Abstract

This paper explores Dewey's identification of education and growth, examining his analysis of growth as social, moral, and intellectual. Implications of this analysis for the compulsory and hierarchical curriculum are drawn out.

It is argued that Dewey's position contains several serious difficulties: his thesis identifying growth for its own sake as the end of education is particularly problematic. A Peircean perspective on these issues is presented and defended, followed by a brief defence of Dewey.

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Dewey and Peirce on Curriculum and the Three R's

Introduction

In the 1960's Canada found itself in a period of growth and expansion. "Economic restraint," "declining enrollments," and "getting back to the basics," were terms that were far-removed from the thinking of most educators of the day. Instead, the vocabularies of teachers, school trustees and educational administrators included such colourful phrases as "the discovery approach," "group learning," "first hand experience," "experimentation," and self-awareness". These imaginative, though sometimes obsure terms, are found in much of the educational literature of the 1960's such as Quebec's *Parent Report,* Ontario's *Living and Learning,* and the *Worth Report* in Alberta. It is not surprising that in this experimental period educators turned their attention to earlier progressivists such as John Dewey.[1]

In the 1970's economic restraint has forced educators to think in terms of compulsory curriculum and getting back to the basics. There is always the danger that something valuable may be lost in such sudden reversals of the educational pendulum. As Canadian educators work their way back to fundamental principles and the three R's it is perhaps more important than ever to take a second look at progressivists such as John Dewey and to consider how his philosophy might be guided and tempered by the logic of Charles Peirce. These two companion papers[2] are an attempt to do exactly that. The first presents an account of Dewey's position on the nature of growth and its implications for curriculum development. The second paper provides a critique of Dewey's concept of growth and sketches what C.S. Peirce would have regarded as more viable alternatives.

John Dewey believed that principles which govern decisions about curriculum ought to be based on the overall aims of education. Many current philosophers of education agree with Dewey that sound judgements about curriculum and subject matter are necessarily related to educational aims.[3] Yet it is primarily in the matter of aims in education that Dewey's views on curriculum depart from other educa-

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tional philosophers. While many others see education as a means of producing refinement, knowledge, and enlightenment in the individual through a liberal education, Dewey regarded education primarily as an ongoing process of growth and development. While these two positions need not be mutually exclusive, Dewey's views regarding aims in education had the effect of reducing the importance of any particular subject matter *per se.* The subjects of the curriculum were not so important for the special knowledge and skills they contained as for their capacity to act as useful vehicles in the students' ongoing growth and development.

1. Education as Growth and Growth as Education

The terms "education" and "growth" have frequently been used by Dewey to mean one and the same thing. for example, he suggests that education is all one with growing and that it has no end beyond itself.[4] Dewey states that "education means growth" and "without it there can be no growth except in a purely physical sense".[5] This statement implies that, for Dewey, growth and education are synonymous terms. Yet in other writings Dewey suggests that education leads to an ongoing growth process: "Growing, or the continuous reconstruction of experience is the only end [of education]."[6] In spite of some ambiguity as to whether education is growth or education leads to growth, Dewey did not view the aims of education in terms of strictly practical results. As a pragmatist, one might expect Dewey to consider education in terms of practical skills, and functional knowledge that could have immediate application to the work-a-day world. Such was not the case however. While practical ends might be an important by-product of education the most *useful* function of the educational process was its role in producing continued growth.[7]

Dewey's idea concerning the continuous reconstruction of experience implies that education has no definite terminus. Moreover, fixed ends and definite objectives are to be avoided since they limit the educational process. According to Dewey fixed ends permit change only "within narrow and unimportant limits. They paralyze constructive human inventions by a theory which condemns them in advance to failure."[7] Dewey did not view the aims of education in terms of end products to be achieved through a process of education. Instead he held that the process itself becomes the aim, and in Dewey's opinion, the process of education ought always to be a growth process.

One of the implications which follows from this view is that growth and education are continuous and cumulative in nature. Since growth lacks a clear terminus, "education is by its nature an endless circle or spiral".[9] Thus Dewey's concept of the educated man is not that of a person who has completed his education but rather that of the person who has learned to accept responsibility for his own ongoing development.[10]

A second implication of Dewey's concept of education as an ongoing growth process is that education must be autonomous in setting its directions. If education has no fixed and external goals for which to strive, it must of necessity become either a self-regulatory process or a completely directionless one since Dewey held that education has no end beyond itself. He believed that education is autonomous and should be free to determine its own ends and its own objectives.[11] This view of autonomy in education pervades much of Dewey's later thinking and it also appears in his writing as early as the turn of the century.[12]

Dewey's view that the aim of education is simply to provide further growth leads to a number of philosophic problems. In Dworkin's words, "the dictum that

education ought to lead only to more education, growth to more growth, has been criticized as without precise meaning at best and as a justification of aimlessness at worst."[13] Much of the criticism of Dewey's growth process has been aptly summarized in the works of Malcolm Skilbeck: "By defining the aim of education as 'growth' leading to further growth' he appeared to be offering a formal definition which incorporates no criteria at all for distinguishing between educative and miseducative experiences."[14] As Dewey became more aware of the force of his critics' arguments he attempted to clarify his concept of continuous growth. The following rather lengthy quotation represents an effort on his part to deal with his critics:

> . . .The objection made is that growth might take many different directions: a man, for example, who starts out on a career of burglary may grow in that direction, and by practice may grow into a highly expert burglar. Hence it is argued that 'growth' is not enough; we must also specify the direction in which growth takes place, the end towards which it tends. Before, however, we decide that the objection is conclusive, we must analyze the case a little further.
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> That a man may grow in efficiency as a burglar, as a gangster, or as a corrupt politician, cannot be doubted. But from the standpoint of growth as education and education as growth the question is whether growth in this direction promotes or retards growth in general. Does this form of growth create conditions for further growth, or does it set up conditions that shut off the person who has grown in this particular direction from the occasion, stimuli, and opportunities for continuing growth in new directions? What is the effect of growth in a special direction upon the attitudes and habits which alone open up avenues for development in other lines? I shall leave you to answer these questions, saying simply that when and *only* when development in a particular line conduces to continuing growth does it answer to the criterion of education as growing. For the conception is one that must find universal and not specialized limited application.[15]

In the above quotation Dewey attempted to develop an overriding principle for the type of constructive growth that he considered to be educative. Growth must have universal rather than limited application and it must lead onward to continued growth. Although Dewey's explanation may possibly serve as a principle for recognizing educative growth after it becomes an accomplished fact, it appears that he failed to provide a clear terminus which might serve in advance as a directing focus for teachers and educators. That is, his explanation can be reduced to the somewhat tautological position that growth is beneficial growth only when it leads to more growth. The original problem of growth lacking appropriate direction remains unanswered in Dewey's explanation. Although the notion of growth leading continuously to more growth has enjoyed wide popular acceptance, one is inclined to agree with Dworkin's observation that "it may be no compliment to professional educators that they so easily understood Dewey while philosophers shook their heads".[16] In spite of Dewey's critics, he held to the view that the overriding aim of education is one of providing the kinds of experiences which lead to a continued process of growth.

In his *Experience and Education*, Dewey attempted to clarify the point that not all experiences were educative. Truly educative experiences were characterized by the two principles of "continuity" and "interaction".[17] Continuity implied that each educative experience takes up something from those which have gone before and modifies in some way the quality of those that come after. Dewey's second principle, interaction, implied that both the outer objective factors and the inner subjective factors (or thoughts and feelings of the learner) were of equal importance in the learning process. The inner and outer factors must interact for learning to occur. While these two principles give some indication of the type of qualities that are exemplified in Dewey's notion of educative experiences they do not provide a clear terminus for his growth process.

Those who take the time and effort to examine his prolix writings find that Dewey's concept of growth includes social, moral and intellectual dimensions and

for the greater part of his writings he tended to exclude spiritual and physical growth as legitimate educational endeavours.[16] These three dimensions of social, moral and intellectual growth are unified in the ongoing development of the self. Although this concept of growth does not leave Dewey's readers with as clear a picture as we might expect from an educational philosopher, it is nevertheless this concept of growth upon which he bases his ideas about curriculum.

1. Curriculum and the Three R's

Since growth is the overriding aim in education, curriculum and the various subject areas serve as instruments of growth. Each individual subject is valuable according to the degree in which it is instrumental in the growth process and no subjects are inherently valuable in their own right. Thus, for Dewey, there is no hierarchy of subject matter:

> Accordingly, any subject, from Greek to cooking, and from drawing to mathematics, is intellectural, . . . not in its fixed inner structure, but in its function — in its power to start and direct significant inquiry and reflection. What geometry does for one, the manipulation of laboratory apparatus, the mastery of musical composition, or the conduct of a business affair, does for another.[19]

Again in Dewey's words, "we cannot establish a hierarchy of values among studies. It is futile to attempt to arrange them in an order, beginning with one having least worth and going on to that of maximum value."[20] From the above statements, it seems likely that Dewey would have been cautious about establishing a compulsory curriculum on the basis of subject priorities. Almost certainly, he would have been reluctant to support the current demand that schools ought to return to the basics in curriculum. The persistent problem that arises when eductors wish to return to the basics is that of finding a suitable principle for determining what exactly is meant by basic subjects.

The idea that certain subjects are basic is often included in the popular expression, "the three R's". Dewey argued, "the notion that the essentials of elementary eduction are the three R's. . . .is based upon ignorance of the essentials needed for realization of democratic ideas".[21] He believed that it is absurd to restrict the curriculum to a certain group of studies and his following condemnation of this practice sounds very much as though it might be readily applied to current trends in education:

> There is, however, a false educational god whose idolaters are legion, and whose cult influences the entire educational system. This is language-study — the study not of foreign language, but of English; not in higher, but in primary education. It is almost an uquestioned assumption, of educational theory and practice both, that the first three years of a child's school-life shall be mainly taken up with learning to read and write his own language.[22]

Dewey's criticism of attempts to impose a compulsory curriculum or a hierarchy of subject values leads to the question of what he would approve as a reasonable principle underlying curriculum. Again, we return to Dewey's idea that growth is education and education is growth and that all school subjects are subservient to the needs of growth. While it is true that growth may take many directions, Dewey upheld the importance of social, intellectual and moral dimensions of growth. These three dimensions combine to result in a process of self-growth. For Dewey, there is no such activity as sheer self growth *per se,* yet self growth arises out of a combination of social, intellectual, and moral development. On the matter of social growth, Dewey held that the growth of the child in the direction of social capacity and service and his larger and more vital union with life become the unifying aim. Under this social rhubric, discipline, culture, and information, fall into

place as phases of growth. Moral growth too, occupied a place of central importance for Dewey: "Morals means growth of conduct of meaning. . . It is all one with growing — morals is education."[23] Dewey also upheld the importance of intellectual growth. He believed that reflection, or thought, occupied an intermediate and reconstructive position in bringing together the social and moral experiences of the individual.[24] In the end, Dewey's growth process resulted in the on-going development of the self. The individual self is modified and reconstructed by each new educative experience:

> But individuality is something developing and to be continuously attained, not something given all at once and ready-made. It is found only in life-history, in its continuous growth; it is so to say, a career and not just a fact discoverable at a particular cross section of life.[25]

A question arises as to what kinds of curricular experiences facilitate the type of growth process that Dewey had in mind. Perhaps without stretching the point too far we may say that Dewey wished to replace the traditional three R's, with receptiveness, reflection, and reconstruction. Dewey's three R's related more to attitudes and approaches in curriculum than to subject-matter itself:

> It is not the subject matter *per se* that is educative or that is conducive to growth. There is no subject that is in and of itself, or without regard to the stage of growth attained by the learner, such that inherent educational value can be attributed to it.[26]

The first R, "receptiveness", implies that curriculum should reflect an openness of mind, flexibility of attitudes, and a willingness to accept change. "In short, these are impossible without an active disposition to welcome points of view hitherto alien; an active desire to entertain considerations which modify existing purposes."[27]

The second R, "reflection", implies thoughtfulness and understanding. Dewey describes relective thought in the following words: *"Active persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends* constitutes reflective thought."[28] Reflection also implies an inner active process of thinking, of connecting ideas together in a way that is meaningful to the learner, so that he may come to understand and question rather than to passively accept the bare facts of the curriculum. Reflection is Dewey's term for the mental process that is necessary to unite the experiences of everyday living with the understanding of the learner. In this respect, reflection, or thought, occupies an intermediate and reconstructive position in Dewey's ongoing growth process.[29]

The third R, "reconstruction", implies a remaking of the self through the learning process. Dewey's overall aim for education was the ongoing growth of the self. This view implies both adjustment and accommodation of the self to new experiences and new understanding.[30] It combines "receptiveness" to change, with "reflective" thought in the "reconstruction" or remaking of self. Dewey stated that "in the strictest sense, it is impossible for the self to stand still; it is becoming, and becoming for the better or the worse".[31] The idea that inevitable reconstruction of the self will be for the better or the worse gives a certain urgency and focus to Dewey's growth concept:

> Personality, character, is more than subject-matter. Not knowledge or information, but self-realization, is the goal. To possess all the world of knowledge and lose one's own self is as awful a fate in education as in religion.[32]

Dewey's notion of self-realization leaves his readers with yet another open-ended concept since there is no set mold to which the self should be accommodated. He suggests however, that positive self growth will be in harmony with the

good of society.[33] It will have moral, social and intellectural dimensions, although the idea of continued growth will militate against a fixed terminus for self-realization. Such an open-ended view of self growth may leave Dewey's readers unsatisfied yet the alternative may be even less satisfactory. That is, any proposals which purport to give a fixed and final view of self realization are equally open to ongoing questions.

In summary, John Dewey would agree with many educational philosophers that the main principles guiding curriculum choices ought to be determined by the overall aims in education. He believed that the aim of education was to encourage a process of continuous growth. For Dewey, growth and education were normally synonymous terms and curriculum and subject-matter serve only as instruments through which children achieve growth. Although Dewey's concept of growth lacks a clear terminus, it includes development in social, moral, and intellectual dimensions and these three dimensions have as their focus the ongoing development of the self.

Dewey was reluctant to uphold any one subject as more valuable than another or to claim that subject-matter was intrinsically valuable. Curriculum was valuable only to the degree that it served the process of growth. Thus Dewey did not espouse the view that certain subjects were basic, nor would he have aligned himself with the current popular demand that schools ought to concentrate on teaching the traditional three R's. In conclusion, Dewey would have been likely to replace the emphasis on the traditional three R's, with a renewed emphasis on receptivity, reflection, and reconstruction of the self in an ongoing growth process.

C. S. Peirce on Society and the Quest for Knowledge — A Rejoinder to Dewey

I attempt to do two things in this paper: first, to outline what I take to be three serious problems in the foregoing account[34] of Dewey's analysis of growth and education and, second, to illustrate how a Peircean perspective could have extricated Dewey from some of these difficulties.

Difficulties in Dewey's Position

I shall discuss the difficulties to which the three following Deweyan tenets give rise: (1) The end of education is growth *per se* or growth for the sake of growth; (2) Growth which results in "universal and not specialized limited application"[35] is valuable; (3) The fact that subjects have no inherent value and are only valuable as they contribute to growth discredits the traditional hierarchy of subject matter in the school curriculum. The first tenet is clearly the one most central to Dewey's position as a whole; I deal with it first and in greatest detail.

(1) The End of Education is Growth *per se* or Growth for the Sake of Growth.

Goldie Emerson is aware that this tenet is problematic. He states, "The original problem of growth lacking appropriate direction remains unanswered in Dewey's explanation."[36] I shall try to draw out more fully the exact nature of this problem. The central difficulty, as I see it, lies in Dewey's reluctance to give a substantive response to the question "What kind of growth is good?" Dewey prefers a purely formal analysis, claiming that growth in and of itself is to be sought after by education, although he does exclude physical growth and spiritual or religious growth, which he takes not to be relevant educational goals.[37] Thus any particular instance of growth can be bad or undesirable only if it limits the possibilty of other growth.

In an attempt to clarify what he means by this, Dewey cites the example of growth in burglary which is a bad thing in exactly this sense, because it does limit growth in other directions.

I wish to pursue this example further. It is not at all clear that the burglar would see eye to eye with Dewey on the inherently limiting nature of burglary as a way of life. As a matter of fact, the thief might well see thievery as presenting a lifetime of growing options. She could argue that adopting such a life style permits one to grow from petty theft to larceny of a more substantial nature and eventually to matriculate into breaking and entering or armed robbery.

Nor is it clear that this area of growth cuts one off from those areas that Dewey clearly favours — namely, intellectual, social, and moral. Our thief could combine growth in burglary with intellectual growth by carrying out a serious, systematic study of the pros and cons of engaging in high class theft, such as income tax evasion. Unlimited amounts of reflection and thought which Dewey appears to link or even identify with intellectual growth[38] could be devoted to this study. She could do extensive research on business and computerization precisely in order to enhance her qualifications for defrauding a company. Also, theft of significantly valuable property might reduce the amount of time she spent earning a living, leaving her time, hitherto unavailable, to pursue the subtleties of Anselm's argument for the existence of God and the debate of rule versus act utilitarianism.

Neither is growth in the skill of theft incompatible with social growth. One could form a corporation of thieves (called Heist and Company) and there is no reason why social benefits like unemployment insurance, old age pension, continuing education programs, and even rehabilitation for those who had fallen from the fold and gone straight could not be part of the structure of such a corporation. Dewey speaks of social capacity, service, and union with life as constitutents of social growth.[39] Yet all of these could be facilitated by membership in my fictional Heist and Company.

For an example of the compatibility of theft with moral growth, consider the legend of Robin Hood. One might, with the Singing Nun, avoid income tax payments in order to give more to charity. A person might steal mistreated animals from their owners in order to give them a better home. A little thought would undoubtedly reveal many more examples. Dewey's analysis of moral growth is not so clear as that of intellectual or social growth. Goldie Emerson quotes him as saying "Morals means growth of conduct of meaning."[40] I interpret this to mean that morals is growth of meaningful conduct. This is little help, since the term "meaningful" is notoriously unclear. However, there is no *prima facie* reason why our burglar wouldn't see her work as meaningful, so this notion cannot be used to cast disfavour on the burglar's lifestyle. One might even argue that our burglar is more likely to see her conduct as meaningful than the typical assembly line worker or key-punch operator.

Nor does our burglar example violate either of the conditions which Dewey builds into educative experiences, in attempting to clarify this concept. Experiences which are truly educative must exhibit both continuity and interaction.[41] for our burglar could "take up something from those which have gone before [literally as well as figuaratively] and modif[y]. . .in some way the quality of those that come after."[42] That is, she could learn from and build upon the work of her predecessors and in some way shape the direction in life of her successors. She could also pay equal heed to "the outer objective factors and the inner subjective

factors",[43] her own thoughts and feelings, in pursuing her career as a burglar, thus ensuring that the interaction requirement was met.

What I have argued is that growth in theft need not limit growth in other areas. But problems remain even if we were to ignore this and grant Dewey that growth in theft is undesirable *because* it limits growth in other areas. For Dewey now must demonstrate that the same criticism cannot be applied to his three sanctioned areas of growth — intellectual, social and moral. Yet surely this criticism is applicable. Intellectual growth, for example, might consume so much of one's time and energy, that growth in pocket-picking would be stunted as a result. And if growth's *only* measure of worth is its keeping open the avenues of further growth, this is as serious a criticism of intellectual pursuits as Dewey's parallel criticism of burglary.

It is, in fact, impossible, to avoid growth which subtracts from the development of other types of growth, as growth of any form, simply by virtue of the time required for its development, will cut into the time which could conceivably be allotted to other areas. What we must do is to avoid growth which places limits on certain specific types of growth sanctioned by our society — i.e., social, intellectual, and moral growth. But to say this is to take a definite stand on which areas of growth are to be preferred and to put forward a substantive rather than a purely formal account of growth. Dewey cannot get away with a purely formal notion of value in growth. If he is to defend the pursuit of moral, social, and intellectual growth he must do so on other or at least additional grounds than their leading to further growth in general. He might argue, for example, that they are necessary pre-requisites for the survival of a democratic society.[44]

Dewey's loose identification between growth and "adequacy of life"[45] does nothing to clarify the matter. What constitutes an adequate life and who decides? Must a life be moral, social, and intellectual in order to be "adequate"? But to answer affirmatively is to foresake a purely formal notion of growth. Does each person select their own mode of adequacy? If so, we will not need to look far for people who see their lives of crime and violence as perfectly adequate. If some higher more qualified authority who would renounce such patterns of behaviour has the final word on the nature of an adequate life, we need to know what criteria such people use, for in ruling out theft, they will have brought in substantive principles of excellence.

In talking about growth, Dewey seems to shift between talk about further growth and clear normative talk. "The continuous reconstruction of experience"[46] fits into the first category, as does "development [which]. . .conduces to continuing growth".[47] "Adequacy of life"[48] fits into the second category, along with "fixed ends [which] permit change only 'within *narrow* and *unimportant* limits'."[49] If Dewey wants to work out a purely formal criterion of growth, this second terminology category is illicit. Goldie Emerson has fallen into the same error in employing normative terms; thus he talks about "constructive growth"[50] and "beneficial growth"[51] for example.

(2) Growth which Results in "Universal and not Specialized Limited Application"[52] is Valuable.

Dewey is using the notion of "universal" as opposed to "specialized limited" in an attempt to further clarify what "answer[s] to the criterion of education as growing."[53] What exactly Dewey means by "universal", however, is not made clear. In opposing it to "specialized limited", I will assume that he means "very general, broad and far-ranging". To push Dewey further on this issue and equate "univer-

sal" to "infinite or totally unlimited applicabilty" would render his distinction useless as a device for differentiating between educative and non-educative growth. Assuming, then, a loose synonymity of "universal" with "broad, general, and long-range", the universal criterion is not sufficient even to debunk burglary as a genuinely educative experience. For while burglary does demand certain specialized as opposed to broad, general skills, this is no less true of cooking[54] or "the manipulation of laboratory apparatus",[55] both of which Dewey explicitly includes as intellectually justifiable components of a school curriculum, as much so as Greek, mathematics, or the mastery of musical composition.[56] Like Dewey's continuity criterion, his emphasis on broad, general and long range rather than specialized limited is not sufficient to distinguish the educative from the non-educative. Either might be a valuable supplement to a set of substantive guidelines but combined only with Dewey's highly formal concept of growth, neither is very effective as an evaluative device.

(3) The Fact that Subjects have no Inherent Value and are only Valuable as They Contribute to Growth Discredits the Traditional Hierarchy of Subject Matter in the School Curriculum.

I will discuss this point in terms of the inference being made. According to Goldie Emerson's representation, Dewey moves from the premise (P) that a subject has no inherent value, but is valuable only in so far as it contributes to the process of growth, to the conclusion (C) that there should be no hierarchy of subject matter.[57] However, it is easy to see that C does not follow from P, but needs separate justification. Suppose that P is true, and that the value of all subjects is completely tied to their promotion of growth. From this it does not follow that all subjects necessarily promote growth equally and consequently it cannot follow that there should be "no hierarchy of subject matter".[58] In fact, if C did follow from P as Dewey claims, i.e., if the equal relevance of all subjects to continued growth followed from the absence of inherent value in any subject matter, then Dewey would have to accede to burglary a place of equal prominence in the curriculum with music, art, cooking, auto-mechanics, and mathematics.

A Peircean Perspective

As Dewey's views on education are portrayed in Goldie Emerson's paper, there are two areas in particular where a Peircean perspective would extricate Dewey from some of the serious difficulties entailed by his own position. These are: (1) growth for the sake of growth and (2) the emphasis on *self*-development. In both cases, the strong advantage of Peirce's position is that it provides a direction or focus, thus avoiding the aimlessness of the process of change to which Dewey's system falls victim.

(1) Growth for the Sake of Growth

As we have seen, Dewey's main difficulty in talking about educational growth as its own end is the resultant implication concerning the aimlessness of such growth; he was unable to combat this criticism with the qualifications which he put forward in the form of clarifications to his theory. Peirce, on the other hand, saw education, and all forms of rational endeavour, as focused on what Dewey would call a fixed and definite objective, namely the pursuit of truth or the acquisition of higher levels of knowledge. The question to be answered is whether the adoption of this objective resulted, as Dewey feared, in rendering the educational process rigid. The answer is clearly negative. This is because Peirce's *method* for acquiring

knowledge was inherently open-ended and flexible. Any rigidity, subjectivity, or even dishonesty in one's approach to acquiring knowledge would eventually be revealed in the check of experiment, against which all truth claims must be tested. The fixedness which Dewey feared could not survive *exactly because* it would inhibit the search for truth which is the goal of educational growth. The scientific method, essentially means for Peirce the testing out of all truth claims and hypotheses against the back-drop of experience and the community. This method is our best means of detecting the narrow minded, uninformed, subjective prejudices which cripple educational advancement of any kind and hence our best protection against these threats to growth. With Dewey's own emphasis on the scientific method, it is surprising that he did not attempt to build into it, rather than a purely formal notion of growth, the safety-valve of open-mindedness and flexibility.

In the discussion of his 3R's, Dewey describes the first, receptiveness, as "an active disposition to welcome points of view hitherto alien; an active desire to entertain considerations which modify existing purposes."[59] This claim also has overtones of change for the sake of change. At the very least, Dewey seems to be urging that the educational process should result in the *wish* to alter the presently accepted purpose of our behaviour. Peirce's analysis would differ in two basic ways from that of Dewey. First, the purpose of all investigation for Peirce — reaching the truth of the matter in order to make better informed decisions on what to expect and how to act so as "to avoid disappointment and surprise" (2.173)[60] — would not change. *Because* it would not change, however, one must indeed be receptive to "welcom[ing]...points of view hitherto alien."[61] Peirce would admonish us not actually to *wish* to alter hypotheses which we have adopted, but always to be *willing* to alter them, should experience or the test of experiment cast even the tiniest doubt on their validity. For it would waste too much time to be constantly altering our beliefs, conclusions, and points of view. We must be willing to change, but only when the need arises, that is, when our present belief system or point of view is undercut by reality.

Yet Dewey was as aware as Peirce of the importance of the critical appraisal of our beliefs. In discussing his second R, reflection, he insists that we carefully consider "any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends."[62] In a similar vein, Peirce tells us that all hypotheses must be tested out in the "cupel-furnace of measured criticism" (6.480). Where Peirce and Dewey differed was not in the perception of such critical analysis as necessary to educational endeavours, but in the perception of it as sufficient to ensure open-endedness and flexibility.

The discussion of reconstruction, the third R, further illustrates the problems of Dewey's formal account of growth. According to Goldie Emerson, "Dewey's overall aim for education was the ongoing growth of the self."[63] Yet he quotes from Dewey a few lines later, "In the strictest sense, it is impossible for the self to stand still; it is becoming, and becoming for the better or the worse."[64] The conjunction of these two claims is problematic. If growth of the self could be bad as well as good, and is inevitable in any case, then it makes no sense to speak of growth *per se* as the goal of education. The plea for a certain kind of growth or growth in a certain direction must be advanced.

To conclude our discussion of this point, Dewey describes education as "by its nature an endless circle or spiral".[65] For Peirce, there might well be a spiralling phenomenon involved, but there would nevertheless be a constant movement in

the direction of higher levels of knowledge and consequently greater justification for applying such knowledge to practical circumstances. Perhaps part of the reason for Peirce's confidence in where education is heading is his notion of where it is coming from. Goldie Emerson states that for Dewey "growth and education are continuous and cumulative in nature."[66] For Peirce, the cumulative, continuous nature of education is immeasurably stronger than for Dewey. This is because Peirce sees learning and progress as a function of *community* growth. To the self-growth which Dewey so vehemently advocates Peirce attributes the value of only a single cell in the social organism. This brings me directly to the second area of Dewey's thought that I wanted to discuss from a Peircean perspective.

(2) The Emphasis on *Self*-Development.

The extent of the difference in emphasis between Peirce and Dewey is best captured by the following pairs of quotations. Dewey says "To possess all the world of knowledge and lose one's own self is as awful a fate in education as in religion."[67] Contrast this with Peirce's claim, "He who would not sacrifice his own soul to save the whole world, is illogical in all his inferences, collectively. So the social principle is rooted intrinsically in logic" (5.354). For Peirce, education or growth is not an endless cycle, but an endless pyramid in which those in pursuit of knowledge build upon the work of others and make their own contributions for the generations that will follow. Through his emphasis on individuals working within the context of a large community, Peirce inferred the necessity of certain moral and social dimensions. All individuals must regard their contribution to the search for truth as more important than the acquisition of personal fame or financial benefits. They must be scrupulously honest in formulating their own results and relating these to the work of others — this must all be done with the maximization of knowledge rather than their own reputations in mind. Presumably, people who meet the criteria formulated by Peirce will see themselves as stepping-stones in the history of humanity's growth.

According to Goldie Emerson, "Dewey suggests that *Positive* self growth will be in harmony with the good of society.[68] Two features of this attempt to link self-growth with the social good must be noticed, however. First, the inclusion of the normative term "positive", which is inadmissible, given that Dewey wants to argue for growth *per se* as the end of education. Second, if this normative term is deleted, there is no evidence at all that "self growth will be in harmony with the good of society."[69] We need only recall our burglar example to establish this.

Perhaps, with his stress on self-realization, Dewey has unconsciously championed the currently popular "do your own thing and the rest of the world be damned" philosophy. Peirce, on the other hand, would have urged educators to foster in students above all else the skills and mentality required for co-operating towards a better total society based on a clearer perception of reality.

Dewey has had a profound impact on the educational system in North America. Evidence of his influence on the Canadian school system may readily be found in such important recent documents as *The Formative Years,*[70] *The Hall-Dennis Report*[71] and *The Mackay Report.*[72] Given this, it may be that Dewey was correct in the content, but wrong in the referent of his claim that "There is. . .a false educational god whose idolators are legion, and whose cult influences the entire educational system".[73] Perhaps it would have been better if the educational god of North America had been tempered with more of Peirce's respect for the overarching community and infected with more of Peirce's passion for truth and the acquisition of knowledge.

The pragmatic philosophies of Dewey and Peirce are so remarkably similar tha. it is unlikely that Peirce can extricate Dewey from whatever difficulties may be found in his philosophy. Most of the difficulties in Dewey's philosophy are equally present in Peirce. In spite of Ayim's claims, both Dewey and Peirce are equally strong in their support of the scientific method. Both view the pursuit of truth as important and ongoing, both look to practical consequences as a test of theoretical truths and both Dewey and Peirce hold to a social morality.

Since Dewey believes that only those actions which are socially good (or growth producing) can be good for the individual, his concept of self growth necessarily includes the notion of social good. True self growth does not work in opposition to social growth as Maryann Ayim seems to suggest.

It is difficult to understand why Maryann Ayim devotes so much effort to supporting the possible merits of burglary on one hand while on the other she gives equally strong support to Peirce's social ethics. Surely Peirce, like Dewey, recognizes that burglary is parasitic upon society since the success of the individual burglar depends upon most citizens acting in a trusting, socially responsible manner. In short, the pragmatic philosophies of Dewey and Peirce are remarkably similar in their strengths as well as their weaknesses.

Dewey et Peirce face du programme de Lecture-Ecriture-Arithmétique.

Cet article expose la conception de l'éducation et de la croissance selon Dewey et s'attache à l'analyse de la croissance des points de vue social, moral et intellectuel. Nous examinons aussi les implications de cette analyse quant aux aspects obligatoire et hiérarchique du programme. Nous croyons que la position de Dewey présente de sérieuses difficultés: et que sa conception de la croissance comme but en soi de l'éducation est très problématique. Nous présentons et défendons les idées de Peirce à ce sujet, et faisons une brève défense de la thèse de Dewey.

Notes

[1]The Progressive Education Association was founded in 1918 by a group of educational philosophers, many of whom were Pragmatists. This group included John Dewey, Sidney Hook and William H. Kilpatrick. Dewey's pragmatic philosophy was frequently influenced by Peirce as evidenced by his use of Peircean statements in his *Logic: Theory of Inquiry* and *Essays in Experimental Logic.* In Canada the extent to which interest in the progressive movement spread is indicated by educators such as John McCormack, from Prince Edward Island and C.B. Sessions from Victoria College.

[2]Goldwin Emerson is the Author of the first paper, "Johy Dewey on Growth, Curriculum and the Three R's". Maryann Ayim is the author of the second paper "C.S. Peirce on Society and the Quest for Knowledge — A Re-joinder to Dewey". Emerson includes a brief response to Ayim's paper in the final section.

[3]R. S. Peters, *The Concept of Education* (London: Routledge and Kegan Paul, 1969), p. 36. See also P. H. Hurst and R. S. Peters, *The Logic of Education* (London: Routledge and Kegan Paul, 1970), chapter 4, "The Curriculum", and R. Barrow, Common Sense and the Curriculum (London: George Allen & Unwin, 1976).

[4]John Dewey, *Democracy and Education* (New York: Free Press, c. 1916), p. 100.

[5]John Dewey, *Lectures in China, 1919-1920,* edited by Robert Clopton (Honolulu: University of Hawaii, c. 1973), p. 185.

[6]John Dewey, *Reconstruction in Philosophy* (Boston: Beacon Press, c. 1920), p. 184.

[7]John Dewey, *The Child and the Curriculum: The School and Society* (Chicago: University Press, c. 1902), p. 133.

[8]*Ibid.*, p. 70.

[9]John Dewey, *The Sources of a Science of Education* (New York: Horace Liveright, c. 1929), p. 77.

[10]John Dewey, *Lectures in China, 1919-1920, op. cit.*, p. 197.

[11]John Dewey, *Democracy and Education, op. cit.*, p. 53. See also *Sources of a Science of Education, op. cit.*, p. 74.

[12]John Dewey, *My Pedagogic Creed, 1897,* as quoted from . M.S. Dworkin, *Dewey on Education* (New York: Columbia University, 1967), p. 27.

[13]Martin S. Dworkin, *Dewey on Education, op. cit.*, p. 13. See also Reginald Archambault, "Philosophical Bases of the Experience Curriculum" in *Dewey on Education* (New York: Ramdom House, 1966), p. 176-177.

[14]Malcolm Skibeck, *Dewey* (London: Collier-Macmillan, 1970), p. 19.

[15]John Dewey, *Experience and Education* (London: Collier-Macmillan, c. 1938), p. 36.

[16]Martin Dworkin, *Dewey on Education, op. cit.*, p. 14.

[17]John Dewey, "Criteria of Experience", chapter 3 in *Experience and Education, op. cit.*, pp. 35-42.

[18]George Axtelle and Joe Burnett, "Dewey on Education and Schooling", chapter 10 in Jo Ann Boydston, *Guide to the Works of John Dewey* (Carbondale: Southern Illinois University Press, 1970). See also, G. Geiger, *John Dewey in Perspective* (New York: Oxford University Press, 1958), p. 199 and Wm. Brownson, "John Dewey's Concept of Habit and Dynamics of Growth", Ph.D. Thesis, Stanford University, 1970.

[19]John Dewey, *How We Think* (Boston: Health, c. 1933), p. 46.

[20]John Dewey, *Democracy and Education,* op. cit., p. 239.

[21]*Ibid.*, p. 192. See also John Dewey, *Education Today* (New York: Greenwood, c. 1940), p. 44.

[22]John Dewey, *Education Today, op. cit.*, p. 18.

[23]John Dewey, *Human Nature and Conduct* (New York: Modern Library, c. 1922), p. 259.

[24]John Dewey, *Essays in Experimental Logic* (New York: Dover, c. 1916), p. 18.

[25]John Dewey, "Progressive Education and the Science of Education" in *Progressive Education,* Vol. v, 1928, as quoted in Martin S. Dworkin, *Dewey on Education, op. cit.*, p. 123.

[26]John Dewey, *Experience and Education, op. cit.*, p. 46.

[27]John Dewey, *Democracy and Education, op. cit.*, p. 175.

[28]John Dewey, *How We Think,* op. cit., p. 9.

[29]John Dewey, *Essays in Experimental Logic, op. cit.*, 18.

[30]Milton Mayeroff, "John Dewey's Conception of the Unification of Self: An Exposition and Critique", Ph.D. Thesis, Columbia, 1961.

[31]John Dewey, *Theory of the Moral Life* (New York: Holt, Rinehart and Winston, C. 1932), p. 172.

[32]John Dewey, *The Child and the Curriculum,* op. cit., p. 9.

[33]John Dewey, "Ethical Principles Underlying Education", *The Early Works of John Dewey,* (5 vols.; Carbondale: Southern Illinois University Press, 1972), Vol. v, p. 55.

[34]I make no attempt to evaluate the accuracy with which Dewey's position is portrayed by Goldie Emerson. This paper is for the most part not a critique of Emerson, but of Dewey as described by Emerson.

[35]John Dewey, *Experience and Education* (London: Collier-Macmillan, 1938), p. 36, E.4. I use E.4 to indicate that the quote appears on p. 4 of Goldie Emerson's paper.

[36]Goldwin Emerson, "John Dewey on Growth, Curriculum, and the Three R's", p. 5.

[37]*Ibid.*, pp. 5-6.

[38]*Ibid.*, p. 8

[39]*Ibid.*

[40]John Dewey, *Human Nature and Conduct* (New York: Modern Library, 1922), p. 259, E.8.

[41]Dewey, *Experience and Education,* pp. 35-42, E.5.

[42]Emerson, p. 5.

[43]*Ibid.*

[44]Dewey's complaint that "the notion that the essentials of elementary education are the three R's. . .is based upon ignorance of the essentials needed for realization of democratic ideals" offers some indication that this analysis of growth (in terms of the survival of democracy) might be compatible with other aspects of Dewey's work. John Dewey, *Democracy and Education* (New York: Free Press, 1916), p. 100, E.7.

[45]*Ibid.*, p. 51.

[46]John Dewey, *Reconstruction in Philosophy* (Boston: Beacon Press, 1920), p. 184, E.2.

[47]Dewey, *Experience and Education,* p. 36, E.4.

[48]Dewey, *Democracy and Education,* p. 51.

[49]Emerson, p. 2. John Dewey, *The Child and the Curriculum: The School and Society* (Chicago: University Press, 1902), p. 70, E.2, my italics.

[50]Emerson, p. 4.

[51]*Ibid.*

[52]Dewey, *Experience and Education,* p. 36, E.4.

[53]*Ibid.*

[54]John Dewey, *How We Think* (Boston: Health, 1933), p. 46, E.6.

[55]*Ibid.*, E.6.

[56]*Ibid.*, E.6.

[57]Emerson states as C that there *is* no hierarchy of subject matter, but I assume he means C to be rather that there *should be* no such hierarchy. Emerson, p. 6.

Peirce, unlike Dewey, would argue that logic occupies the apex of the curriculum hierarchy, because of the role which it plays in making our ideas clear (5.369 — See n. 27 below for reference convention). See also *Charles S. Peirce's Letters to Lady Welby,* ed. by Irwin C. Lieb (New Haven, Conn.: Whitlock's Inc., 1953), p. 4.

[58]*Ibid.*

[59]Dewey, *Democracy and Education,* p. 175, E.9.

[60]Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce, ed. by Charles Harshorne, Paul Weiss, and Arthur Burks (8 vols.; Cambridge, Mass.: Harvard University Press, 1931-1958), 2.173. I shall follow the conventional form of referring to the Collected Papers,* such as in "2.173" above, which refers to paragraph 173 of volume 2. See also 5.197. According to Arthur Burks' chronology (*Ibid.*, pp. 325-330) these passages were written in 1902 and 1903 respectively. They thus represent a view to which Peirce adhered late in his career.

[61]Dewey, *Democracy and Education,* p. 175, E.9.

[62]Dewey, *How We Think,* p. 9, E.9.

[63]Emerson, pp. 9-10.

[64]John Dewey, *Theory of the Moral Life* (New York: Holt, Rinehart and Winston, 1932), p. 172, E.10.

[65]John Dewey, *The Sources of a Science of Education* (New York: Horace Liveright, 1929), p. 77, E.2.

[66]Emerson, p. 2.

[67]Dewey, *The Child and the Curriculum: The School and Society,* p. 9, E.10.

[68]Emerson, p. 10, my italics.

[69]*Ibid.*

[70]Ontario Ministry of Education, *The Formative Years: Circular PIJI — Provincial Curriculum Policy for the Primary and Junior Divisions of the Public and Separate Schools of Ontario,* Issued under the Authority of the Minister of Education, Thomas L. Wells, 1975.

[71]Ontario Department of Education, *Living and Learning: The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario,* E. Hall and L. Dennis *et al.,* (Toronto: The Newton Publishing Company, 1968).

[72]Ontario Department of Education, *Religious Information and Moral Development: The Report of the Committee on Religious Education in the Public Schools of the Province of Ontario,* J. Keiller Mackay, Mary Q. Innis, *et al.*, 1969.

[73]John Dewey, *Education Today* (New York: Greenwood Press, 1940), p. 18, E.7.