KIERAN EGAN. Children's Minds Talking Rabbits & Clockwork Oranges: Essays on Education. London, Ontario: The Althouse Press (1999). 200 pp. \$24.95 (paper) (ISBN: 0-920354-46-7).

This intriguing title captures our imagination and invites us to investigate what is between the covers. Capturing the imagination is a central theme woven through most of the eleven essays in this collection and indeed, represented in many of Kieran Egan's approximately 100 published articles and books.

Egan shows how it is possible, and why it is desirable, to conceptualize children's and adolescents' minds in their own terms, rather than in terms of some adult ideal. That children are able to suspend disbelief and take seriously talking rabbits that wear waistcoats and sip tea is evidence of their ability to deal with characters and conditions that are beyond anything they encounter in their daily lives. Clockwork Oranges, the subheading of the last three essays, is taken from Anthony Burgess's book by the same name, and refers to the confusion that results when organic beings, such as people, are treated as though they are mechanical objects, having no imagination.

Kieran Egan's ideas have the potential to influence the way we think about teaching and learning. He asks us to consider whether, if we adapted some of his ideas to our own teaching, we might engage students' imaginations more meaningfully and teach more effectively. At the very least these essays ask us to examine our assumptions and actions; at most they hold out the possibility of improving our thinking and our practice.

Two central questions in education are what to teach and how to teach it. These two questions are emotionally and politically loaded, and preoccupy all institutions in society, including families, governments, schools and business. Both content and teaching come under scrutiny and are subject to criticism in ways that are unknown in other professions or fields of study.

Tensions in schools in the industrialized world increase as demands for technology education and media and computer literacy compete with academic subjects for resources. Arts education continues to fight for its existence and public debates continue over whether the purpose of education should be to prepare students for jobs or whether education should serve broader socio-cultural purposes.

Kieran Egan, an educational philosopher, curriculum theorist, and professor of education at Simon Fraser University, addresses curriculum issues in the first ten essays and research design in the last essay. He selected all of these essays from about 100 of his published articles. Egan argues for a conceptualization of curriculum content and teaching approaches based on the richness of stories and the logic of story form, as an alternative to the logico-mathematical model we have become accustomed to in many schools.

For more than 20 years Egan has been advocating imaginatively different approaches to curriculum content and teaching based on a model of children's and adolescents' thinking that acknowledges the potential of the imagination as a tool for learning subject matter. He deals with conceptions of children's thinking in the first essay, "Literacy and the Oral Foundations of Education." Egan claims that our conceptualization of teaching is based on a belief that children' thinking, is primitive, and is but a stage en route to adult modes of thinking which are seen as the ideal. Children's thinking is seen by many curriculum developers to be deficient in some way. Such a view has created serious educational problems because traditional approaches to curriculum are based on the logico-mathematical model of thinking that is a feature of literate (adult) communities.

A logico-mathematical model of thinking, he claims, hampers the development of children, whose thinking is grounded in orality. Orality must be stimulated for it is the foundation for literacy. To take advantage of children's orality, he proposes an alternative model of curriculum that takes advantage of children's ability to tell stories, to function in various poetic states of mind, to use and respond to metaphor, rhyme, rhythm, meter, repetition, metonymy and synecdoche Children also have the capacity to respond to a wide range of emotional states, to engage with the fantastic, the distant and the implausible, such as talking rabbits who wear waistcoats and sip tea, and they have their own logic. Egan illustrates how a lesson plan or unit in history might be designed for early childhood education in ways that draw on children's abilities and ways of thinking.

He says that children are capable of comprehending history through binary organizers, as a story of "struggle for freedom against tyranny, for peace against arbitrary violence, for knowledge against ignorance", and so on. To approach teaching in this way demands that curriculum developers and teachers rethink their practices, to look deeply into their own imaginations and to view their subject matter knowledge perhaps in more poetic terms.

In "Narrative and Learning: A Voyage of Implications," Egan addresses the issue of the "expanding horizons" principle which is based on assumption that the best way to proceed is to start with what children "know'. Egan argues that the concept of the "known" has been distorted to refer only to what is local and familiar, such as the family and neighbourhood. In fact, what is also known is that which exists in the affective domain, experienced through the senses and the imagination. Using the structure of fairy tales as a point of departure, for example, he shows how narrative can help children to make sense of the world. Classical narrative structure is built on conflicts between security and danger, courage and cowardice, cleverness and stupidity, concepts that are known to children. Narrative structure thus engages children in abstract thinking. Social studies should build on these "knowns," drawing on children's capacity for affective engagement with something

other than everyday experience to allow them to approach subject matter using a variety of discourse forms.

The third essay, "Teaching the Romantic Mind", focuses on the characteristics of adolescents' thinking, needs and behaviours. Adolescents respond with enthusiasm to ideas that engage them affectively. To help them in their search for identity they need to push the limits imposed by real or perceived societal and other constraints. They respond to the transcendent qualities that they attribute to romantic figures such as athletes and other heroes and heroines, and they are able to focus their energy on gathering all the information that may be known about an area that interests them. Egan argues that curriculum design should make use of these characteristics. As an alternative to the more common Objectives-Content-Methods-Evaluation schemes he offers a "Romantic" Planning Framework derived from a focus on students' imaginative lives. He shows how such a framework could be used to address a topic as seemingly mundane as punctuation. The transcendent qualities of punctuation arise from the fact that it is a set of conventions invented by people to help them to make sense of texts. Students can be presented with two texts: one that is devoid of case, commas, paragraphs, spaces and so forth, and another which has these conventions. The dramatic difference in how they sound when they are read out loud illustrate the role of punctuation in writing. Students could invent their own conventions that support their interpretation of a text.

In the fourth essay, "Conceptions of Development in Education", Egan claims that prevailing psychological and biological theories of development derived from Platonic and Rousseauian conceptions of development are mutually incompatible and are inadequate to account either for how our minds work or how children learn. Drawing on a Vygotskyan concept of mind as a social organ, Egan proposes a theory of education based on the notion that the socio-cognitive tools that are our cultural and evolutionary inheritance such as oral language, literacy, theoretic abstractions and irony shape our understanding in particular ways in particular contexts.

Curricular decisions are made on presuppositions about what is held to be most valuable to know or what is valuable to be, but underlying most curricular decisions, Egan claims, is a subconscious desire for children to turn out to be very much like idealized image of ourselves – only without our defects. In "Letting Our Presuppositions Think for Us" Egan warns of the ineffectuality of engaging in arguments about curriculum before establishing some common understanding of the grounds on which the arguments are to be made. He illustrates by an example how the inability to come to an understanding of points of view, if not agreement with them, may usually be attributed to conflicting presuppositions of the speakers about what the issues actually are. Individuals who engage in argument for or against a

particular curriculum innovation, can have no impact on each other's arguments unless they recognize the real source of their disagreements. For instance, to put it in simplistic terms, the individual who believes that people are "good" is likely to argue for fewer constraints and rules in schools than the individual who believes that people are "bad" and therefore must be controlled. The basis for argument, then, is not the rules and constraints themselves, but rather the perception of the nature of human beings.

The "Arts as 'the Basics' of Education" deplores current educational practice that emphasizes logico-mathematical tasks - tasks that some children do less well than others. Such a practice fails to take into account the capacity of children for poetic thinking. He stresses once again the importance of using the power of oral language, and especially stories, to engage children's interest and to stimulate their imagination.

The foundation of educational development, he argues, should be the arts, particularly the tools and skills that are central to early language development - such as the poetic device and affective abstraction. However, the title of this essay is a bit misleading as there is nothing here about visual art, music, dance or drama.

The title of the seventh essay, "Clashing Armies in the Curriculum Wars" refers to incompatibilities among three value orientations that he says are embedded in curricula: emphasis on the production of good citizens, on ideas, and on the nature of the child. Education that accommodated these three orientations would seek to socialize students to the norms and values of the society of which they are a part while ensuring that they accumulated "the kind of knowledge that would give a truer view of the world". It would also help students to fulfill their potential at each stage of their development. It would seem that these emphases, derived from the ideas of Plato, Rousseau, Piaget and Dewey, are complementary, however Egan argues that they are incompatible, and are at the root of practical problems in education. For example, the socialization of students aims for homogeneity while the search for truth encourages skepticism. From a Platonic point of view development refers to the mastery of increasingly sophisticated knowledge regardless of the students' progression through "some putative psychological developmental stages" (p. 106). On the other hand, from a Rousseauian and Piagetian perspective, the psychological developmental stages determine what kind of knowledge the student needs.

The eighth essay, "Educating and Socializing," picks up themes from the seventh Egan makes a distinction between educational activities whose aim is to make people more distinct, and activities whose aim is to make people more alike. He discusses the problems that arise when the distinction is not well understood. Acknowledging that both types of activities are necessary in education, he explains that there must be a balance between them. What

is important is to recognize the difference, because the criteria underlying curricular decisions for one type of activity are not appropriate for making decisions about the other.

In "Social Studies and the Erosion of Education", Egan addresses another tension. He analyzes and severely criticizes the foundations of the social studies curriculum which he refers to as an anti-educational curriculum subject. He claims that there is a fundamental conceptual confusion arising from assumptions about what students can learn and how they learn that is inherent in social studies. For these reasons the social studies curriculum cannot work. In fact, Egan claims that it would be better to remove social studies from the curriculum altogether because, in its misguided attempt to socialize students, the social studies curriculum erodes education and undercuts its own stated aims. He is particularly critical of the teaching of history, which has become the handmaiden of socialization. The structure of social studies focuses on the immediate social experience of the students as a paradigm for what is real and meaningful. But local experience is not the best place to begin; focusing on the familiar erodes education. The social studies that he deplores tends, he says, towards narcissism while history, taught as an academic subject, takes the students' attention away from themselves.

"Metaphors in Collision: Objectives, Assembly Lines and Stories" takes on the "objectives movement" in education. Citing Kliebard's (1975) criticism of objectives-based curriculum as a "complex machinery for transforming the crude raw material that children bring with them to school into a finished and useful product" (p. 81) Egan proposes an alternative, constructivist conception of teaching derived from the story-form analogy. He invites us to stretch our imaginations, to conceive of curriculum content not as a set of subject matters or forms of knowledge to be taught and objectives to be met, but as a set of great stories to be told. To illustrate how such an approach might be carried out with six-year-olds, he offers a planning framework that is similar in structure to the framework he offers for adolescents in the third essay.

Lastly, in the essay entitled "The Analytic and the Arbitrary in Educational Research" Egan deconstructs the foundations of empirical research in education, particularly as it has developed in the field of educational psychology. He charges that what appear to be empirical findings in psychological research are very often the consequences of confusing what he calls "analytic" and arbitrary components in research design, and he illustrates with an example the difference between the two.

While he expects that those who do empirical research will refute his arguments, Egan's point is that it is nevertheless worthwhile to pay attention to any arguments that cut away at the foundations of one's own research. The same could be said for researchers of any stripe.

JOAN RUSSELL McGill University