaller contexts as a foundation for combining into a broader theory.

The Research Level of the Field

When considering the research in the field of gifted education, one must recognize that the field is not one single group; rather, it is made up of numerous groups of stakeholders. There are those who provide direct educational services to students with gifts and talents; those who prepare preservice teachers to work with students with gifts and talents; those who provide specific, residentially based programs along with distance-based complementary services (e.g., educational talent search programs; those who specialize their counseling practice for students with gifts and talents); professionals who provide consulting work to schools that have students with gifts and talents; those who conduct research as relatively independent agents; those who conduct research out of a particular tradition; those who work out of a particular graduate program that has a model-based conception of

gifted education; administrators of programs and schools for students and talents; and professionals who develop materials such as curriculum for teachers of students with gifts and talents. The parents and families are a part of this group and not far from it are stakeholder groups who believe in a relationship between the future success of these students and the betterment of society. Each of these groups has a different perspective from which to consider the hypothetical construct called giftedness.

Some study the ideas surrounding the construct empirically, while others develop more implicit notions of giftedness. The implicit notions are often deeply held beliefs that remain largely unknown to the holder. This is especially true when the beliefs emerge from one's own experience or observations. Because these groups are affected by, and deal with, the research side of gifted education in very different ways, and because many hold views about giftedness without any formal training about it, it is easy to see the field of gifted education as necessarily fractured, pluralized, and internally contested in its fundamental conceptual foundation.

To illustrate further the tendency for hypothetical constructs to generate varied interpretations, consider the term *negative reinforcement*. Behaviorists coined the term to describe a type of reinforcement process and schedule. Although its effectiveness has been studied and reported hundreds of times, the concept of negative reinforcement is widely misunderstood by teachers, parents, students, college professors, administrators, and others. These represent stakeholder groups similar to those in the gifted group. As with the term negative reinforcement, the familiarity of the word *giftedness* within our personal lexicon makes misunderstanding likely. Therefore, it is reasonable to assume that part of the fractured nature of the field can be tied to lack of effective instruction about the construct that transcends group boundaries.

In addition to all of these groups' differences and the inherent conceptual underpinning of the field they operate under, there are other reasons for the current state of conceptual fragmentation that may be as powerful if not more so in predicting the future of the field. The first is the explosion in the conceptions of giftedness being considered among the professionals who write on the topic. For example, in a recent textbook, Coleman and Cross (2005) identified several categories of conceptions of giftedness currently in operation. Four of the

most popular of these categories are IQ, achievement, creativity, and de facto. The IQ-based definition and its derivations are still favored among a large group of researchers. Stanley and Benbow's work has convinced many that the achievement conception of giftedness is hard to argue against. Creativity has grown so widely internationally that it has several journals dedicated to it and gets considerable attention. The Gagné model, Renzulli model, Gardner model, and Sternberg model all have supporters today.

Additional evidence of the explosion of differing conceptions of giftedness comes from two publications. In 2003, Borland edited a book titled *Rethinking Gifted Education*. This book forwarded 18 chapters on thinking about giftedness, bringing to bear a wide range of thoughtful alternative conceptions of giftedness. Sternberg and Davidson's (2005) book, *Conceptions of Giftednes*s (2nd edition), recently emerged. It, too, brought the intellectual market many new ways of conceptualizing giftedness.

When these two facts—the myriad stakeholders with their idiosyncratic tacit conceptions of giftedness and the dozens of conceptions of giftedness on the intellectual market—are considered together, it is easy to conclude that the field is fractured and contested. However, even more evidence comes from our editorial work. As editors of the major journals in the field, it is clear to us that, in addition to these reasons for a fractured field, we have found a few conceptions that seem to remain viable. Interestingly, although a few have some research support, others have little research to support them. When one studies the history of the field of gifted education as it pertains to the intellectual marketplace, it is easy to see the influence on the marketplace of a small number of authors who work at universities. Some have numerous doctoral students who graduate with backgrounds in gifted education, and others, while having doctoral students, do not tend to focus on gifted education per se. Included in the first group are well-respected scholars such as John Feldhusen, Joe Renzulli, and Paul Torrance. Included in the second group are Françoys Gagné, Howard Gardner, Robert Sternberg, and others. In the settings where a scholar has forwarded conceptions of giftedness and has numerous doctoral students in gifted education, the protégés have continued to forward manuscripts touting the basic ideas of the original theorists. Surprisingly, few followers of these programs have published empirical

evidence of the veracity of the original theories. The theories remain popular among the groups that tout them and also influence those who work in schools with gifted children, despite limited empirical support. The continued attention to and presentation of these theories serve to perpetuate them in the market of ideas, somewhat through their application.

In the second group of theorists without an ongoing stream of doctoral students in gifted education, ideas exist in the intellectual market primarily from researchers forwarding their own ideas after periods of extended study, and by subgroups of stakeholders who resonate with the theory and who apply it in schools or develop materials based on it. In the two categories of the theorists' work, their ideas remain and compete for support. Over time, the acceptance of the ideas has been predicted less by research support and more by the degree to which the original researcher works within a large-scale institution that includes the doctoral students who provide a variety of types of support. These supporters publish manuscripts touting the original idea, promote the idea for implementation's sake within schools, offer staff-development training, write grants based on the particular conception at its core, or assist in running a research center. One outcome of these behavioral patterns has been the intellectual equivalent of a feudal system with lords and competing armies along the lines of the feudal metaphor developed by Coleman (2003). Those who maintain the most financial and human resources are competing favorably. Those without the resources are unable to be as influential with the stakeholders who determine viability in the market. An additional aspect of the intellectual marketplace relates to the extent to which the theories have immediate applicability. The myriad creations of materials based on the numerous conceptions of giftedness fuel support for certain conceptions while precluding other conceptions from being experimented with in a particular setting.

Complicating these matters is the fact that researchers often conduct and report on their studies with minimal articulation of which construct is defining their subject pools. As editors, we have had to work hard to obtain the details needed to know what assumptions are actually underpinning a particular study. Moreover, it is quite common that disciples of particular programs assume that the conceptual model they champion is widely accepted and has been effectively

proven by a substantial amount of research. This is one of the most difficult shortcomings to overcome given the fact that virtually none of the popular conceptions of giftedness have received enough research to fully substantiate them. In some cases, research about its application in schools or a product representing the particular model is offered, based on the assumption that the conception's veracity is proven. The feudal camps exist based on conceptions of giftedness that have yet to be substantiated through research. In essence, our field is quite fragmented at the research level, divided among several groups, none of which has yet to establish firm intellectual footing.

The State of Gifted Education Practice

Just as Jared Diamond (1997) pointed out that different cultures go through evolutionary stages in their development as they progress toward societal self-government, as a key to unified social thought, so too in the field of gifted education, thinking may be characterized in a similar way. In the field of gifted education at the practice level we are still at the stage of medieval thought characterized by camps, fads, and imperfect attempts to gain coherence.

While the most promising development in recent years at the practice level is the educational reform call for research-based best practice, hypothetically leading to greater coherence in practice, the efficacy of this model is less than stellar. There is reason for pessimism even about this potentially powerful way to transform practice in the field of gifted education for the following reasons.

First, as mentioned earlier, the field does not have a cohesive research base that has implications for practice in all relevant areas. Rather, we have studies in selective areas only that may suggest appropriate practices at the classroom level. A recent volume on what works in gifted education (Robinson, Shore, & Enersen, 2007) identified 14 practices that reach the level of evidence across studies that are sufficient to warrant practitioner use. Furthermore, statistical techniques such as meta-analyses suggest that only selected instructional, management, and curricular approaches have effect sizes sufficient for schools to use for educational decision-making on gifted program practices (Rogers, 2002). Even within these research-based practices,

cited by both types of reviews of research, schools must make choices with respect to the types of acceleration, the types of grouping, the balance between group and independent work, and the efficacy of particular curriculum and instructional approaches at different grade levels and with diverse gifted learners.

Second, schools do not use the available research that is found in the field of gifted education. Decades of research on acceleration, for example, including a nationally disseminated report (Colangelo, Assouline, & Gross, 2004), suggest the efficacy of this approach in all forms for working effectively with gifted learners. Yet, practice, especially at the elementary level, is devoid of the approach in most settings, even those where gifted students are self-contained.

Third, schools buy into research-based best practice as it is expounded by textbooks and consultants. Unfortunately, experts use rhetoric to call their work research-based when in fact it is not supported by credible studies relevant to classroom applications. For example, the brain-based learning movement has promoted the connection between neurological brain function and classroom-based instruction, clearly a linkage that has not yet been established by the research at the level of educational application, even though the scientific foundation is being laid.

Fourth, schools experience difficulty interpreting research on gifted learners in an appropriate way because so much reform-based research in the last 20 years has been focused on students who have difficulty learning. The resultant research findings may not apply to gifted students, often because they were not a part of the sample or because researchers have not conducted subanalyses of the learning effects on them. For example, the program Success for All (Borman et al., 2007) presents strategies for struggling readers, not for proficient ones, but that intervention is used with all students, regardless of the targeted findings.

Finally, in many contexts, schools ignore the idea of research-based best practice entirely in a rush to keep up with the fads of the field as presented in conferences and workshops. Learning about new thinking in a field is a good thing, but it is an insufficient base on which to alter practice until effectiveness research is available. Just because someone in authority suggests that an approach might be useful does not make it so. For example, the early teaching of foreign language to

gifted learners is a well-researched best practice, yet it is only sporadically applied in gifted programs. New models of curriculum often are applied before any evidence is available that suggests they work.

Therefore, the field is fractured and porous at the practice level, which is informed by the levels above it, implicating them as well in this state of affairs. Furthermore, practice in gifted education likely will continue to be fragmented due to several interrelated factors:

1. We make choices for practice in the absence of research-based evidence.
2. We do not implement faithfully the practices we do adopt. Studies have documented well the problems with treatment fidelity and curriculum drift (Gallagher, 2006).
3. We do not institutionalize programs and strategies that work; instead, we opt for something new in their place.

For all of these reasons, practice in gifted education does not progress; rather, it stagnates in some places and regresses in others.

If there were a level where it may be a distinct disadvantage to be fractured and porous, it would be at the practice level where the grounded understandings and research evidence on what works should be flourishing. A field cannot thrive if its theoretical and research findings are not faithfully translated and applied by practitioners. Other levels may benefit from greater openness, porosity, and fragmentation as the value of new paradigms enable a field to reinvent itself, to solve new problems, and to progress in a new direction (Kuhn, 1970). In a postmodern environment where education is still operating on a modern model, theory-building and subsequent research in a field will need to be interdisciplinary and collaborative in order to evolve in a progressive sense. Yet, the press for a single paradigm of educational research as seen in the current federal agenda works against the important ways that we might grow. Staying open and receptive to new ideas should characterize the field at the theoretical and research levels, even as research-based evidence should always be the guide for practice.

Philosophical Perspectives on the Field

From philosophical vantage points, the field of gifted education appears to be internally contested, inclusive of diverse ideas, and in the process of reconceiving its fundamental conceptual frameworks. Although some constructs and investigative methods persist, new ideas do make their way into the field and challenge prevalent assumptions.

Employing our terrain metaphor, some insights about high ability become visible from the root-metaphorical world view mountaintop. A world view is a broad conceptual lens based on a root-metaphorical filter through which an individual perceives reality. Each of four world views implicitly shapes our thought and behavior (Overton, 1984; Pepper, 1942). Individuals dominated by the mechanistic world view see reality as machine-like, and tend to favor reductionist research methods. Although mechanists enjoy the advantages of prediction and control, they tend to miss important phenomena such as aesthetics, affect, holistic interconnections, and the shaping influences of context. The contextualist world view encourages thinkers to see phenomena as ongoing events within their contexts. Contextualists look for the unpredictable emergence of novelty and the subtle shaping influences of context on phenomena. The organicist world view emphasizes integrative holism and the long-term, teleological development of systems. The formist world view highlights widespread patterns of similarity, such as interdisciplinary similarities in the behaviors of complex adaptive systems, which are revealed by complexity theorists.

Contextualists, organicists, and formists tend to lack the precision of mechanistic thinking. Consequently, if the work in a field comes excessively from any one of the four world views, without sufficient attention to the other three, that field suffers from dogmatic insularity and approximates the unified-insular pattern in the Bender-Schorske (1997) analysis of disciplines. Conversely, if work in the field comes from multiple world views, it is likely that the field is fractured and porous at the philosophical level because adherents to differing world views tend to disagree vehemently with one another (Overton, 1984; Pepper, 1942).

Gifted education seems to be somewhat fragmented from a world-view perspective. Ambrose (1998a) discovered that research in gifted

education strongly favors the mechanistic world view because it is dominated by positivist investigative methodology, which is rooted strongly in the tenets of mechanism. However, the topics of study tend to favor the creativity and context sensitivity of contextualism and the integrative aspects of organicism. For example, emphases on interdisciplinary connection making and curriculum integration (e.g., VanTassel-Baska & Stambaugh, 2006) are strongly organicist and contextualist. A follow-up world-view analysis would reveal whether or not these methodological and study topic favoritisms persist today.

Other philosophical mountain peaks in the gifted education island continent can provide different views from a height. For example, a view from the utilitarian mountaintop reveals much emphasis on maximization of personal benefit for the individual child, and maximization of tangible benefits to the nation when our greatest *resources,* the minds of gifted young people, are enhanced vigorously for practical ends. Advocating the development of more scientists and engineers to strengthen national competitiveness fits this pattern (e.g., Subotnik, 2006). Views of the child as self-interested rational actor, or as national resource, derive from rational-choice theory, which dominates the social sciences and draws from utilitarian philosophy (Beckert, 2002; Monroe, 2003).

Still other philosophical mountaintops reveal different terrain with additional groups of explorers, surveyors, and settlers. Growing emphases on the lived experiences of the inner child (Cross, 2006; Grant & Piechowski, 1999; Schultz, 2002), and the spiritual dimensions of giftedness (e.g., Chauvin, 2000; Kerr & McAlister, 2000; Lovecky, 1998; Piechowski, 2000, 2003; Reynolds & Piirto, 2005) derive somewhat from phenomenological and transcendent philosophies.

There are many more philosophical mountains to climb, more than we can consider here, so additional philosophical analyses are needed to generate the big-picture guidance necessary for productive exploration in the field. Views from just the few philosophical peaks we have considered suggest that our field likely fits the pattern of the pluralized, internally contested disciplines, which are inclusive of diverse ideas, and in the process of reconceiving their fundamental conceptual frameworks.

Implications for Gifted Education

The Bender and Schorske (1997) analyses of disciplinary structures and dynamics revealed that excessive unification, insularity, and policing is counterproductive because it traps a discipline within tired, old assumptions, and leads professionals to engage in inefficient or counterproductive practices that otherwise could be replaced or corrected with exposure to more promising, innovative theory, research, or practical application. Conversely, they found that the opposite error, excessive fragmentation, porosity, and contestation, can generate uncertainty and chaos in a field because there is no firm ground for solid footing. Combining the Bender and Schorske portrayal of disciplinary structure and dynamics with the four levels of analysis derived from Ambrose (1998b) and articulated in this article, these two counterproductive extremes are portrayed graphically in Figure 2.

At all four levels of analysis the field of gifted education appears to fit the pattern of fragmentation, porosity, and contestation. We call this horizontal fragmentation because it occurs horizontally along each level of analysis. For example, the field is broken horizontally across the level of research because interest-based camps cohere around differing, favored conceptions of giftedness. Across the level of theory we tend to be atheoretical but still fragmented horizontally, relying on competing models that promote particular conceptions of giftedness instead of viable theories that can be tested. Across the philosophical level, we are fragmented by adherence to differing world views, which implicitly frame our very conceptions of reality.

The field appears to manifest an additional form of fragmentation not emphasized in the analyses of the social science and humanities disciplines (see Bender & Schorske, 1997) or in the analyses of the field of creative studies (see Ambrose, 2006). We are vertically fragmented between the levels because there is little coherence or connection from one level to the next. For example, the level of practice is disconnected from the level of research because many textbook authors and consultants promote particular curricula and instructional methods through the use of rhetoric when those curricula and methods have little or no research support. Moreover, the atheoretical nature of the theory level makes for disconnection between theory and research. The level of philosophy is disconnected from the other
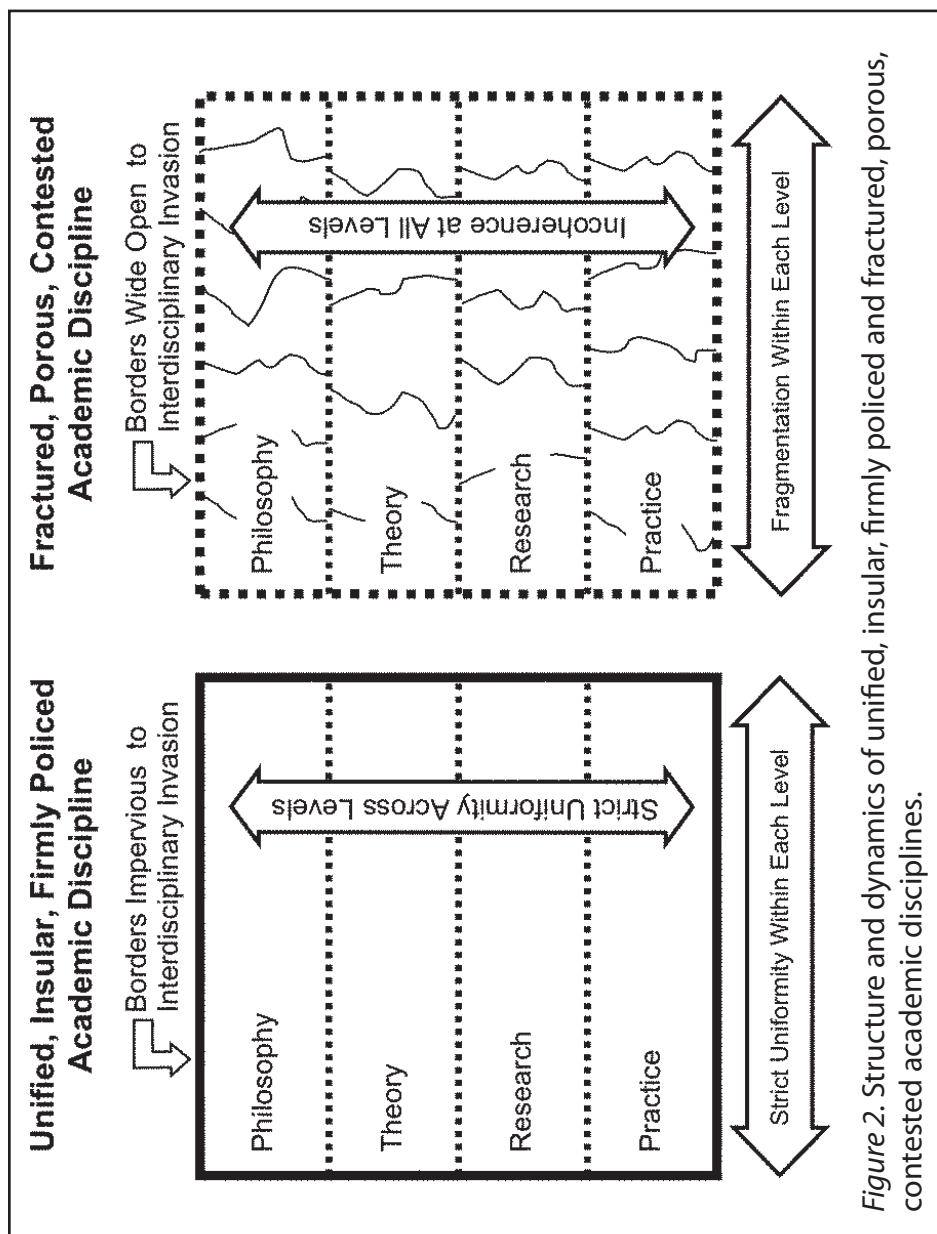
Figure 2. Structure and dynamics of unified, insular, firmly policed and fractured, porous, contested academic disciplines.

levels because so few professionals attend to it. We are atheoretical but we may be even more aphilosophical.

In order to become more unified, the field might attempt one of two strategies. First, it can attempt to emulate the unified disciplines, such as analytic philosophy or economics, by adopting a single, over-arching, dominant theory that brings researchers and practitioners into conformity. Alternatively, it can follow Coleman's (2005) lead by using observation and inference to build a number of solid grounded theories that don't generalize well but can provide helpful pieces in a puzzle-like mosaic of high ability. Even without considering the difficulty of the first approach and assuming it could be accomplished, it may be counterproductive to adopt a grand theory because it could push the field toward the dangers of excessive homogeneity and insularity. On the surface, the second option looks like it could generate even more fragmentation and therefore not rescue us from our current chaotic state. However, it could be the most viable option because high ability may be so complex that it requires a mosaic, constructed from solid theoretic pieces derived from credible research, because a grand theory cannot capture it.

Another discipline provides a strong, productive precedent for a mosaic-like collection of locally grounded theories. According to Geertz (2000), a prominent cultural anthropologist, his field is centrifugal and fragmented by its very nature because its purpose is to study the particularities of local cultures in far-flung regions of the world. In spite of its fragmentation, the field has progressed well and has extended knowledge of the human condition considerably.

In the field of gifted education, the test of the worthiness of the second option would be discerning whether or not the development of a mosaic of research-based grounded theories would provide sufficient bases for program development, curriculum, and instruction. From the vantage point of this analysis, it looks somewhat more promising than our current collection of faith-based practices, which are supported by faith in the merit of particular practices as opposed to solid, empirical support.

Concluding Thoughts

Returning to the island-content metaphor in Figure 1, an excessively unified field would be dominated by a single theorist, or a small cabal of theorists who strongly adhere to a singular theoretic vision. The leader(s) would confine the research surveyors and the practitioner colonists within an isolated theoretic valley, claiming it was Shangri-La, and would punish researchers or practitioners severely for straying over the ridges into other valleys. A dense cloud of epistemic fog would shroud the philosophical mountain peaks so no one would even think of doing any philosophical climbing to gain a panoramic view of the field.

In contrast, the professional population in an excessively fragmented field would be distributed into many small fortress-like villages scattered throughout a number of theoretic valleys. Each village would be ruled by a chieftain who would influence his or her followers with a preferred theory or model. Any pathways connecting these dispersed villages would be poorly trod and, when infrequent intervillage visitations did occur, they would be for the purposes of skirmishing. The philosophical mountain peaks would be clear of epistemic fog but few would think of climbing because most would assume there is nothing worth seeing in other villages or valleys anyway.

The most productive island-continent would contain some dynamic practitioner communities located in several theoretic valleys that had been well mapped by research surveyors. Vibrant intervillage commerce would take place along well-traveled roads. Of course, tribal conflicts would occur but they would be managed through energetic dialogue and diplomacy instead of armed conflict. Theoretic leaders would take groups of research surveyors and practitioner-colonists on frequent expeditions into new theoretic valleys and would establish new settlements where they found fertile practical soil. These new settlements would build roads connecting back to the older villages. Philosophical mountain climbers would be ascending most of the peaks looking for promising new territory and their guidance would encourage idea traders to set off toward the distant interdisciplinary lands in search of productive commerce. From philosophical heights, the collection of diverse villages located in well-mapped, fertile terrain would look like a giant mosaic.

We may never attain this preferred settlement pattern but more attention to the virtues of local, grounded theory building, along with stronger ties between the four levels of analysis, could nudge our field a little more toward coherence and away from the chaos of excessive fragmentation. More attention to the structure and dynamics of the field can reveal the biases, political forces, and future possibilities that confront scholarship and practice. It can make researchers and theorists aware of traditional, tacit influences on their work and their own potential entrapment within current orthodoxies. Broad-scope analyses of the evolution of the field also may reveal whether or not some of those orthodoxies are still productive and vibrant or tired and desiccating.

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