

Coming to Terms on Critical Thinking

INTRODUCTION

The attention given to critical thinking in the last several years has led to an ever-increasing number of conflicting strategies and definitions. For example, one camp might claim that critical thinking is detached from the disciplines and is merely another name for either formal or informal logic. Other camps may, on the other extreme, plunge critical thinking absolutely into a discipline: to some it means no more than giving good discipline-accepted reasons; or to others it is the capability to do the "right thing" at the "right time." These positions should be found unacceptable for none is capable of successfully integrating critical thinking both into the disciplines and also across a curriculum containing many disciplines. That critical thinking should facilitate both intense specialization as well as inter-disciplinary connections seems the implicit rationale for its increasingly widespread implementation, especially as a part of competency-based curricula. Some recent literature begins to explore the dialectical dimension of critical thinking, but more important contributions have been made by the Institute for the Advancement of Philosophy for Children which develops the dialogical aspect. The invaluable contributions of Dr. Lipman and Dr. Sharp have greatly influenced the ideas in this essay which is intended to promote even further their insights into the critical thinking conversation.

In the following essay, I will describe a three dimensional model for critical thinking. In the first section, I will delineate the linear and two dimensional aspects; in the second, the aspects of transcendence and depth — the spherical dimension. After a brief conclusion, some implications of my description of critical thinking will be explored. A listing of several of the specific skills for critical thinking can be found at the end of the essay.

IN AND OUT OF THE DISCIPLINE: THE LINE AND THE PLANE

The very complexity of thinking partially accounts for the tremendous diversity of views that mark its definition. This essay begins with the assumption that this diversity can be diminished by attending closely to the term "critical" as a specific descriptor by which questions are raised that promote conversations (dialogues) within a single discipline and among several disciplines. This process is comprised of those skills and dispositions necessary to animate and guide this dialogue in a creative and communal manner. To put the matter differently, critical thinking takes place only when the critical thinker stands both within a discipline as well as outside it. The term "critical" demarcates proximity and distance.

Perhaps it is best to clarify how critical thinking is simultaneously in and outside the discipline — that is, how critical thinking is neither discipline specific nor discipline-neutral. Consider the following example: Although the

thought of the literary critic is different from that of the sociologist, they are not totally dissimilar, for one can usually read the works of the other without special training. The literary critic would discover in the sociologist's work a care for clarity and cogency, he could discern structure and rule-governed discourse, and he could read its words — he could find meaning in the discourse. Thus precisely because the critical thought of the literary critic and that of the sociologist are not discipline-specific, one can think in the two disciplines without tremendous difficulty. But a difficulty in reading from one discipline to the other persists because although clarity, cogency, structure and words are similar to both disciplines, these factors are in and of themselves not sufficient to enable one to move effortlessly from one discipline to another. Even though both the literary critic and sociologist prize cogency and clarity, and both write with structure and in rule-governed discourse, different criteria are used by both. Thus the similarity does not stem from both disciplines possessing a kind of discipline-neutral structure: clarity is a quality of a statement, not an autonomous property. Therefore most outsiders must struggle with the discourse of another discipline and be initiated into it because the criteria for understanding it are tied to the discourse of the discipline as a whole, to its language and not merely to its logic. To conclude, then: there is difference between the critical thinking exemplified in the disciplines, but the difference is not systematically exclusive; and there is similarity, but not systemic inclusivity. Critical thinking is neither discipline-specific nor discipline-neutral.

But, one might exclaim, it is often difficult to read the latest article on laser research published in the leading academic physics journal, especially if one had never read anything about lasers before, nor possessed a background in physics. This difficulty in reading sophisticated discourse does not negate the validity of the previous example but introduces one to the problem of professionalism and its relationship to critical thinking. More on this in the section on implications. Let it be noted here, however, that the avoidance of professionalism marks an important characteristic of critical thinking. Critical thinking is a unique expression of *liberal learning and the liberal arts*.

As the appropriate mode for both understanding and expressing the liberal arts (that varying collection of several disciplines), critical thinking must serve as a way of facilitating entry into the single discipline as well as into several disciplines. That is, it is both unique to the discipline (assisting one to perceive the distinct vision of the sociologist or literary critic), but also permits one to see how the disciplines interact in a rich variety of ways as, perhaps, different views of the same phenomena. The general tendency, however, is to give the former aspect of critical thinking exclusive emphasis and to provide no care to the interconnections between the disciplines.

That critical thinking should attend to discipline-specific procedures (the "line" in my model) needs no elaboration. Let me then concentrate on how critical thinking promotes interdisciplinary connections (the "plane" in the model).

Critical thinking is interdisciplinary when it examines the procedures of the disciplines through vigorous generation

of alternatives and radical questioning; when it asserts that students are intellectual partners in reading and discussion rather than passive inferiors; when it remains open to a variety of perspectives and strategies for reason-giving. Critical thinking is rooted in thinking for one's self through conversation in one and several disciplines, thus developing a true and profound sense of collegiality. Sensitive to and always self-conscious of intellectual manipulation and narrow-mindedness, it promotes intellectual maturity by weaning the student from dependency upon authoritarian devices, techniques, and personalities. It fosters honesty and prudence, prizes tolerance and patience, and rejoices in the expression of vital and direct contact with self, other, world, and God.

The literary critic, to return once more to my example, desires and indeed craves the perspective of the sociologist (and the perspective of any other discipline) while capable of contributing to those disciplines from which he learns. The point of critical thinking, like that of the liberal arts, is to promote inquiry into all facets of human experience through the development of the requisite skills and dispositions for that dialogue. To master the discourse of one discipline exclusively is insufficient for this enterprise.

Critical thinking, to conclude this section, is a specific activity located within the framework of the whole of the liberal arts. The capability to discern and generate a variety of connections within one discipline and to move across the disciplines are the keys to its identity.

ABOVE AND BENEATH THE DISCIPLINE: THE SPHERE

Like the observation that critical thinking is both within and outside the discipline, transcendence and depth are similarly bonded. People who think critically can investigate their own thinking and thinking itself. Transcendence in critical thinking reveals the formal properties of thought because it is a self-reflexive mode by which critical thinking is capable of perceiving its own structure and form. Formal and informal logic assume their rightful and most helpful place in this direction. Another way of expressing what is meant by transcendence is that it is a search to discover its own structure as it is mirrored or incarnated as a variety of principles of organization from and in one discipline, and through it to another. Attention to the transcendent aspect of critical thinking must never assume the position of being an absolute or doctrinaire way to usurp the radical questioning and communal dialogue that are the signs of its presence. Nor should these abstractions about critical thinking become discipline-specific abstractions. Transcendence is that vantage point from which to see the whole of that two dimensional geography formed by disciplinary and cross-disciplinary thinking.

The quest for depth meaning is the fourth direction of critical thinking. Although there is great oversimplification associated with linking transcendence to logical impulses and poetic animation to depth, the connection illustrates the depth direction of critical thinking. Critical thinking prompts an investigation of depth in and among the disciplines that is animated both by the aesthetic and the moral spirit —

indeed, by the religious quest. The inquiry into depth satisfies the need for meaning and ultimacy and it perceives the disciplines as signs and symbols of this ultimacy. Critical thinking transforms itself from a mental exercise to a visionary capacity for the generation and discovery of mystery and vitality and light. The depth direction is, like all the other directions, marked by intellectual satisfaction, and every effort must be made to prevent this from being mistaken for sentimentalism and cliché. The direction of depth uncovers the sources of thinking critically as a living activity rather than an inanimate tool that the mind masters like a farmer masters a hoe. Critical thinking discovers itself as animate: thinking critically is a virtue, it participates mystically, Zen-like, in the very substance of creation. We do not perform critical thinking, rather we are as Heidegger so enchantingly reveals, that in which thought resides and finds its home. One ought to hear John's Prologue here as well. The road home is by way of irony, paradox, ambiguity, puzzle (Koan), riddle, wit and humor, and silence; by way of reverence, care, compassion, and love.

Critical thinking breaks the bonds of the disciplines and returns the thinker to that primal quest for meaning that is the source of our humanity and the wellspring of the liberal arts.

CONCLUSION

Critical thinking has been described as a multi-dimensional activity located within the framework of the liberal arts. It requires a rich variety of dispositions and skills. Best represented as a three dimensional process, it involves the line of a specific discipline, the interconnections of that line with several other disciplines (thus forming a plane), and the perspective of depth and transcendence.

One final, crucial point. *THESE DIMENSIONS OF CRITICAL THINKING ARE NOT SEQUENTIAL*. Rather, they are like tonal pitch in a choir or like instruments in a string quartet. There is no movement from simple to complex in a quartet unless it is compositionally appropriate. Nor are disciplinary investigations any more simple or complex than inquiry into depth. One should not necessarily proceed from one to another in a mandatory order. For often the second violin's line in the quartet is more demanding than the cello's, and the viola can anticipate the execution of the violinist's line. Critical thinking is both as different and as idiosyncratic as a Hayden and Bartok quartet. And like the quartet, critical thinking becomes boring and tedious when overly repetitive and transparently programmatic; but is inspired when sublime, introspective, demanding, surprising, revelatory, and unusual.

In this essay I have hoped merely to suggest a direction for inquiry into critical thinking rather than to submit a fixed definition or permanent description that pretends completion. Permanent definitions and schemas that are merely implemented in the curriculum are, alas, self-contradictory and violate the very essence of critical thought. Critical thinking, as the third dimension suggests, must always continue to examine itself. Institutions and teachers who value critical thinking are animated by new inquiries and dialogues about critical thinking — and are always slightly discontent with their own ideas and competence.

IMPLICATIONS

The liberal arts, and thus critical thinking, have suffered profoundly in the movement away from a general liberal arts education and toward specialization and now professionalism in colleges and universities. The liberal arts have come to mean four semesters of a variety of unintegrated general courses offered to the least mature students engaged in higher education (freshmen and sophomores). Of these courses, several are already specifically geared to prospective majors. No longer valued for itself, some institutions perceive the liberal arts as a “base” for the professions. Thus the professions (the disciplinary major and the professional majors) have come to dominate the landscape of higher education. Professionalism, what I am calling professional thinking, is that tendency which narrows inquiry to only one field of subject matter; it is antithetical to the fullness of critical thinking. Rather than broadening the student’s and the professor’s vision, professionalism promotes both tunnel vision and myopia. Thus it is now fairly commonplace to observe that thinking within the professions tends to bracket, squash, and pass over crucial issues because it lacks a perspective outside itself from which to examine itself critically. And for this reason discipline-specific content and its acquisition dominate professional thinking. Questions about the discipline’s structure, criteria, and value (importance) are muted; vigorous investigations into why something is accepted as a fact, as certain or objective or believable are exceptions rather than standard practice. The absence of these sorts of inquiries marks the void of critical thinking. In addition, professional thinking becomes obsessed with discipline specific problem solving as an end in itself and with stressing field-specific application; it artificially restricts the search for alternatives and can quickly become the ability to do the right thing at the right time for reasons acceptable only within the discipline.

Clearly, these implications are quick and terribly inadequate sketches at best. My intention, however, is only to suggest some different and, I believe, more fruitful directions for the continuing conversation on critical thinking. Professionalism emphasizes discipline-specific structures and content at the expense and exclusion of persistently radical investigation of both structure and content. Critical thinking is eventually sacrificed, not sharpened or advanced, by professional thinking.

I do not wish to deny the importance of the professions and the major, I am only struggling for clarity. Increased specialization must not be mistaken for an increase in critical thinking. The type of thinking I have described as professional thinking may have justification, but critical thinking cannot be included as a ground for such justification.

The second implication follows quickly from the first: political structures stand in need of revision. The departmental structure in all higher education and in secondary education tends to promote professional thinking. That rare graduate with an extended liberal arts background is, alas, viewed as inadequately prepared for existence in the blinders called graduate school, or medical school, or law school. In many respects the disciplines tend to divide faculty, an arrangement that it promoted through the

segregation of faculty into floors and buildings separating one discipline from another. The ideological and political entrenchment of professionalism within the teaching profession cries out for examination and revision.

Third, there are numerous pedagogical implications to critical thinking. Inquiry, as Lipman and Sharp have so convincingly demonstrated, is the form critical thinking must take. But rather than reiterate their description of the pedagogy of inquiry, let me sharpen the implication of my description of thinking on pedagogy by contrasting it to indoctrination.

The greatest threat to critical thinking that can stem from professional thinking is indoctrination. Indoctrination concedes unquestioned authority to either or both teacher and text. Each is perceived as possessing vital information (either content or method, or both) that the student must master, and mastery is measured to the extent that the student duplicates information in exactly the same manner as the text or teacher. The student is thus often engaged in second guessing the authorities and is primarily concerned with memorization. The learner is in a position fundamentally lower than the authorities and is dependent upon these authorities to provide both the means and content of thought — there is little or no room for creativity and originality. A student’s own views are not really valid when they do not conform because mimicry of the authorities is all that matters. Difference of view is only occasionally and passingly tolerated; pedagogical or textual equality with the student is not seriously manifest; and, in general, it is fair to say that patronization characterizes the pedagogy. Indoctrination is methodologically opposed to critical thinking which celebrates independent thinking, pluralism, openness to a variety of strategies for reason-giving, and difference in the spirit of collegiality.

And finally, one needs to re-examine a string of clichés about thinking and teaching. Critical thinking and its appropriate pedagogy of inquiry come under direct attack in clichés like: “I’ve got to make the students see...” “Before they can question, students need to know the facts.” “How can we go on to more complex things when the basics aren’t mastered?” “My students don’t know how to think.” “You can’t understand it if you haven’t experienced it.” “I’m not interested in my students’ point of view; I’m the authority.” “My students aren’t ready for the ideas that are meaningful and interesting to me.” “Only my majors excite me.” “If only I could get my students to agree with this (my) point of view.” “Everyone is entitled to his own opinion.” “This doesn’t make sense now, but it will in ten years.” “You can’t question that, it’s the way things are (have always been, are traditionally seen, were taught to me).” “There’s no right or wrong here.” “We’re *only* discussing it.”

In addition to investigating these all too common statements about teaching, my description of critical thinking implies that critical thinking cannot be taught by lecturing alone. Nor by short answer, multiple choice, or objective tests. Nor by simplified and easy-to-understand, step-by-step guides. Nor by filling in the outlines and blanks. Nor by thinking like the book or teacher. Critical thinking as three dimensional cannot really be tested — how would

we *test* the poet or painter; is testing even the appropriate response here? You cannot *make* someone think critically. Critical thinking is more emulated than learned. And the most fruitful way to begin to implement critical thinking in the classroom is to investigate carefully the strengths of one's own pedagogy — and not adopt another learning theory.

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CRITICAL THINKING SKILLS

The following is a list of those skills and dispositions requisite for the development of critical thinking. These lists follow the description of critical thinking as a three dimensional activity.

DIRECTION ONE:

ENTRANCE INTO THE LINE OF DISCOURSE

To be found competent of critical thinking in this direction, the student should be able to

1. explicate and organize reading material, and identify textual conventions
2. explicate and interpret pertinent sections of text using inference and deduction
3. inquire into the foundation of proof, objectivity, validity, truth and certainty in the discipline
4. give and generate criteria pertinent to the discipline
5. identify and explicate assumptions
6. isolate and manipulate appropriate methodologies, systems or patterns of meaning
7. identify and assess interpretation of facts
8. identify and generate and assess series of facts in proper relationship
9. move from generalization to greater degrees of specificity
10. identify and imitate strategies of consistency
11. use problem solving or problem resolution strategies
12. organize material from part to whole and whole to part with greater dexterity
13. identify and generate definitions
14. investigate how and why things become important in the discipline
15. articulate the history of the discipline, especially the history of controversy and conflict
16. explicate the underlying rationale for the discipline, especially differences and distinctions from other disciplines
17. identify and converse about the major figures — possess a historical and biographical knowledge of both the discipline and its main persons
18. state what makes something “interesting” or new in the discipline — possess a sense of what is creative

19. isolate, assess, and generate examples
20. analyze and construct appropriate if-then hypotheticals
21. articulate possibilities for use and application of the discipline in variety of ordinary (non-professional) contexts
22. use the central questions of the discipline to sustain inquiry
23. locate resources and know how to use these
24. generate new and pertinent questions

DIRECTION TWO:

INTERPENETRATION OF THE LINE OF DISCOURSE WITH OTHER LINES/FIELDS OF DISCOURSE (INCLUDING THE DISCOURSE OF “PERSONAL EXPERIENCE”)

To be found competent of critical thinking in this direction, the student should be able to

1. locate central textual passages and concepts connotative or denotative of other disciplines
2. explicate and interpret pertinent sections of the text crucial to interdisciplinary connections
3. articulate appropriate uses of subjectivity and objectivity, and their ambiguous relation
4. perceive and articulate variety, multiplicity and pluralism
5. search for assumptions
6. locate and use facts or concepts to facilitate the establishment of connections between disciplines
7. classify pertinent information
8. generate alternative explanations and interpretations
9. move from part to whole, and from specific to pertinent generalizations with greater dexterity
10. use problem solving or problem resolution techniques
11. draw implications from one discipline and apply them to another
12. explicate the impact of findings in other disciplines on the present discipline
13. identify and explicate the relations based on similarity/difference and comparison/contrast
14. explicate and generate concerns stemming from context and situation
15. explicate the rationale for the discipline, especially its connections to other disciplines
16. identify, explicate, and generate relevant examples, analogies, and analogues
17. converse about the history of the discipline, especially integrative theories, events, and thinkers
18. articulate possibilities for the use and application of interdisciplinary work in a variety of ordinary (non-professional) contexts
19. identify and expand on what makes something new or interesting in the field

20. locate resources and use appropriate research strategies for interdisciplinary work
21. generate new and pertinent questions

DIRECTION THREE:

METAMORPHOSIS OF PLANE OF DISCOURSE
INTO SPHERE OF TRANSCENDENT AND DEPTH
INQUIRY

To be found competent of critical thinking in this direction, the student should be able to

1. use other disciplines to illumine one's own
2. use one discipline to sustain conversations with another
3. articulate the importance of disciplinary and interdisciplinary inquiry
4. generate new and interesting approaches and provide rationales for these
5. inquire into the nature of key concepts: consistency, interesting, new, definition, assumption, etc.
6. know when to search for irregularities and/or consistency
7. explicate deliberate and necessary ambiguities
8. inquire into ideals and goals
9. master the basic formal and informal fallacies
10. search for assumptions
11. articulate limits of a system or discourse
12. express wit, humor, and irony
13. use legitimate strategies of persuasion
14. bring new images, metaphors, and symbols into the discourse
15. appropriately seek or cease seeking alternatives
16. know the strengths and weaknesses of one's own thinking style
17. dispel authoritarian or paternalistic strategies
18. help someone else use appropriate critical thinking skills
19. facilitate the exchange of ideas or prevent the breakdown of this exchange

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