

Commentary

In the following commentary Dr. Cato responds to the poignant and provocative ideas of Prof. Kieran Egan, in his article, "Two Wrong Steps for Curriculum," published in the M.J.E., Vol. 19, No. 2, Spring 1984. Following these comments, Prof. Egan sets out to clarify his point of view regarding the concepts of "romance" and "precision" as applied to the educational process. In addition, Prof. Egan, in his own unique fashion, challenges Dr. Cato's understanding of his basic theoretical structures, some of which, he reminds us, were written with "tongue-in-cheek."

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Three Wrong Steps for Curriculum: Reply to Professor Egan

In the course of elaborating his conception of educational theory which he took to be that domain of practical judgment standing midway between his theoretical "forms of knowledge" and informed educational practice, Paul Hirst (1963) drew attention to three "misconceptions" which he claimed have dogged our understanding of that theory. In addition to the traditionalist misconception that educational theory can be inferred straight from philosophical belief and the positivist misconception, which reduces educational theory to a collection of pieces of psychology, there was the further misconception which saw educational theory

as some form of autonomous discipline possessing its own **sui generis** criteria of judgment internal to the theory itself and in terms of which the offerings from the range of theoretical forms of knowledge were to be accepted or rejected. "As far as I am aware," he pointed out, "no judgments of quite this exclusive character have been shown to occur and it is therefore difficult to accept the claim in this extreme form" (p.55). Whatever else one might think of Hirst's view of the nature of educational theory, the claim that no such judgments of quite this exclusive character have been shown to occur is, at least up to the present, quite correct. However, a current attempt purports to show that not only do such judgments of this exclusive character indeed occur but that Hirst's contributory range of disciplines are only contingently connected with these judgments, and, indeed, to focus exclusively on these disciplines leads to a perversion of the educational process it was the job of educational theory to justify.

In his "Two Wrong Steps for Curriculum: Structures of knowledge and stages of development" (1984), Professor Kieran Egan maintains there is a "common view" in respect to the manner in which educational problems are addressed - a view, however, which is mistaken. The common view holds that curriculum researchers, in addressing these problems, "take the aims provided by 'society,' the knowledge organized by philosophers, the facts given by psychologists and sociologists, and compose from these a curriculum" (p.119). The common view "yields little, if any, educational fruit" because it "follows of necessity that it has been looking in the wrong places for the wrong things" (p.119). Further, the reason it has been looking in the wrong places for the wrong things is because it has committed the error of "isolating objects for study, separating them from whatever they may be contingently connected with" (p.119). While such traditional methods may have been successful in other fields of inquiry, it won't do for "the educational problem of dealing with the dialectical process of children growing older and of knowledge accumulating in them, and their thus becoming more sophisticated intellectual beings" (p.119).

The method of isolating objects for study and separating them from whatever they may be contingently connected with has resulted in psychological inquiry into the stages of development on the one hand, and on the other a philosophical inquiry into the structures of knowledge. For Egan, both methodologies "ensure that the problems addressed are significantly different from the educational problem with which we hope to deal, and that the contributions they offer can be accepted only at the cost of perverting the educational process" (p.119). In the course of revealing just how the problems addressed by psychology and philosophy are significantly different from the educational problem with which we hope to deal, Egan examines both the structures of knowledge and stages of development, together with a consideration of the nature of history, in a curriculum once freed

of the perversions such structures and stages bring in their train. He concludes that:

Education is concerned with our development as cultural beings. The study of knowledge - one constituent of culture - separately from our uses and pleasures of it, becomes an educationally arbitrary and sterile activity. The study of psychology and our psychological development apart from those uses and pleasures whose constituents we accumulate in our enculturation is educationally irrelevant. We do not get educational enlightenment by bringing together two distinct educationally irrelevant areas of inquiry. We get educational enlightenment by being able to recognize the difference between psychological, epistemological, and educational questions and by being able to frame and investigate the last kind; and by being bolder in reflecting on our educational experience and in articulating our ideas of education, and in rejecting the pseudo-scientific and pseudo-philosophical mumbo-jumbo that presently dominates what is mis-called educational discourse. (p.131)

Egan draws our attention to an autonomous discipline of "education" which, while involving that process of children growing older and of knowledge accumulating in them, transcends that process conceived as psychological stages of development, on the one hand, and that content seen as structures of knowledge on the other. To restrict the study of "education" to such structures is to be arbitrary and sterile; to direct attention to such stages is to be educationally irrelevant. Rather, according to Egan, educational enlightenment is an outcome of focusing "precisely on education," one articulates one's "ideas of education" after reflecting on one's "educational experience." Educational questions, ideas, and experiences are to be distinguished from philosophical and psychological questions, ideas, and experiences by virtue of the fact the latter have inscribed within them "uses and pleasures" which is the basis for making them educational rather than psychological or philosophical. The failure to recognize the centrality of these uses and pleasures is not merely a failure in securing educational enlightenment but also a matter of engaging in pseudo-scientific and pseudo-philosophical mumbo-jumbo.

It is our contention that Egan has actually supported that position with which he charges those who hold the "common view," that is, he has isolated objects for study from what they may be contingently connected with and, *mutatis mutandis*, the contributions he offers can be accepted only at the cost of perverting the educational process. We assert that in the absence of some characterization of those uses and pleasures by which Egan claims our development as cultural beings is constituted, it

is not so much philosophy and psychology to which contingency attaches but rather to those very uses and pleasures. It is further suggested that Professor Egan's "educational problem" concerning the dialectical process of children growing older and of knowledge accumulating in them and on which we must be able to focus precisely in order to secure educational enlightenment cannot, apart from philosophy and psychology, be seen to exist. In other words, there is nothing on which to focus.

As a consequence, it is suggested that one must suppose that Egan's injunction to be bolder in reflecting on our "educational experience" and in articulating our "ideas of education" will not issue out into educational enlightenment, as he supposes, but rather into arbitrariness, sterility and irrelevance. To establish these suggestions I will attempt to show that: (a) Egan does not produce his autonomous discipline of "education" seen to exist in some genuine sense apart from philosophy and psychology and that, consequently, his account of history in the curriculum is incoherent precisely to the extent that it appeals to this discipline; and (b) that in his rejection of the psychological stages of development and philosophical structures of knowledge, where he simply does not rule against their claims by prescriptive stipulation, he merely utilizes the process criteria of the former to undermine the content criteria of the latter, and vice versa. In the course of demonstrating these positions I shall employ Egan's own subtitles.

Two separate explanations

The problem for Egan is "to see how far developments of the kind we observe as important in education are caused by some natural cognitive maturation and how far they are caused by the acquisition of knowledge and experience" (p.120).

The "common-sense" view sees the two "as 'feeding' each other; thus experience and knowledge stimulate cognitive development, which in turn permits the acquisition of more complex knowledge, and so, dialectically, on" (p.120). However, the difficulty with the common-sense view is that it joins perspectives which are in fact mutually exclusive.

The cognitive structuralists, according to Egan, see mental growth as constituted by the acquisition of knowledge and experience and not by some passage through natural stages of development. Indeed, the stages of development for the structuralists are not really stages of development at all but "are simply reflections of developments in knowledge and language" (p.120).

The developmentalists, on the other hand, see the kinds of things we observe as important in education as caused by the

spontaneous unfolding of pre-experiential cognitive structures "more or less regardless of the particular knowledge and experience learned, as long as the child interacts appropriately with an adequately rich social environment" (p.120). As a consequence of such conflicting perspectives, explanation of the same development will be equally conflicting.

"For one group," Egan states, "the explanation is an age-related, psychological matter; for the other, it is a time-related, logical matter" (p.120). Clearly, the views of the structuralists and developmentalists appear to be mutually exclusive. For curriculum researchers to design a curriculum based on the structures of knowledge is to ignore the psychological stages of development, and conversely. Further, no combination of the two is permitted since that constitutes the "common view" which has been looking in the wrong places for the wrong things. How does Egan propose to solve the dilemma?

History in the curriculum

To resolve the conflict of the structures of knowledge and stages of development perspectives in curriculum construction Egan does not initially focus precisely on education itself after having reflected on his educational experience but rather asks us to "consider briefly the place of history in the curriculum" and, in particular, to consider Whitehead's view that the place of history in such a curriculum should be governed by the principle that "in education a stage of romance should or properly does precede a stage of precision" (p.121). Since he does not focus precisely on education itself anywhere else, one must suppose that such a consideration constitutes an attempt to derive an autonomous discipline of "education" from components in history which he claims are not explicable in terms of either the structures of knowledge or stages of development. Here Egan launches what might be called the cumulative stages which we may call romance and precision.

In response to the question about the kind of claim Whitehead makes we learn that: "It is clearly not a straightforward logical or psychological claim" (p.121). The thing is that it is not a claim which has been empirically established, nor is it a matter of logical necessity that a stage of romance precede a stage of precision. If it is **neither** a logical nor psychological claim, is it then merely Whitehead's unfounded recommendation? The second thing we learn about the claim that a stage of romance should or properly does precede a stage of precision is that it is **both** a logical and psychological claim, albeit only in "some sense."

Whitehead is clearly not making an arbitrary prescription. He does think that if one wants to

educate someone to have an historical consciousness, for example, then there is some sense in which a stage of romance is a kind of logical prerequisite to a stage of precision, and some sense in which he clearly believes that it could be empirically established that this sequence is required for reaching the aim of an historical consciousness. (p.121)

If Egan hopes to secure curricular acceptance for the stages of romance and precision what he must do, clearly, is establish the manner in which these stages are a "kind of" logical claim, a psychological claim in "some sense." To show that a stage of romance should precede a stage of precision what he does is to embrace the principles of both areas of inquiry previously rejected for looking in the wrong places for the wrong things and, so embraced, employ them in the construction of his history curriculum. What Egan does is (1) define "historical consciousness" in terms of the stages of romance and precision which then, of course, come to stand relative to that historical consciousness as logical prerequisite, and (2) adopt the stages of development by simply replacing the terms of those stages, concrete and formal operations, with his own empirical stages of romance and precision. "Any process," Egan maintains:

. . . is largely defined by its starting and ending points. If we focus on a particular strand of cognitive development whose end is a stage of formal operations, then the stages of the process are in some degree defined by their accumulating contributions towards that endpoint. If the endpoint is historical consciousness then the process will be defined in terms of the major cumulative stages towards that end. Given an endpoint such as "historical consciousness" it is on the face of it quite plausible that careful observation might expose, as an hypothesis if you will, cumulative stages which we may call romance and precision. (Egan, pp.121-122)

It seems then to be Egan's arbitrary prescription which establishes the "some sense" in which the stage of romance is a "kind of" logical prerequisite to the stage of precision. For if one simply defines "historical consciousness" as the endpoint of which romance and precision are the cumulative stages, it is merely analytical to say that the stages of romance and precision are logically prerequisite to historical consciousness since that is what "historical consciousness" means. It means having passed through the stages of romance and precision. But Egan does not explain why such historical consciousness should not mean having acquired the structures of knowledge involving those concepts peculiar to history and in terms of which historical explanations are given.

Similarly, the claim that the stages of romance and precision are cumulative stages resulting in historical consciousness is in "some sense" a psychological claim made so by the simple expedient of identifying the stages of romance and precision as such cumulative stages, which "careful observation" then strikingly confirms. However, on face examination it is quite **improbable** that careful observation will ever expose as an hypothesis those cumulative stages of romance and precision leading out to the endpoint of historical consciousness, as Egan suggests, because it is his **initial** hypothesis that such stages **are** cumulative relative to historical consciousness which serves to guide his observations and in terms of which they **are** careful. In other words, the stages of romance and precision as cumulative stages of historical consciousness are the sorts of things an hypothesis that historical consciousness is constituted by stages of romance and precision would expose.

Again, Egan fails to explain why historical consciousness should constitute the endpoint of the cumulative stages of romance and precision but not the endpoint of the cumulative stages of concrete and formal operations or, indeed, what identifiable difference there is between them. As he showed that romance and precision were a "kind of" logical prerequisite to historical consciousness by merely re-defining "historical consciousness" in terms of romance and precision, so now he shows that romance and precision constitute a psychological claim in "some sense" by the equally direct expedient of replacing the terms of the psychological stages of development with those of romance and precision.

Whether or not Whitehead was making an arbitrary prescription in maintaining that a stage of romance should or properly does precede a stage of precision is a further question. On his showing that the principle constitutes both a logical and psychological claim even in "some sense," Egan clearly is making such a claim.

In charting the strange curricular career of romance and precision, we gather that (a) it is **neither** a straightforward logical nor psychological claim that a stage of romance ought or properly does precede a stage of precision, as well as (b) it is **both** a logical and a psychological claim, albeit only in "some sense." We now find that (c) it is **neither** a logical nor a psychological claim, even in the diminished fashion of being a logical and psychological claim only in "some sense." The reason given is:

Nothing in the "structure of knowledge" kind of analysis has yielded anything like a distinction between romance and precision, nor any suggestion that the sequencing of a history curriculum should be significantly discontinuous in such ways. Nor has any study in the "stages of development" tradition come to

grips with stages of Whitehead's kind. The basic unit of such research is typically the concept, and the methodological tools available in this area are unable to come adequately to grips with such general processes as accumulating constituents of such complex ends. (Egan, p.122)

Where previously it was the "common view" which was the received tradition in respect to those problems in education which interest us and in respect to which Whitehead's stages of romance and precision were the aspiring but unanointed claimants, we are now presented with a curricular **coup d'etat** in which the common view is to be overthrown for the reason that it does not conform to the imperatives inscribed in romance and precision as the proper principles which Egan supports to guide curriculum construction. His line of reasoning might be sketched as follows:

- (a) "Historical consciousness" may be explained by:
 - (1) the structures of knowledge, or
 - (2) the stages of development, or
 - (3) the stages of romance and precision.
- (b) But (1) and (2) have never yielded anything like (3), nor have (1) and (2) ever come to grips with anything like one finds in (3).
- (c) Therefore, since (1) and (2) are not like (3), they should be abandoned as explanations of "historical consciousness."
- (d) Further, since the proper explanation of "historical consciousness" is to guide construction of a history curriculum, the principles of romance and precision are to serve as the principles of such construction since they constitute the proper explanation of "historical consciousness."

The point, of course, is that since romance and precision are not structures of knowledge, there is no particular reason why the structures of knowledge kind of analysis need yield anything like a distinction between romance and precision for its justification, nor why it need sequence a curriculum in such significantly discontinuous ways. Nor, for that matter, is there any obvious requirement for the stages of development kind of analysis to come to grips with stages of Whitehead's kind; they are not psychological stages of development even in "some sense." Further, if Egan hopes to ground his distinction between his stages of romance and precision and the stages of development kind of analysis on the basis of the fact that the latter employs the "concept" as its basic unit of research, he must show how his stages of romance and precision employ something else. But are not his "general processes," his "accumulating constituents," his

"complex ends" such concepts? For that matter, are not the very notions of "romance" and "precision"? Further still, if the "methodological tools" of the stages of development kind of analysis are unable to come adequately to grips with such processes, constituents, and ends, will Egan reveal how his methodological tools, whatever they may be, are so able?

In concluding his analysis of the role of the stages of romance and precision in respect to the construction of a history curriculum, Egan remarks that, "What has kept Whitehead's essay alive is the persisting sense that the process of education is something autonomous and complex, and that his observation is rich and potent" (p.122). One must suppose, unfortunately, that his persisting sense will remain a private one for, in spite of the fact that he maintains we can get educational enlightenment only by focusing precisely on education, Egan does not seem to follow his own advice. The second part of his paper renews his argument relative to structures of knowledge and stages of development, rather than articulating his ideas as to just how the process of education is something autonomous and complex. Consequently, his attempt to derive an autonomous discipline of education by way of establishing the status of romance and precision as independent of the structures of knowledge and stages of development kinds of analysis assumes crucial importance. However, our consideration of the strange curricular career of romance and precision has revealed that the autonomy of Egan's stages has not been secured beyond the bare prescription that they **are** autonomous. On his showing, we just do not know what a kind of analysis that employs the stages of romance and precision independently of the structures of knowledge and stages of development would look like. A brief consideration of his remarks on the structures of knowledge and stages of development, as well as the consequences of those criticisms for a history curriculum, will serve to sustain the private nature of Egan's vision.

Structures of knowledge

The burden of Egan's rejection of the structures of knowledge and stages of development kinds of approach to those questions which interest us reduces to the contention that (a) the structures of knowledge approach does not satisfy the process criteria of the stages of development approach, for the sequencing of instruction, while, (b) the stages of development approach does not satisfy the content criteria of the structures of knowledge approach, for that knowledge and experience encapsulated in culture. Therefore, both must make way for the principle that a stage of romance should or properly does precede a stage of precision. While, of course, the view that the structures of knowledge and stages of development are mutually exclusive is basically a re-wording of his initial thesis, Egan must show how

his stages of romance and precision do - and the structures of knowledge and stages of development do not - satisfy both criteria and do so non-analytically. That he does not do so can be seen by a brief examination of the three parts of the criticism of the structures of knowledge which are, respectively, (a) the misplaced charge, (b) the *coup d'etat*, and (c) the private version.

The misplaced charge. Where the structure of a subject is taken to include the "networks of related concepts, inferential and deductive structures, the kinds of propositions proper to each area of knowledge," Egan points out that "the apparent structure of the subject seems not to yield such obvious guides to the sequencing of instruction as it first appears likely" (p.122-123). The reason behind this is that, "It is difficult to discover any set of deductively ordered theories, concepts, and phenomena" (p.123). In turn, the reason it is difficult to discover any deductively ordered theories, concepts, and phenomena is that "any complex field is amenable to a vast number of structural characterizations," since the view that there exists "the structure of most disciplines is a mirage" (p.123). Consequently, "we are left with no good reason to infer from any particular structure principles for the sequencing of subject matter" (p.123). But who has said these things? Surely not Paul Hirst with whom Egan appears to link these views. In addition to stating emphatically that there does not exist the structure in any domain of knowledge, Hirst (1967) was at pains to point out that such confusions resulted from confounding the "logical grammar" with the "logical sequence," neither of which claimed to yield obvious or non-obvious guides for the sequencing of instruction (p.54). Is the mirage that of Hirst, or of Egan?

The coup d'etat. In a manner identical to his rejection of the structures of knowledge and stages of development as explanations of "historical consciousness" (since neither yielded anything like the stages of romance and precision), now Egan explains that "the student's romantic appreciation of history ... cannot emerge from the structure of knowledge because it is not part of the structure of knowledge. It is a part of what happens when we use knowledge for human purposes" (p.124). To say this, however, is to say nothing more than that the student's romantic appreciation of history cannot emerge from the structure of knowledge because the stage of romance out of which it does arise is not part of the structure of knowledge; that is what "romantic appreciation of history" means. But more than tautology is required to overthrow the structures of knowledge. Why, for example, can't they be used for "human purposes"?

The private vision. Egan further reveals that not only does the student's romantic appreciation of history in fact emerge when we use knowledge for human purposes but that in principle, "It can emerge only when we consider education; it cannot emerge when we consider psychology or structures of knowledge

separately" (p.124). What does Egan mean when he "considers" education? Is it to consider psychology and the structures of knowledge jointly, or is it to consider something ontologically distinct? A clue as to what goes on here is found in his observation to the effect that the kinds of things Hirst has proposed will never "provide us with principles . . . that will guide our construction of the curriculum better than the kind of common-sense or better 'educated' principles we have available to our own reflection" (p.124). Is this, then what Egan means by using knowledge for human purposes? Is this what he does when he considers education? There appears to be no indication what his common-sense would look like, what concepts his better educated principles would embody. In the absence of some characterization of both, the screening of such common-sense and better educated principles must remain solitary, the vision private.

Stages of development: two kinds of attack

Where Egan adopted the process criteria of the developmentalist position by way of pointing out that the structures of knowledge method of inquiry failed to yield principles for the proper sequencing of instruction, it is now time to adopt the other view, to show that the stages of development approach fails to incorporate the knowledge and experience criteria of the structures of knowledge approach. So, the reason the stages of development approach (the view that there is a natural substratum to cognitive development which is culturally invariant and to which educational prescriptions should conform) is wrong is that ". . . it underestimates the degree to which human beings are cultural animals. Even those appetites and behaviours which we most clearly share with our animal relations have been transformed for us by our language and culture" (p.125). Where knowledge and experience failed to account for the stages in terms of which instruction is to be sequenced, so now those stages are to prove deficient as an account of that knowledge and experience as it is embodied in culture and as it is imbibed in the process of enculturation.

Two alternatives to the view that there is a natural substratum to cognitive development which is culturally invariant are noted by Egan. The "less extreme" is the view that, while the subject matter of this type of research may exist, the facts about human cognitive development which it turns up "will be too remote from the proper interest of educators to have any significant implications for education" (p.125). The "less extreme" argument can be dismissed immediately on the grounds of analyticity. Since the "proper interest of educators" is, by definition, that process of enculturation by which we transform those appetites and behaviours which we share with the animals, any findings of research into the natural substratum of cognitive development will of necessity be too remote from the proper

interest of educators since such proper interest is in the process of enculturation and not in any natural substratum to cognitive development. Egan however declines to show just **why** this should be so, preferring rather to legislate on precisely that which is at issue.

The "most extreme" kind of reaction to the view that there exists a natural substratum to cognitive development which is culturally invariant is "to point out that the presumed subject matter of this area of research does not exist" (p.125). There are two "prongs" to this reaction. Prong 1 maintains that "the data which support the theory are not data about the nature of human development, but are simply descriptive of a particular form of enculturation" (p.125). Prong 2, in referring to the research of Jan Smedslund, a Scandinavian psychologist, states that the type of educational research which "aims at the establishment of psychological theories gains its plausibility by confusing in what it tests both analytic and arbitrary elements" (p.128). Professor Egan must then show how the theory of human development is both analytic and arbitrary - where his theory of enculturation in general and the principle of the stages of romance and precision, in particular, is not.

"The topic is not isolable": Prong 1

By way of showing how the data which were thought to support a theory of human development really support a theory of enculturation Egan considers Piaget's claims as exemplary. "The trouble is," Egan points out, "that it is not clear what findings would disconfirm his theory" (p.126). The reason this is not clear is that:

. . . significant parts of Piaget's theory are not matters of empirical discovery but of logical necessity. For example, it is not an empirical matter that concrete operations precede formal operations because the latter are defined as operations that are built on those of the former. That is, the general sequence is guaranteed by logic. (p.126)

Similarly, since Piaget has acknowledged that experience, environment, and social interaction will produce irregularities in the stages of human development, such irregularities would not work to disconfirm his theory. "The general uniformity of sequence cannot count as evidence for, because that is guaranteed by logic," Egan concludes, "and some particular irregularities do not count as evidence against" (p.126).

In the interests of brevity, three comments will suffice in respect to the view that the data which were thought to support a theory of human development really support a theory of

enculturation. First there is the logical point that if Egan, under the ruling, does not himself have a nature, but only a particular form of enculturation, how is it that his is able to transcend that culture and return with the news that man does not have a nature but only a particular form of enculturation? Secondly, in maintaining that significant parts of Piaget's theory are not matters of fact but of logical necessity Egan appears to suggest that such matters of fact can subsist in independence of the theory in terms of which they are conceived of as "facts" in the first place. What, in other words, would a theory-free "matter of fact" look like? And last, if it is not clear, what findings would confirm or disconfirm Egan's?

To paraphrase Egan's view of Piaget, one might say that it is not an empirical matter that a stage of romance precede a stage of precision because the latter is defined as a stage that is built on the former. That is, the general sequence is guaranteed by logic. And, as experience, environment, and social interaction will produce irregularities in the stages of romance and precision, such irregularities would not work to disconfirm Egan's theory either. Similarly, since his process of enculturation is itself analytical with the stages of romance and precision in terms of which that process is constituted, Egan can neither confirm nor disconfirm his view that the process of enculturation and the process of education are identical.

"The topic is not isolable": Prong 2

By way of revealing that the type of educational research which aims at the establishment of psychological theories gains its plausibility by confusing in what it tests both analytic and arbitrary elements, Egan gives the example of "how one should organize lists in order for people to learn them better" (p.128), resulting in the finding that "ordered lists are learned better than random lists" (p.128). While this might appear to be a generalization based on empirical research, what has really happened here, according to Egan, is that the study

. . . gains its plausibility from a fundamental confusion of the analytic and the arbitrary. . . . The analytic component involves the necessary connection between order and learning. A detailed definition of learning would imply notions of order; the structure of the human mind and what is conceived as order are not distinct things. The arbitrary element involves what particular kinds of things count as ordered to any subject. (p.128)

Because of these analytic and arbitrary elements, Egan observes that the findings are "pseudo-empirical" and "need have no constraining effects on educators" (p.128).

As with Prong 1, there is the logical point as to how a claim can be simultaneously analytic and arbitrary under the same concept. If a concept of learning is that which picks out certain kinds of activities as being instances of learning, how can those instances be simultaneously arbitrary in relation to that concept? In other words, arbitrariness is not an attribute of instances falling under a single concept but is rather the attribution of a competing concept which denies that the instances picked out **are** instances of learning. Egan's tendentious example might well be an instance of learning for those whose concept embraces the example, but it is not supported by Egan who has a different concept of learning and who, therefore, labels the example as arbitrary. What he has not shown, of course, is why their concept is arbitrary and his is not.

As with Piaget, whose concepts he rejects, there is a necessary connection between Egan's theory of enculturation and his concept of learning since a detailed definition of that concept would imply notions of enculturation. The structure of the human mind and what is conceived as enculturation are not distinct things.

Unless Egan can show how his conception of the human mind, order, and learning is correct - and Piaget's wrong - what he must do is show how the structure of the human mind and the concept of order **are** distinct things so that his concept of learning will not be a mere analytical re-description of that concept and structure, as well as show how his identification of those particular kinds of things which are to count as ordered to the concept of learning does **not** pre-suppose possession of the concept.

Consequences for a history curriculum

In view of the fact that Professor Egan has not non-analytically and non-arbitrarily shown that the data purported to support a theory of human development really support a theory of enculturation, or that educational research aimed at the establishment of psychological theories confuses in what it tests both analytic and arbitrary elements, and that the common-sense and better-educated principles which we have available to our reflection (to provide us with a guide to curriculum construction in default of the structures of knowledge approach) which did not yield such obvious guides to the sequencing of instruction, as at first appeared likely, have themselves not been revealed, it is difficult to see why there should be **any** consequences for a history curriculum. Of course, one might respond like Egan to studies drawing upon Piaget's theory suggestive of that history, since it involves formal rather than concrete operations, should appear later rather than earlier in the curriculum and "wonder whether these results are truths about human nature, or whether

about human nature, or whether they are contingent cultural matters - due to the kinds of stories, reading, and history teaching which the students enjoyed or suffered for preceding years" (p.129). One could wonder if these results were the outcomes of history teaching which the students suffered for preceding years. One could wonder, "Does it make sense to say that nearly all history teaching is bad" (p.129)? One could wonder as does Egan if our acceptance of these results has been "excessively respectful," that if we wished to design a history curriculum "and our mind is on history rather than Piaget's theory, the kinds of things that will be of concern will be Vikings, Romans, Industrial Revolutions and so on" (p.129). One could also wonder about all of these things but it is difficult to see what consequences for a history curriculum such wonderings would produce.

Conclusion

I have argued that Egan's concept of "education," which he proposes to replace the structures of knowledge and stages of development kinds of analysis for those questions in education which interest us, has not been shown to exist independently of his common-sense and better-educated principles which he has available to his reflection. His concept of "education" has not been shown to be isolable. As a consequence, his call to focus precisely on education in order to deal with those questions is without identifiable meaning and, further, his attempt to secure a history curriculum by reference to such a focus has met with failure. In attempting to isolate objects for study, by separating them from whatever they may be contingently connected with, it is maintained that Egan, perforce, must join those whom he challenged for looking in the wrong places for the wrong things, for engaging in pseudo-scientific and pseudo-philosophical mumbo-jumbo. I have argued that Hirst's view still stands.

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