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CRITICAL THINKING AND PEDAGOGICAL LICENSE

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Critical thinking involves deliberate application of tests and standards to beliefs per se and to methods used to arrive at beliefs. Pedagogical license is authorization accorded to teachers permitting them to use otherwise illicit means in order to achieve pedagogical goals. Pedagogical license is thus analogous to poetic license or, more generally, to artistic license. Pedagogical license will be found to be pervasive in college teaching. This presentation suggests that critical thinking courses emphasize two topics: first, the nature and usefulness of critical thinking; second, the nature and pervasiveness of pedagogical license. Awareness of pedagogical license alerts the student to the need for critical thinking.

Critical thinking is not necessarily negative or disapproving; it does not necessarily produce criticism, in any of several senses of that word; and it is not necessarily directed toward resolution of a critical situation, a crisis. Critical thinking is not “fault-finding”; and it is not “crisis-management”. The word ‘critical’ in the expression ‘critical thinking’ is used in a rather special way; its etymology is instructive. In the appropriate sense, the word ‘criti-

cal' is related to the Latin noun for *sieve*, which is cognate with the verb to sift – as in sifting flour, sifting sand, and sifting evidence.

We don't speak of sieves much any more; when we need to refer to a sieve we are more apt to use the word 'screen'. Perhaps the cognate verb to sift is still as current as ever, but even here the verb to screen is more common.

Critical thinking is rational sifting or screening. The word 'critical' is cognate with the word 'criterion', which derives from Greek and which refers to tests or to standards used in tests or even, less properly in my opinion, to a quality, condition, attribute, or property used for screening. Critical thinking is applying tests; more specifically it is applying tests or criteria in one's own thinking.

It seems to me that this point should be made early in every critical thinking course; and it should be reviewed often so that students never lose sight of what they are aiming at. Critical thinking is applying tests in thinking.

Now what is it that is subjected to the testing? And what is *that* being tested for? These are important questions for which we should patiently seek full answers. It seems obvious that beliefs are subject to testing and that they are tested for *coherency* and *incoherency*, first, and then those that are found to be coherent are tested for truth and falsehood. For example, when examining the belief that the sun goes around the earth, one of the first things to be discovered by critical thinking is the elliptical incoherence of the belief; it does not make sense to say that one thing goes around another without indicating a point of reference. If the point of reference is taken in the sun then clearly the earth goes around the sun; if the point of reference is taken in the earth then clearly the sun goes around the earth.

Some of you may have wondered why I said that critical thinking tests beliefs rather than propositions; it is clear that when we test for truth and falsehood it is irrelevant whether the

proposition tested is a belief. In fact, one of the highest character traits to be developed in critical thinking courses is impartiality: when a proposition is being tested it should be treated with complete detachment. The tester should not take into account who it is, if anyone, that believes the proposition to be true and who it is, if anyone, that believes the proposition to be false. The critical thinker attends to the proposition and to what the proposition is about while ignoring the hopes, the fears, the promises, the threats – of those who have a stake in the outcome.

Nevertheless, we will find good reasons for taking beliefs as one of the categories of things that are subjected to testing by critical thinking. To begin with, focussing on beliefs in this way clarifies the fact that critical thinking can not take place until some other kind of thinking produces beliefs to be tested. Critical thinking presupposes *precritical* thinking. In order to apply rational tests for truth and falsehood it is of course not necessary to have a belief; frequently the scientist, mathematician, detective, or other investigator is testing a *hypothesis* that is not believed to be true and not believed to be false... the testing is to reveal which it is. Precritical belief sometimes arises through testing; but all too often testing is not involved.

Critical thinking needs to be distinguished from the normal, routine activity of objective and impartial investigations. Critical thinking is like scientific thinking as far as objectivity and impartiality are concerned, but it is an activity that belongs as much to the humanistic side. Critical thinking *per se* comes into action once precritical thinking has produced beliefs.

If we allow gratuitous jumping to a conclusion to count as a method of arriving at a belief, then we can say that every belief was arrived at by a method. Besides subjecting the belief itself to critical scrutiny, critical thinking also examines the method by which the belief was obtained.

Critical thinking asks: how did *the* belief arise? How did *the belief* come to be a *belief*? Critical thinking wants to determine the

path, the process, the avenue, that led up to the establishing of the belief as such. How did the believer come to accept this particular belief as true? How did the believer come under the impression that this belief corresponds to the way things are? For example, how did I, John Corcoran, come to believe that the sum of any given number of consecutive odd numbers beginning with the number one is the square of that given number? How did I come to believe that the Canary Islands were named after dogs and not after canaries?

Once the path has been identified, critical thinking wants to examine it to determine whether, or to what extent, it warrants the belief. As a critical thinker, once I have identified the method by which I came to accept the proposition as true, I ask myself whether that method made the belief evident?... or whether that method made the belief probable?... is that method a relevant, reliable, cogent way of arriving at that belief?

It often happens that once the method used to arrive at a given belief has been identified, its inadequacies become obvious and the belief evaporates... it gets demoted to a hypothesis, it becomes a proposition open to active deliberation rather than one already decided. Once a person sees that a belief was inappropriately grounded, the mental energy needed to hold the belief tends to dissipate. For example, once I realize that my belief was logically deduced from a proposition that I have since found to be false, I no longer hold the belief. Once I realize that my belief was based on testimony by a witness who has since been found to have lied, or contradicted himself, then the belief is unseated.

But, perhaps just as often, it happens that discovering the inadequacies of a belief-formation method leads to a search, sometimes successful, for a more adequate method, perhaps even a proof. Of course, the proof could be a proof of the original proposition or a proof of a contradictory opposite of it.

Thus far we have seen that critical thinking is applying tests in thinking. Moreover, to the question of what it is that critical thinking tests, we have seen the first two of a possibly extensive list: beliefs and methods. Beliefs we test for coherence and for truth. Methods we test for various kinds of relevance, reliability, and cogency. This brings me to the second part of my theme, to pedagogical license.

When we ask what kinds of methods we should fruitfully discuss in a critical thinking course, we may come to wonder what kinds of methods are most frequently used by our students to arrive at their beliefs. Surely critical examination of *these* methods can be expected to give the course some practical relevance. When the students become more aware of their own belief-forming methods they have made progress towards critical thinking.

A large number of the beliefs formed by college students are based on the teachings, spoken and written, of their teachers. Students tend to believe what their teachers present as true. What could be more enlightening than an examination of the reliability and cogency of this method of precritical belief acquisition?

When this subject is first broached it becomes clear that the method of learning *from* teachers has several dangers. The student may misunderstand the teacher's words. The student may understand well and yet still come away with a false belief, because the teacher misspoke or because the teacher was mistaken. But the process of learning from teachers has another source of unreliability: *teachers commonly propound in the classroom views that they themselves take to be wrong.*

How can this be? How can teachers, dedicated to truth, permit themselves to deliberately propound what they do not themselves take to be true? How can colleges, entrusted to instruct their students, permit teachers to knowingly deceive students? The beginning of the answer is this: *pedagogical license.*

Pedagogical license is like poetic license. Poetic license, as you know, is the authorization accorded to poets permitting

them to use otherwise illicit means to achieve artistic effects. Common examples involve violating rules of punctuation, capitalization, spelling, grammar, coherence, fact, mathematics, or even logic. Society values artistic effects so highly that it is willing to condone otherwise reproachable means that produce them. Poetic license has been taken to be a prime example of the end justifying the means. It is the same with pedagogical license, the authorization accorded to teachers permitting them to use otherwise illicit means to achieve pedagogical goals.

Pedagogical goals are found spread out along a spectrum terminating on one end with *educational* goals and on the other end with *indoctrinational* goals. Most courses I have taken or given fall somewhere toward the middle – some being much more educational than indoctrinational, some being much more indoctrinational than educational. In its pure form, education consists in the identifying, organizing, and developing of the student's own active intellect: skills, powers, virtues, etc. In its pure form, indoctrination consists in presenting, clarifying and inculcating a predetermined subject matter. A philosophy seminar or a mathematics workshop might approximate the ideal of pure education. A non-laboratory anatomy course or a calculus course for non-majors might approximate the ideal of pure indoctrination.

Education is something that is done by the student. Indoctrination is something that is done by the teacher. Education has to do with *how* to think; indoctrination has to do with *what* to think. Education brings something out of the student; indoctrination puts something into the student.

Pedagogical license is equally effective and perhaps equally necessary whether the goal be educational or indoctrinational. In an educational setting, students may be lulled into accepting a view that they will ultimately discover for themselves to be false, or they may learn the effectiveness of exaggeration, hyperbole, and other rhetorical tricks by having those tricks done on them. In an indoctrinational setting, the teacher may distort the truth in

any number of ways in order to make something more understandable, more memorable, more in accord with what the students are able to accept.

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Distortion of many kinds is surprisingly common in an instructional setting. Sometimes when I want the student to be sure about the correct pronunciation of a word I deliberately mispronounce it. The plural form of the word 'hypothesis' is 'hypotheses'. Teachers sometimes understate, or exaggerate, or quote out of context. Once students become aware of the phenomenon of pedagogical license, they are on the way to developing a whole new "take", a new perspective, a new approach to the lecture experience and to the reading experience. For some this will be a decisive first step toward grasping what critical thinking is and what role it can play in one's intellectual life.

Perhaps when students realize that they cannot always rely on their teachers for accurate information, that their teachers cannot always be expected to make true pronouncements, *then* perhaps they will have made a step toward the more profound discovery that unverified testimony is not knowledge, that testimony of other people, however, well-informed, sincere, and careful, is never knowledge until it is verified personally by the believer. The more students verify what was propounded in the classroom the more classroom instruction is likely to be transformed into knowledge.

Etymologically the word 'pedagogue', the noun cognate of 'pedagogical', means "leader of youths". There is some irony in the fact that pedagogues routinely *mislead* in order to *lead* and that *misleading* is condoned when it contributes to *leading*. My thesis carries even more irony. My thesis is that the student's *education* is advanced by means of *indoctrination*, in four points: that critical thinking involves application of tests to beliefs and to methods, that most college courses involve a mix of educational goals and indoctrinational goals, that critical thinking courses come somewhere in the middle of the educational-indoctrinational spectrum, and that many

beliefs arrived at through classroom instruction will not stand up to critical scrutiny and were not even intended to do so.

Even the best teachers at their best can not be trusted to propound the truth. The best we can trust the best teachers to do is to try to propound views that are worth trying out, worth trying to verify. This gives new meaning to the old saying: Trust, but verify.

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