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Imagination, Critical Thinking, and Teaching

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New ideas thrive in the imagination, which negates what is and ponders what might be.

—Israel Scheffler, *In Praise of the Cognitive Emotions*

Imagination and Critical Thinking

In the wealth of material which has appeared on critical thinking, there is precious little attention paid to imagination. "**Critical thinking**" has become something of an educational slogan and everyone, it seems, subscribes to the view that teachers need to both have and "foster critical ability." Imagination has had fewer champions.[1] Some philosophers of education, of course, have long claimed a link between criticism and imagination, notably John Passmore (1967), who took the view at the very outset of the modern debate on critical thinking that a critical person must possess initiative, independence, courage, and imagination (198). Not surprisingly, John Dewey (1985) also resists the tempting dichotomy between criticism and creativity, pointing out that criticism, especially self-criticism, is the road to the release of creative activity (30). Gilbert Ryle (1963) reminds us that "there are hosts of widely divergent sorts of behaviour" which can be appropriately described as imaginative, including the business of criticism itself (242-3).[2] On the whole, however, these suggestions have not been pursued, and it has been assumed that imagination and criticism are in conflict.

No one who has followed recent educational theory can have failed to notice that critical thinking has effectively supplanted creativity as the preeminent aim of education. During the past thirty years, there has been a veritable deluge of articles and books on critical thinking, and a parallel decline in work on creativity which had so captured the headlines in the 1960s.[3] It may be that imagination has suffered by its association with creativity and the sense that critical thinking and creativity are unrelated, or even incompatible. This is quite mistaken; criticism and imagination are intimately connected. In thinking critically, we are not merely offering a stock response. Critical thinking can take us beyond our present beliefs and practices to new, unanticipated, and imaginative possibilities. We need imagination if we are to see how an idea might be supported or how it might be applied. Similarly, imaginative work draws on critical judgment; ideas that genuinely deserve to be considered creative, or imaginative, must be critically evaluated and deemed to meet an appropriate standard.[4]

Teachers who value imagination need to see critical ability and imagination as complementary, as Dewey (1985) clearly does when he describes one vital phase of reflective thought as involving "anticipation, supposition, conjecture, imagination" (198).[5] Robert Ennis (1987) attempts to catalogue the dispositions which distinguish the critical thinker, calling attention to the importance of *looking for alternatives*, a disposition which translates into a number of relevant abilities. That, indeed, is the heart of imagination, since an essential feature of the imaginative person is being both disposed and able to think up various possibilities (White 1990, 185). In Ennis's list of abilities we find such items as formulating alternative solutions, considering alternative interpretations, seeking other possible explanations, thinking up questions to elicit possible meanings, designing possible experiments, and so on. As far as I can see, Ennis (1987) makes no explicit mention of imagination, though he does say that his current definition incorporates "creative elements" (11). The sorts of activities he mentions, however, do call for imagination. All that is needed is to bring the connection into the open.

Some commentators, however, take the view that there is a fundamental incompatibility between those ideas that are central in the modern critical thinking literature and those ideals that we associate with imaginative inquiry. Laura Duhan Kaplan (1991) argues that critical thinking texts and courses tend to teach political *conformity*, contrary to the expressed intention of teachers and authors.[6] Her conclusion is that the whole conception of critical thinking, and the movement inspired by this conception, is deficient if we are concerned, as she puts it, about "the ability to envision alternative events and institutions" (369). I take this to mean, although again it is not made explicit, that the student's imaginative capacity is impaired by courses and texts in critical thinking. To learn conformity is, after all, to have one's eyes closed to other possibilities. It is also clear from Kaplan's (1991) endorsement of critical pedagogy as "a means of awakening the student's awareness that the world contains unrealized possibilities for thought and action" that the notion of imagination is implicit in her argument and fundamental in her scheme of values (362).[7]

The nub of her objection is that critical thinking merely teaches students to practise certain skills with respect to given and fixed alternatives, whereas students ought to be encouraged to "create alternatives, not merely to choose between them" (ibid., 364). Her case is supported by reference to a few texts in the general area of critical thinking (Toulmin, Rieke, and Janik 1979; Kahane 1988; Kelley 1998). None of her claims, however, are at all persuasive. In discussing David Kelley's approach, for example, she objects that teaching should not assume that choice exists among clear-cut options, determined by the author or teacher. But it is surely obvious that critical thinking can show, and must allow, that none of the options presently before 'a thinker is defensible; some other option will have to be found. Reflection on the fallacy of many questions, for example, is one way in which students may come to appreciate how options can be arbitrarily excluded; and this lesson can be generalized for use in other contexts' (Flew 1975, 99).[8] Awareness of other fallacies, such as oversimplification, the black-or-white fallacy, and begging the question, can also awaken in students an appreciation that a context or argument can be rigged

or unfairly circumscribed, closing off other avenues. [9]One of the basic lessons in critical thinking is that alternatives may have been arbitrarily denied and consequently that we have to *imagine* other possibilities; these points are commonly made in critical thinking texts and this very insight can be applied to the critical thinking text in which the fallacies are described.

Kaplan (1991) observes that most major and many minor life choices do not present themselves as opportunities to select among clear-cut options. Surely, however, students can learn to distinguish between the context of teaching and the context of ordinary experience. They can practice their skills on the examples offered, and recognize that, once learned, such skills can be employed in other contexts and even turned against the very examples on which the skills were honed,[10] or against the teacher's views, real or apparent.[11] On the assumption that students have some capacity for independent, critical judgment,[12] we need not be concerned that the examples we choose may be inadvertently slanted *if* the students are not only permitted but encouraged to assess the merits of these examples.

In her classic and still useful primer on clear thinking, Susan Stebbing (1939) offers the following cautionary word to the reader, touching on this point: "I ought to avoid making elementary mistakes in logic, since I have been thinking about the conditions of sound reasoning and have been trying to teach logic for years. But eager haste to establish a conclusion may lead me to make elementary blunders… Naturally I cannot provide an example of my own failure in this respect; to have recognized the error would be to have avoided it" (47-8). The invitation to apply the skills and techniques *to the book itself* is quite explicit.

Every good author and teacher concerned with the development of critical thinking will ensure that a similar self-referential doubt is cultivated. We can readily imagine that we have committed errors even if we cannot imagine what they are; and we can encourage our students and readers to try to imagine alternative positions to the ones we confidently defend. Would any self-respecting teacher of critical thinking disagree with Stebbing (1939) when she remarks, "I do not hope to succeed in escaping

bias either in my selection or in my exposition of these examples" (75)?"[13] Even more pointedly Stebbing observes, "It may even be that you can find in this book some evidence of my having used crooked arguments. Certainly I am not aware of having done so, but in that I may be self-deceived. I cannot hope to have avoided altogether the defects of twisted thinking" (89-90).

Another text rejected by Kaplan (1991) as seriously deficient is *An Introduction to Reasoning* by Toulmin, Rieke, and Janik (1979). Kaplan's opinion that this book "teaches reasoning in the sense that we say the Sophists in ancient Athens taught reasoning" (366) seems unlikely in the extreme given that distinguished philosopher Stephen Toulmin is its senior author. Still, stranger things have happened and, as Carl Sagan remarks, one's skepticism imposes a burden, i.e., a responsibility to find out. Kaplan's interpretation of the book is that it teaches students to adopt those reasons that are socially acceptable, in her words "how to behave in the courtroom, the health spa, the realtor's office, and the office party, in order to be accepted as a member of the petty bourgeoisie" (367). Again, the alleged lesson is conformity and the result is the supposed demise of imaginative speculation about alternatives.

An examination of *An Introduction to Reasoning* reveals that Kaplan's reading of the book is a complete misrepresentation. As one might have predicted, it is not the authors' view (how could it be?) that a good reason is whatever is generally thought to be a good reason in a particular social situation. Why would one need to study critical thinking if it were the case that informal socialization would suffice? Their point is the quite different one that the appropriateness and necessity of giving and searching for reasons vary from one context to another: "The trains of reasoning that it is appropriate to use vary from situation to situation" (Toulmin, Rieke, and Janik 1979, 7). It is made perfectly clear that appeals to "well-founded" authority may be challenged and supposed authority cannot be taken for granted. Moreover, to say that reasons "relevant" to a certain situation must be given is not to say that what is traditionally and socially regarded as relevant is relevant. It is explicitly acknowledged that such reasons may

be disputed (Toulmin, Rieke, and Janik 1979, 8). The notion of relevance is itself controversial. Similarly, the distinction between what appears to be quite acceptable and proper and what is acceptable and proper is always clear. What is not clear is how Kaplan could have so completely misinterpreted this.[14]

Of course, any text can be presented and taught in an uncritical manner and in such a way as to discourage creative thinking; but there is no reason to believe that the books reviewed here present critical thinking as an exercise in conformity. In the hands of an unimaginative teacher, they might do precious little to foster critical and imaginative reflection, but that is true of any text and is merely a reflection on the way in which the material is approached. There is no reason, moreover, to conclude that the conception of critical thinking in these books is one which excludes imagination. The connection, however, between critical thinking and imagination needs to be made more explicit in general accounts of critical thinking so that any tendency to drift into a mechanical and formulaic approach to "critical thinking" is averted.

One final point about imagination and critical thinking. One hears much less these days about brainstorming. Perhaps it is yet another example of a practice that is occasionally useful but by no means the panacea which enthusiasts once proclaimed. The general idea at work is that judgment should be deferred as ideas are being produced so that those involved will not be inhibited by the concern that their ideas are foolish or irrelevant. It may indeed be that the technique is sometimes effective, as researchers have claimed, but whether or not imaginative suggestions have been produced can be determined only by judging their merits *at some point*, and this requires critical assessment. The great danger is that simply being prolific in producing ideas (regardless of their merit) will be equated with being imaginative. Nevertheless, the strategy of getting our ideas on the table before deciding too quickly that they are not worth mentioning seems sensible. This does not mean, however, that we have only to play down critical reflection to allow our imaginations to flourish. That is, once again, to set up a dubious dichotomy.

Believing in Imagination

In addition to resisting the false dichotomy between imagination and critical thinking, teachers who value imagination need to reject the suggestion that our imaginations cannot overcome allegedly insuperable barriers resulting from our gender, race, ethnic background, or life experiences. One view that has enjoyed wide appeal is that those who have not directly and personally experienced certain events cannot really understand what it is like to have those experiences, and thus one's right to contribute to policy decisions about such matters is called into question. It is alleged that without personal experience, we simply do not know what we are talking about. Those who do not have direct, personal experience cannot contribute to a critical discussion on the issue in question. This has already translated into proposals for restricting the teaching of certain courses and topics to those who belong to certain groups, and it is sometimes suggested that members of certain groups should not address certain topics at all (Hurka 1989). These views are no longer as widely endorsed as they were only a decade ago, but it remains important to appreciate the underlying confusions.

The effect of this view, which is also perhaps the intent, is to silence opinion and dismiss certain suggestions without benefit of serious examination. If someone does not, and cannot, understand an issue, it is scarcely sensible to pay attention to what he or she has to say about it. The thesis is that people understand only if they have personally experienced the matter in question (for example, the oppression suffered by minority groups in societies which discriminate against them).[15] It is asserted more than argued that we simply cannot imagine what such experiences are like if we have not had them ourselves; if it is grudgingly conceded that one might have an abstract, intellectual grasp of the experience, it is strongly denied that any genuine imaginative and sympathetic awareness at the emotional level could occur.[16] This view flies in the face of all ordinary experience that tells us that by means of appealing to similarities in our own experience with those

experiences we have not directly had, we can enter imaginatively into those other situations.

Some people, moreover, have the ability to assist us by virtue of their capacity to create and present a vivid and striking imaginative world we can enter vicariously. Imaginative teachers can help students do this too.[17] It is not difficult at all to show that direct, personal experience is not a prerequisite for understanding. In many cases, we know that the person in question did not, in fact, undergo the experience he or she describes. Consider, for example, Hortense Calisher's (1983) achievement in portraying life in a space shuttle on an extended mission. Her lack of direct experience here seems to have been no bar whatsoever to her imagination. By her own account, she went to the library for a very short time and read some NASA publications: "When the book was published, John Noble Wilford, who is head of the science news for the *New York Times*, came to interview me. He asked me how long I had researched, I told him what I had done, and he said he couldn't fault me on what was there. I think you just put yourself in any environment that you write in" (Straub 1988, 66).

In other cases, we know that the individual did not have the experience in question because it has never occurred. We are convinced, nevertheless, that he or she has given us some idea of what that situation might be like and feel like. In some cases, what we could not previously imagine becomes imaginable through someone else's gifts. A devastating virus capable of destroying rice, wheat, barley, oats, and other basic food crops has so far not infected the world, but can anyone doubt that John Christopher (1970) has given us a sense of that world, its social and moral characteristics, if such a calamity were to occur? Nor is it plausible to suggest that the author must have had some familiarity with famine conditions and their effects on human beings as civilized society gradually gives way to anarchy. Quite simply, he was able to imagine various possibilities and present them with great plausibility. Endless examples of similar imaginative works could be given, but it is enough just to mention books such as Golding's *Lord of the Flies* and Huxley's *Brave New World*, and to note that

science fiction would effectively disappear as a genre on this view, for the position to collapse into absurdity.

Teachers should reject this alleged limitation on imagination not just because it is false but because such a belief may be self-fulfilling and may deter them from attempting imaginative work. Barriers to the imagination arise easily enough. We hear of customs and lifestyles very different from our own and declare that we simply cannot imagine anyone living that way. We hear of a new scientific notion and find it unimaginable. It may indeed be psychologically impossible for us to imagine these things because everything we have ever learned has built up the conviction that *only* what we already believe is possible. If we do not use our imaginations, if we are not encouraged to try to imagine certain things, if our imagination is not given full rein as children, then it may be that we cannot imagine what we might otherwise have been able to imagine.[18] If we are led to believe that we cannot imagine certain things, we may not *try* to imagine them with the result that, in time, we indeed cannot do what we might otherwise have done.[19]

It is important for teachers to believe in the value of imagination in their own work, whatever subject they are teaching. Imagination can characterize our efforts in teaching any subject, and we need to put behind us the idea that a concern for developing the imagination is the prerogative of teachers in certain areas and other teachers need not concern themselves. The view persists, however, that some subjects are especially connected with imagination, and the favourite candidate is literature.[20] The difficulty involved in ridding ourselves of this view can perhaps be illustrated by noting that while Robin Barrow (1990), for example, recognizes that one can exercise imagination in *any* context, he insists nevertheless that history and literature have special value in the development of imagination. Of course, literature has the power to help us connect imaginatively with other people, to imagine other times and places, and in so many ways to stimulate our imaginative abilities. Why, however, would literature or history be more likely to develop philosophical imagination than imaginative philosophy? Russell (1979) argued persuasively that basic scientific information can

stimulate the imagination if people will take the time to reflect on it. He wanted people to ponder the fact, for example, that the largest star measures six hundred million miles across. Is there any reason to think that history would do more than science to develop our imaginations in this direction? It surely will not do to say that imaginative mathematics feeds the imagination only in respect of mathematics. All imagination takes some form, and literature and history will satisfy some and not others.[21]

Teachers who believe in the value of the imagination in education should also resist the suggestion that the term "imaginative" cannot in any reasonably strict sense be applied to the activities and ideas of young children (Barrow 1990, 87-8). Barrow is surely right to insist that the word is bandied about loosely in much educational theory, and that the necessary connection with relevant standards of quality is often absent. Nevertheless, just as he properly allows that what we considered as imaginative at an earlier period of history would not necessarily count as imaginative today, so too the application of standards in connection with the work of students needs to take into account the child's level and knowledge. An unusual and valuable suggestion from a five-year-old counts as imaginative even if it would not count as such if uttered by an adult.[22] This is simply because what counts as unusual is a reflection in part of what the child knows (Groarke agrees and illustrates the latter two points in this volume). We need to keep this in mind as teachers so that we are encouraged to continue looking for and promoting such ideas in our students.

Teachers with Imagination

Teachers need to use their imagination in many ways in their work. If they are not to be trapped in narrow and negative views, they will need to entertain the possibility that either/ or choices can be challenged and overcome. They might try to imagine ways in which they can do justice to critical thinking and cultural literacy, to knowledge for its own sake and vocational studies, to

competence and creativity, to moral rules and moral thinking, and so on. Fanaticism on either side of these divisions in educational theory encourages teachers to take refuge in whatever fortified position they can, and the idea of an imaginative resolution is lost. For example, in the conflict over whole language versus more traditional approaches to the teaching of reading, the atmosphere was, at times, so hostile and the respective positions so uncompromising that it took an effort of the imagination to conceive that there might be "a new order of conceptions" (Dewey 1965, 5).

The central role of imagination in the kinds of cases just mentioned will be missed if we think of the imagination only as entering into the formation of utopian visions. Nicholas Burbules (1990), for example, anxious to point out the dangers of utopianism, reminds us that the capacity to imagine and describe better possibilities is not itself a way of attaining these objectives. He remarks that "utopian thinking avoids the tragic sense by substituting our imagination for our sense of reality" (472). The imagination, however, comes into play not only in conceiving of ideals and visions, but also thinking of the means by which these goals might be achieved or approached. Burbules also indicates that there will be inevitable tradeoffs between competing ideals in the real world, and the implication may be that our imaginative horizons will have to be limited. However, we should remember that the imagination will play a vital role in coming up with creative compromises when such conflicts occur.

Again, a vital imaginative capacity involves the teacher's grasping and sharing the perspective of the student coming to a new subject that may seem impossibly difficult or uninteresting.[23] It is important for the teacher to try to appreciate the difficulties and frustration students may experience, and all too easy to forget them in practice.[24] The teacher, we may hope, now well understands the material and perhaps no longer even recalls similar problems he or she may have encountered when the subject was first studied. It may take an imaginative leap to place ourselves in a certain situation, even if we once occupied that situation. Louis Arnaud Reid (1962) observes that one great benefit of student

teachers studying a new subject during their professional program is that they are thus being placed in much the same situation as the children they will teach, allowing them to gain a new sense of their students' perspectives (194). Imaginative teachers are able to think of various reasons why students might have difficulty grasping or appreciating the material, and this puts them in a position to look for imaginative solutions. There is no point to merely informing the student that the solution to a problem is obvious if the student does not find it obvious; there is nothing to be gained by merely asserting the value of the work if the student does not appreciate its value.

Related to this, teachers need to be able to see what their students are getting at even though their questions and comments are often poorly phrased, awkward, and hesitant. It is a common complaint by students that their teachers "missed the point" they were trying to make, and dismissed an idea too quickly. The teacher needs to consider the possibility that the student has a valuable point to make, albeit clumsily expressed, and also to wonder if there may be a further, deeper meaning for which the student is reaching. In an interview with Magee (1982) Isaiah Berlin notes, for example, that children frequently raise questions that contain the germs of philosophical ideas, and are often told to stop asking silly questions (15).[25] They need teachers (and parents) with an imaginative grasp of the possible meanings in their questions — philosophical or otherwise — and with the ability to respond in such a way that the sense of wonder is not destroyed. Teachers need imagination if they are to be able to recognize imaginative ideas coming from their students.

Teachers also need to be able to see possibilities for the future in the behaviour and interests of their students. Of course, judgment also enters into this, especially when it is a matter of recognizing a teachable moment.[26] As Dewey (1956) notes, however, "other acts and feelings are prophetic; they represent the dawning of flickering light that will shine steadily only in the far future. As regards them there is little at present to do but give them fair and full chance, waiting for the future for definite direction" (14-15). It takes some imagination to see the potential indicated by such

"flickering light," but it needs to be recognized if the opportunity for development is to be provided. We know, unfortunately, how easy it is in practice for children in school to be labelled and streamed in such a way that, in the end, teachers simply *cannot* imagine *any* promising future for them. One thinks here of Jill Solnicki's (1992) impassioned plea to her department head whose cynicism is overwhelming: "How can it be that you've never seen past their 'unclear, incorrect sentences' to the expressiveness in their writing, the humour, the insight, the God damn humanity?!" (209). Educators, Dewey (1965) observes, more than other professionals, are concerned to take a long look ahead (75). This forward-looking perspective often takes the form of imaginative insight.

Imaginative teachers are capable of seeing unexpected possibilities in teaching moments. Eisner (1985) illustrates this with great clarity when he observes that teachers need to be inventive and innovative as they deal with unpredictable contingencies, and in creating ends *as they proceed* (176). Max van Manen (1991) also stresses the importance of teachers knowing how to improvise, knowing at once what is the right thing to say (160). Some writers, however, have misconstrued the need for improvisation and interactive decision-making as meaning that imaginative teachers must avoid intending at the outset to achieve a specific result in teaching. Ruth Mock (1970) speaks of the teacher who "intends, unimaginatively, to obtain a predetermined result" (86).[27] The teacher who has a goal in mind, however, is not thereby prevented from seizing an opportunity which comes along. Once again, an unnecessary dichotomy looms before us, this time planning versus improvisation. Eisner (1985) is much closer to the mark when he comments that "the exclusive use of such a model of teaching (i.e. predetermined ends) reduces it to a set of algorithmic functions" (177). The crucial term here is "exclusive."

On a related matter, there is currently a popular view that if children are to write imaginatively and honestly, they must choose their own topics. If the teacher assigns a topic, the students' own imagination is compromised. Moreover, imaginative writing must not be constrained by conventional norms such as correct spelling

(see, for example, Graves 1983). Clearly, there is much to be said for the student trying to identify a worthwhile topic; this is itself an imaginative exercise. Much more needs to be done to encourage students to identify for themselves the problems they wish to work on, as Eisner argues (1991,14). We need to stop short, however, of the absurd situation where a teacher is afraid to suggest possible topics. There is no point in teachers being more mature, Dewey remarks (1965, 38), if they throw away their insight. Similarly, it would be foolish to be so obsessed with correct spelling that one missed the imaginative ideas that students are producing, as Jill Solnicki (1992) points out. On the other hand, the possession of basic writing skills, including spelling, means that students are able to concentrate on their ideas.

There is sometimes a temptation to think that imaginative teaching must necessarily involve the kind of unusual, innovative strategy that succeeds sometimes precisely because it is so unusual that it captures the student's imagination. John Keating, the charismatic teacher in the film *Dead Poets Society*, comes to mind. As with courage, the dramatic examples may dominate our conception of imaginative teaching and blind us to other forms. Imagination, however, can be displayed in teaching that follows commonly employed methods such as instruction, discussion, and question-and-answer sessions. If these approaches are not imaginative, imaginative variations may well be introduced.[28] In the course of teaching in these ways, the teacher can show his or her imagination in the examples, cases, references, analogies, connections, metaphors, allusions, and diagrams introduced. Tired examples give way to fresh ones that open up the issue for teacher and student alike. These possibilities for imaginative teaching, however, are ignored by those who take the simplistic view that classroom teachers who value and emphasize creative learning will "minimize to the extent possible their own talk in class" (Massialas and Zevin 1983, 235). There may be good reasons why, on occasion, teachers should minimize their own talk but this is not a general guideline for imaginative teaching. It is the quality, not the amount, of talk that matters. Some teachers show their imagination by being able to think of another way of explaining a

point or demonstrating a principle when other teachers would be defeated.

The impossibility of reducing teaching to rules and routines suggests that teachers will need imagination to think of ways to satisfy conflicting needs and claims *in their own teaching situations*. There is no ready-made rule to follow which will satisfy the demands of authority and freedom in education, however, and Russell (1971) is surely right to insist that teachers will simply have to *find* a way of exercising authority in the spirit of liberty (102). Tact, sensitivity, and judgment will be required here, but also imagination and critical reflection. Like Russell, Dewey (1976) sets himself against recommending methods and strategies to be "slavishly copied" in other contexts (319). Moreover, fundamental educational principles, such as the freedom of the learner, do not carry self-evident implications for practice either; they need interpretation in one's own situation (Dewey 1969, 20). They do not constitute answers so much as problems, and solutions will be found only by those with the imagination to break out of traditional ways of thinking and to adapt familiar ideas to the unique situations in which they find themselves: "No teacher can know too much or have too ingenious an imagination in selecting and adapting… to meet the requirements that make for growth in this and that individual" (Dewey 1986, 199).

Imagination and Accountability

If we favour a conception of liberal education that seeks to nurture a wide range of desirable human qualities, then the development of imagination will surely rank among our central aims. It is our imaginative capacity, combined with critical thinking, that enables us to break out of the confinement that results from stubborn and settled ways of thinking, too ready acceptance of the familiar, and a host of factors which prevent us from looking at things differently and thinking of other possibilities. It may be an exaggeration to say, as Mary Warnock (1996) does, that helping students exercise their imagination is the teacher's *only* serious

function, but it is certainly one of the central tasks and rarely given the attention it deserves (147). If students are to be helped to sustain and develop a sense of wonder, to entertain alternative interpretations and explanations, and to cultivate a willingness to engage in imaginative thinking, they must first see these attitudes, habits, and dispositions exemplified in the way their teachers approach issues and problems in their classroom interactions. To take imaginative ability seriously as an aim of education means taking it seriously as a virtue in teachers.

Encouraging imaginative ability in teachers and fostering imaginative work in student teachers will require that supervisors and teacher educators have a rich and appreciative grasp of the many forms imaginative teaching can take. These include the ability to improvise, to recognize a teachable moment, to find a memorable example, to see where something might lead, to notice connections where things seem fragmented and isolated, to suggest the right assignment, to discover the merit in what is haltingly expressed, to think of an effective compromise, to put oneself in the shoes of one's students, to set a problem that is challenging but not overwhelming, and so on. The teacher with imagination is someone who can entertain the possibility that he or she is mistaken, that there are alternative positions which may well turn out to be right, and that his or her own knowledge is really quite limited. Inquiry begins with wonder and the person who is puzzled considers that he or she has much to learn (Aristotle *Metaphysics*, Book 1, ch. 2); in this way a connection emerges between imagination and certain intellectual virtues, especially humility, open-mindedness, and self-criticism. If we can give appropriate weight to such virtues in our account of good teaching, it may help to offset any tendency towards interpreting teaching as no more than the authoritative, rehearsed, and skillful transmission of established knowledge.[29]

Evaluating the performance of teachers is crucial if we are committed to having students encounter teachers who meet the highest standards of excellence. We need to be able to recognize and encourage those teachers whose work is admirable, and offer support and further training to those who need to improve. As

the demand for accountability in teaching becomes ever more insistent, however, imaginative qualities run the risk of being overlooked and crowded out by a preoccupation with demonstrable mastery of particular behaviours and content knowledge. Douglas Anderson (2002) depressingly notes that "we seem currently in the midst of a movement toward mechanical pedagogy" (33). With teaching increasingly being turned into a script specifying — in precise and bewildering detail — the content, approved methodology, and duration of lessons, attention becomes centred on readily observable teacher behaviour that conforms to the script; more nebulous and subjective qualities such as imagination and critical ability are ignored and our conception of good teaching is diminished.

To consider what imaginative teaching involves is to appreciate immediately that it cannot be reduced to a checklist of observable behaviours, steps, or methods. The literature is full of examples of approaches, however, which promise to train teachers to be effective and efficient in ways that can be directly observed and accurately measured. In a climate where schools are regarded as being in crisis, such promises are extremely tempting. When precision becomes our watchword, it is easy to forget Aristotle's wise observation that the same degree of precision should not be demanded in all inquiries. To limit "good teaching" to that which can be documented in terms of hard evidence ("data") means that the exclusive focus will be on those aspects of teaching that can be exactly measured and objectively reported. The real and important difference between imaginative and unimaginative teaching is in danger of being lost unless those who supervise teachers and student teachers continue to believe that the distinction matters and can be identified in practice. Supervisors must be willing to exercise a keen sense of judgment to recognize and encourage those imaginative suggestions, ideas, and approaches that stimulate the students' sense of wonder.

Teachers need to be mindful of the ways in which the curriculum, assignments, and tests can work against the fostering of imagination in their students. In connection with the curriculum, for example, we can become so concerned about "engaged time"

and counting the minutes spent on what is thought of as serious business, that wonder and imagination are undermined (Eisner 1991). A concern to cover the ground may mean that students have little time to wonder about the meaning and significance of what they are learning. The curriculum ought to engage students in the kind of inquiry that opens their minds to unanticipated possibilities, but too often it operates as a constraint. Richard Dawkins (2003) reports meeting excellent science teachers in the United Kingdom who felt unable to spend adequate time on the theory of evolution — "the staggering, mind-expanding truth" — because it only warrants a brief mention in the syllabus they are expected to follow (58). In a similar vein, Douglas Anderson (2002) recalls visiting a school that had a three-inch-thick binder to set out the 5th grade curriculum, replete with instructions on how to conduct discussions and how many minutes to spend on each topic (36). These are anecdotes, of course, but ones that turn up with disturbing frequency.

Regrettably, too, student assignments and activities are sometimes little more than busy work, such as the dull and deadly worksheets that still make an appearance. To use Passmore's (1967) distinction, such work consists of mere exercises that ignore the kind of problems that would invite imaginative and critical responses (206). Again, as Eisner (1991) reminds us, student learning is frequently dominated by tasks that demand the acquisition of conventional knowledge and skills rather than tasks that allow for distinctive and unique responses (16). If, by contrast, teachers can suggest questions, dilemmas, puzzles, projects, and investigations that are interesting, provocative, and novel, in which students have to use what they know in unspecified ways, they may challenge the students and excite their imagination. Such assignments make more demands on teachers, of course, because evaluating this kind of student work requires judgment and interpretation, and takes considerably more time to assess, and there is no simple, objective standard to appeal to if one's judgment is challenged. Nevertheless, if the goal of fostering imaginative work is important in education, teachers must allow for assignments that make it possible.

In discussing tests, Dawkins (2003) condemns what he calls "today's assessment-mad exam culture" which, he argues, undermines the joy of true education (60). Eisner (1991) points out that familiar assessment practices militate against the development of the imagination. Teachers need to avoid being so locked into particular anticipated responses that they cannot entertain some other answer to the question posed.[30] Standardized tests, for example, which permit only one correct response deprive students of the opportunity to articulate an idea they have, and also prevent teachers from trying to look imaginatively at the students' responses (see Eisner 1991: Sobocan, this volume).[31] If the tests we employ allow no scope for imaginative and critical responses, we can hardly claim that our aims of education take such ideas seriously; we show by our actions that we prefer conformity to innovative thinking, safe and prudent responses to courageous speculation.

The final word must go to John Passmore (1980), who did so much to make the cultivation of the imagination in conjunction with critical thinking a central aim of education: "To teach in a way which emphasises at once the need to be careful, to be critical, and to exercise the imagination is extraordinarily difficult… But the teacher cannot be satisfied with any lesser ambition… Imaginativeness, disciplined fancy, lies at the very centre of a free society" (163-4).

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Notes

1. There are, of course, some notable exceptions. See, for example, Warnock (1976), and the various contributors to Egan and Nadaner (1988).
2. It would not be fair to say, as Egan and Nadaner do (1998, Introduction), that philosophers in general have viewed imagination as "a damaging intrusion upon logic" (xi). The point is rather that philosophers have been clear that imagination and logic have different roles to play. Even Ryle (1963) is said to have "helped assign low status to nondiscursive forms of thought in education" (xi). It was Ryle, however, who showed us that there are many different sorts of behaviour which we can perform imaginatively; one of his favourite examples was the imaginative and intelligent behaviour of the circus clown. It is hard to reconcile such an example with a "bias for strict order" or a reduction of productive thinking to testable propositions, as Egan and Nadaner allege (xii). If Ryle also saw a darker side to imagination, he saw no more than is true of any virtue or excellence.
3. For a sense of the interest in creativity at that time, see Freeman, Butcher, and Christie (1968).
4. I agree with Robin Barrow (1988) that the term "imaginative" cannot merely refer to unusual ideas or practices. The praise implicit in the term excludes the bizarre, the absurd, or the incoherent (unless, of course, the context makes these appropriate). In excluding them, however, I do not believe we have to build in the criterion of effectiveness, by which Barrow means "conducive to a good solution to or resolution of the task or problem at hand" (1988, 85). Often, proposed solutions may have great intuitive plausibility and generate much interest and excitement before they are eventually shown not to work. Why would we not regard those who advance them as imaginative?
5. Perhaps this is the place to dissociate myself from the view of Kieran Egan (1991) that John Dewey, in stressing the importance of building on the child's everyday experience, somehow generated pedagogical principles which neglect imaginative activity. It is clear enough, surely, that Dewey included imaginative activity *within* the everyday experience of the child: "Even when a person builds a castle in the air he is interacting with the objects which he constructs in fancy" (Dewey 1965, 44). The environment, Dewey insisted, is whatever

conditions interact with an individual to create the experience.

6. Her claim is partly empirical, of course, though it would seem that the burden of her argument is that the very conception of critical thinking is at fault. An empirical case, in any event, could not plausibly be made in terms of two or three examples.
7. Kaplan refers to Maxine Greene (1983). "Critical pedagogy" is used here in its technical sense to refer to a movement inspired by the work of Paolo Freire.
8. Other examples of the "many questions" fallacy from the literature would include the following: (1) "Is God one person or three?" (White 1970, 186); (2) "Why must countries having a dictatorship of the proletariat practise democracy towards the people and impose dictatorship on the enemy?" (Dearden 1988, 174). Of course, White and Dearden are giving these as examples of the fallacy. Kaplan (1991) actually commits the fallacy herself when she invites the student to ask, "If 'guilt by association' is a fallacy, why do we usually use it successfully to make decisions?" (369). Do we? Furthermore, any logic course surely will make it clear that there is a difference between validity and truth.
9. Having mentioned the usefulness of studying fallacies, I should add that I have not been convinced by the current onslaught on this important aspect of the development of critical thinking skills. I provide some reasons in Hare (1982).
10. Kaplan (1991) seems unaware that she does just this herself! In charging Kahane (1988) with indoctrination, she speaks of evaluating his work by "using the questions he teaches students to ask of conservative politicians" (366). But if these questions raised by Kaplan really are critical, it seems that Kahane has been successful after all.
11. Philosophers are not reluctant to say that this is one of their fondest hopes. See, for example, R. Hare's remark about educators being pleased when students disagree with them (Hare 1964, 47-70).
12. It is not clear that Kaplan (1991) shares my optimism, because she quotes with approval Friedrich Pollock's pessimistic appraisal of "the average citizen" who succumbs to the pressure to accept the issues as defined (Pollack 1976, 229).
13. She means "hope" in the sense of "expect." Clearly she *wishes* to avoid bias.

14. Kaplan (1991) criticizes critical thinking for not encouraging students to go on to ask about the forces which have shaped the views of those we convict of being illogical. This is false. Consider the following from a primer on critical thinking:

> It is perfectly legitimate, at least from the standpoint of sound thinking, to raise and to pursue questions about interests and motivations. In particular it is innocuous, and it can be illuminating, to do this when the original issues of truth and validity have been settled... Yet it will not do — notwithstanding that it is all too often done — to offer more or less speculative answers to such consequential questions as a substitute for, rather than as a supplement to, the direct examination of whatever were the prior issues. (Flew 1975, 63)

   To apply this point to the present case, having shown that Kaplan's (1991) argument is faulty, we could now go on to ask about the forces and motives which lie behind her work. That, however, is not germane to our concerns here.

15. Even here, of course, it is easy to forget that people may have had at some point in their lives experiences remarkably similar to those normally associated with other groups (at Hare 1979). Hare's point is that, as a prisoner during the Second World War, he had worked "in conditions not *at the time* distinguishable from slavery" (109).

16. Walkling (1990) rightly condemns "a cultural solipsism which, as an explanation of the world, cannot even account for how persons are mutually intelligible across cultures" (87).

17. Peter McGlynn, the schoolteacher in a short story by Mulkerns (1961), was able to bring Spain alive to the students even though he had never traveled.

18. This is not to say that there is no sense in which we *cannot* imagine certain things. Feynman (1964) makes the point that "whatever we are *allowed* to imagine in science must be *consistent with everything else we know*... We can't allow ourselves to seriously imagine things which are obviously in contradiction to the known laws of nature" (20). Feynman is speaking here of what is intellectually impossible *given certain assumptions.*

19. A point made memorably by Spinoza:

> For no one under-estimates oneself by reason of self-hate, that is, no one under-estimates himself in so far as he imagines that he cannot do this or that. For whatever a man imagines that he cannot do, he imagines it

> necessarily, and by that very imagination he is so disposed that in truth he cannot do what he imagines he cannot do. (Ethics Part 3, clef. 28 trans. Andrew Boyle)

20. One well-known instance of this view in the literature is in Nowell-Smith (1958, 8). A similar view had appeared in The Harvard Committee (1945), in which it was held that "in literature [the student's] imagination is stirred with vivid evocations of ideals of action, passion, and thought" (60).
21. Whitehead (1965) gets the point right when speaking of imagination disciplined by science: "Of course it involves only one specific type of imaginative functioning which is thus strengthened, just as poetic literature strengthens another specific type... we must not conceive of the imagination as a definite faculty which is strengthened as a whole by any particular imaginative act of a specific type" (47).
22. Sometimes, indeed, their suggestions are imaginative by any standard. See, for example, some of the remarks of children reported by Ann Margaret Sharp in "What is a 'community of inquiry'?", in Hare and Portelli (1988).
23. Similar comments could be made about the teacher recognizing that students may see school itself as intimidating.
24. Dewey (1965) thought that the teacher "must... have that sympathetic understanding of individuals as individuals which gives him an idea of what is actually going on in the minds of those who are learning" (39).
25. Perhaps this negative reaction will prove less common as the philosophy for children movement convinces more and more teachers that even young children really can raise and consider serious philosophical questions (see Lipman 1988).
26. For an excellent discussion of the need for teachers to exercise judgment, see Anderson (2002).
27. It certainly reads as if it is this very intention which condemns one as unimaginative.
28. Eisner (1958, 179) makes the point, too, that the possession of familiar repertoires allows the teacher to notice emerging ideas in the classroom, thus permitting imaginative work.
29. One is put in mind of Whitehead's (1959, 37 and 96) famous definition of the teacher as "an ignorant man thinking," and also of his account of the function of the university as the imaginative acquisition of

knowledge. A footnote to Aristotle perhaps?

30. This point is made in an amusing way by Calandra (1972, 4-6).

31. Nunn (1947) also reminded us that "it is fatally easy to condemn as contrary to beauty, truth or goodness what merely runs counter to our conservative prejudices" (42).