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## Curriculum design as humanistic technology

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### **The armament of Theseus**

*Ideologies separate us. Dreams and anguish bring us together.*

EUGENE IONESCO

When Theseus descended into the labyrinth, he took with him a sword and a ball of thread. His mission was to vanquish the Minotaur, half-man and half-bull, the progeny of Queen Pasiphae's illicit passion for the snow-white bull that Poseidon had sent from the sea to King Minos. Minos, King of Crete, to hide the shame brought upon himself by his reluctance to sacrifice the bull to Poseidon, had his chief architect, Daedalus, build the labyrinth under the royal palace at Knossos. Every year a dozen young men and women were sacrificed to the Minotaur, whose subterranean bellowing could be heard like an earthquake throughout the island of Crete. Prince Theseus volunteered for the sacrificial contingent from Athens, determined to rid the region of this menace. His lover, Ariadne, the daughter of Minos, provided him with the means to do so: to kill the Minotaur—a sword forged by Daedalus himself, a short, sharp, pointed weapon, made for assault, for stabbing and cutting; and to find his way back out of the labyrinth—a ball of woollen thread. Theseus was successful in his mission, killing the Minotaur, escaping with Ariadne as an earthquake destroyed Knossos, and eventually returning to Athens to become king.

The Greek story-tellers understood the power of symbols. They recognized that living requires two complementary kinds of resource: technical weapons for aggressive resolution of immediate obstacles, as well as the gentle means of guidance to ultimate goals. The myths of the Greeks, like all of their arts, integrated values and technique, art and science, the mind and the heart. We live, by contrast, in a fragmented, specialized and polarized culture. Educational thought is one arena in which different ideologies collide. What are the possibilities for the reconciliation of polarities in education, and specifically in what Westbury once called the 'incurably schismatic' field of curriculum?

### **The curriculum labyrinth**

*In modern times there are opposing views about the practice of education. There is no general agreement about what the young should learn either in relation to virtue or in relation to the best life; nor is it clear whether training should be directed more towards the intellect than towards the character of the soul.*

ARISTOTLE

Curriculum is a maze which, ever since the time of Plato, has echoed with the claims of conflicting philosophies. It is not the intent of this paper to review these diverse philosophies, but to examine the areas of conflict and commonality between two significant orientations, the technical and the humanistic. This limitation entails resisting the temptation to explore important questions raised by the proponents of such other schools as academic rationalists, who urge the pre-eminence of the traditional disciplines as the means of inducting the young into established modes of thought, and neo-marxists, who view the conventional curriculum as one means by which the privileged classes maintain their hegemony over the thought and lives of new generations.

It is appropriate to admit that my starting-point is not that of a neutral outsider. I approach these issues as one schooled in educational technology, but committed to the tenets of humanistic education. My experience is one of encouragement with the considerable contributions each orientation offers to educational practice, and one of frustration at their frequent narrowness, complacency and ideological xenophobia. My endeavour is to explore the ground on which orientations that view one another as antagonists might come to see one another as allies. The referential context for this encounter is the field of curriculum design. Curriculum design might be described as the art and science of planning the conditions of learning, or, in Apple's phrase, 'the creating of educative environments in which students are to dwell'.<sup>2</sup>

The technical and the humanistic orientations will be described more fully later, but, at this point, the term 'humanistic' requires some elucidation on account of its specialized use in this paper. It does not here refer to the humanism of the Renaissance, nor to nineteenth-century agnosticism, nor to the academic disciplines commonly referred to as the humanities. In this context, the term owes its origin to Stephen Cohen, who originally proposed the title for what became the *Journal of Humanistic Psychology*.<sup>3</sup> The term has come to describe the orientation of those who identify with the 'third force' psychologies of Maslow, Rogers, Perls, Berne, and others. The reaction of these psychologists against traditional psychology can be seen as one instance of post-positivist trends in philosophy and in intellectual culture in general. Humanistic practitioners in the schools, however, are more conscious of their psychological than of their philosophical antecedents. Their scriptures tend to be such books as Rogers's *Freedom to Learn*,<sup>4</sup> and 'third force' psychologies are reflected in books directed at teachers on humanistic, holistic, confluent, invitational, transpersonal and transactional education by such influential authors as Aspy,<sup>5</sup> Brown,<sup>6</sup> Hendricks and Fadiman,<sup>7</sup> Miller,<sup>8</sup> Purkey<sup>9</sup> and Thaxter.<sup>10</sup>

Proponents of the humanistic and the technical orientations generally view one another as antithetical. On the one hand, there are the technologists, with their systematic procedures, military metaphors, and their behavioural and positivistic language. On the other hand, there are the humanists, with their intuitive thinking, poetic language, and their subjective and interpersonal priorities. In a perceptive paper on rationalism and humanism in curriculum studies, Reid lists 30 contrasting features that distinguish the two orientations in terms of their premises, procedures, truth tests, emphases and characteristics.<sup>11</sup> These polarities include reductionist versus holistic, objective versus subjective, quantitative versus qualitative, prediction versus understanding, intervention versus nurturing, efficient versus ethical, directive versus interactive. We seem to be dealing here with two radically divergent philosophies. Members of the two groups reflect this divergence: they communicate little with one another, develop different networks, read different journals and attend

different conferences. When they interact, the result is often misunderstanding and mystification. The technologists say they want to develop learners' minds. The humanists say they want to touch people's hearts. Different languages are being spoken, and on either side of the language barrier slogans and caricatures develop. Ultimately, different ideologies produce reciprocal demonologies. Technologists blame the ills of education, if not of society, on the romantic irresponsibility of the humanists. The humanists attack the technologists as callous manipulators who reduce human beings to statistics. Beginning by being unwilling to talk to each other, the two sides end up unable to do so.

Meanwhile, the great majority of practising teachers define themselves neither as technologists nor as humanists. Curriculum theory historically has had little appeal for classroom practitioners. The failure of its exponents to agree on anything of significance, to speak in a language that is compelling to professional educators, and their predilection for interminable talk about talk about curriculum, give them little credibility with those who work in classrooms. So, while the theorists wrangle, the culture of schools continues to be neither technical nor humanistic, but traditional. In a traditional culture, decisions are rooted more firmly in rules and precedents than in conscious philosophical positions. Within this traditional culture, however, many teachers combine in their work, often at an intuitive level, both technical skill and humanistic values. They like their pupils, treat them as human beings and have developed effective means of delivering worthwhile instruction. They personify a synthesis of the technical and the humanistic, giving direct evidence that the two are reconcilable. This paper attempts to sketch out some of the benefits that may accrue to teachers from a dialogue between the two positions. The model that inspires this endeavour is one that most of us are fortunate enough to encounter at some point in our lives: the effective, loving teacher.

### Curriculum technology

***I loved watching him at work, so swiftly and efficiently was it all done. There was no fuss and all his movements were deliberate and consequential. Everything went smoothly and without interruption. It was obvious that he had grown up in a stern school, which had taught him to be energetic, creative, and economical of time.***

V. K. ARSENEV, *Dersu the Trapper*

The technical tradition in curriculum may be described as an orientation that seeks to discover principles and procedures for curriculum planning which will increase the effectiveness and efficiency of teaching and learning. This is a broad definition of technology, related to its etymological origin in the Greek *techne*, a word closer to 'art' than to 'technique'. Curriculum technology is a part of educational technology, described by Gagné as 'a set of systematic techniques, and accompanying practical knowledge, for designing, testing, and operating schools as educational systems'.<sup>12</sup> Educational technology is a specific instance of 'technical rationality', the term used by Schön to describe 'instrumental problem solving made rigorous by the application of scientific theory and technique'.<sup>3</sup> Educational technology uses procedures that are algorithmic rather than hermeneutic. It rests on a model of science that seeks explanation rather than interpretation, whose domain is perceived as being that of nature rather than that of mind. Its world is one in which, in

Ricoeur's words, 'there are external facts to observe, hypotheses to be submitted to empirical verification, general laws for covering such facts, theories to encompass the scattered laws in a systematic whole, and subordination of empirical generalization, to hypothetic-deductive procedures'.<sup>14</sup>

Although in popular parlance 'educational technology' is often used to refer to such instructional hardware as computers, we are considering here the much wider phenomenon of a methodology of inquiry linked to a particular epistemology. In the field of curriculum, the methodology of educational technology may be seen with particular clarity in the commitment of curriculum technologists to the concept of design.

The word 'design' has connotations of sharpness and precision which make it at once attractive to the technically minded and suspect to the humanistically oriented. The word derives from the Latin *designare*, to make a sign. *Signare* is from *Signum*, a mark, sign or seal; *signum* from *secare*, to cut, such marks typically being incised in stone, clay or wax. *Secare* derives from *secula*, a sickle. So the word 'design' has a cutting edge which runs back to the design of the first stone tools by protohominids. In its most comprehensive sense, it embraces almost all intentional human activity. The designer and inventor Victor Papanek writes:

All that we do, almost all the time, is design, for design is basic to all human activity. The planning and patterning of any act toward a desired, foreseeable end constitutes the design process. . . Design is the conscious effort to impose meaningful order."

Designers perceive their role as utilizing knowledge and skill to make changes in the world. Information, knowledge, understanding and explanation, as exemplified in the academic disciplines, describe the world, but of themselves cannot change it. Herbert Simon had this in mind in pointing to the danger of professional schools in universities neglecting design to concentrate exclusively on the ever-increasing mass of relevant knowledge. Accordingly, whether we are speaking of the design of buildings by architects, or of treatment by physicians, or of the conditions of learning by educators, 'design is the core of all professional training. It is the principal mark which distinguishes the sciences from the professions'.<sup>16</sup>

Curriculum technology seeks to design the conditions of learning. These conditions include psychological factors such as motivation and prerequisites, strategic decisions such as instructional methods and sequence, and environmental factors such as classroom layout and lighting. The achievements of curriculum technology in the past 15 years have been substantial. Mastery Learning, the School Effectiveness Studies, and meta-analysis of research in instruction have steadily isolated and refined factors which influence learning in classrooms. The use of this knowledge can enable most teachers to bring about in most pupils a high proportion of the kinds of learning traditionally valued by schools and by parents, that is knowledge and basic intellectual skills. The 'sociological determinism' of the 1960s has had to confront findings that in-school factors can have a much greater impact on achievement than can social class or family background.<sup>7</sup> In this area, educational technology offers affirmation of the potential of the individual teacher and learner.

But curriculum technology, as currently practised, is subject to a number of weaknesses. Two of them in particular are so significant that they blind many humanists to the strengths of technology. One of these is cognitive reductionism, the tendency to view the mind only as an information-processing device, and hence to

see education only in terms of developing cognitive information and skills. Eisner has detailed the enormous damage which the fallacious separation of the cognitive from the affective, the mind from the body, the work of the head from the work of the hand, has done, not only to curricula in the arts but to education as a whole.<sup>18</sup> Educational technology has inherited an analytical drive from its parents, logical empiricism and cognitive-behavioural psychology. Its tendency to fragment and compartmentalize human experience reflects a twentieth-century impulse described by Mac Intyre:

Modernity partitions each human life into a variety of segments, each with its own norms and modes of behavior. So work is divided from leisure, private life from public, the corporate from the personal. So both childhood and old age have been wrenched away from the rest of human life and made over into distinct realms. And all these separations have been achieved so that it is the distinctiveness of each and not the unity of the life of the individual who passes through those parts in terms of which we are taught to think and feel.”

The consequencé is a curriculum reflecting a view of humanity alien both to humanists and to a great many practising teachers. Conventional curriculum technology can deal with knowledge and skills, but it cannot provide useful guidance to teachers seeking to develop in their pupils attitudes, values, intuition or intrinsically valuable experiences. It can only disappoint educators whose priority is what van Manen, after Daniels,<sup>20</sup> calls ‘orientations’:

the specific ways in which an individual looks at the world. . . in ordinary language, it includes the notions of point of view, perspective, a person’s way of looking at things, outlook, standpoint, and so on. . . A person’s orientation is composed of what he believes to be true, to be valuable, and to be real.<sup>21</sup>

Feminist critics such as Jane Roland Martin<sup>22</sup> have also suggested that the focused, task-oriented, propositional and individualistic approach, typical both of traditional and of technically oriented curriculum, reflects and exacerbates a masculine model of schooling which discounts the more feminine qualities of diffuseness, process orientation and co-operation.

The other most serious limitation of curriculum technology is instrumentalism: paying attention only to means and ignoring ultimate ends. Curriculum technologists have often behaved as ‘hired guns’, prepared to lend their expertise to unexamined ends. This leads to a number of unpalatable consequences. One is that instrumentalism leads eventually to treating everything, including people, as a commodity; and, in fact, in the literature of curriculum technology, learners are often spoken of as the objects of instructional endeavours or experiment, rather than as autonomous subjects. Instrumentalism limits the contribution of curriculum technology to the operational or short-term planning of the curriculum and has not developed much expertise in strategic planning, in which long-term goals are addressed. A sense of moral vacuity thus pervades some of the writing in curriculum technology. But this is not to say that all curriculum technologists are morally vacuous. Most, if not all, are primarily motivated by the desire to enhance the contribution of schooling to the sum of human happiness.

Curriculum technology is a two-edged sword. But no blade is of much use unless it is sharp enough to cut yourself. The limitations of curriculum technology are not to be overcome by its abandonment, but by its enrichment with humanistic ideals.

## Humanistic curricula

*To be human is to engage in relationships with others and with the world.*

PAULO FREIRE<sup>2,3</sup>

To return to the myth of **Theseus**: Is curriculum a sword, or a thread? Are curricula designed, or are they spun? The image of curriculum as a sharp instrument, stabbing at ignorance, shaping the learner, is one that many humanists find repugnant. Spinning and weaving are more humane images. The process begins with shearing or combing a sheep, itself a non-invasive, non-injurious kind of animal husbandry. In Ariadne's time, before the invention of the spinning wheel, the wool was drawn from a **distaff** in one hand and wound on a spindle held in the other. Patience and persistence produced a strong and even thread. The process of weaving is a natural process, invented by spiders millions of years before it was observed by humans. Such words as weave, warp, woof and weft all derive from the Greek word **hyphos**, a web. The language of spinning and weaving is the language of the arts. We weave stories, spin yarns. Relationships are not carved, but woven. We speak of knowledge as a seamless web. Linear models of curriculum development are blind to the dynamic way in which a designer moves backwards and forwards from one component to another, designing, adjusting, calibrating and synchronizing. A curriculum is not a photograph, but a narrative woven by the designer, the protagonists of which are learners and teachers.

Curriculum technology draws heavily on cognitive and experimental psychology. Humanistic curriculum relies on clinical psychology, and particularly on 'third force' therapies. These include transactional, transpersonal, **Gestalt**, client-centred, integrative and Jungian approaches. In experimental psychology, a subject manipulates an object. In therapy, therapist and client together weave a healed consciousness. Like curriculum technology, humanistic curriculum tends to ignore its historical roots. While conscious of its debt to Maslow and other modern psychologists, it is often unaware that most of its philosophy is pure Rousseau, and that many of its articles of faith were articulated generations ago by Froebel, Pestalozzi and Montessori. The rationale of contemporary humanistic psychology has been articulated most effectively by such writers as Maslow, and from his **work** can be drawn four basic principles with which most humanistic educators would appear to agree.<sup>24</sup>

1. People's primary needs are for growth and self-actualization. These are 'being' needs, rather than deficit needs. Learners are viewed not as deficit systems, but as persons who are essentially healthy and who have an almost unlimited potential for growth. Unlike most neo-marxists, who see little benefit in trying to change people so long as unjust social structures remain intact, humanistic educators believe that the most effective way to change society is by facilitating the growth of individuals.

2. Psychological and social health depend on recognition and integration of the many different aspects of being, including the cognitive, the affective, the social, the somatic and the aesthetic. These include not only areas of objective knowledge, but also areas which are irreducibly subjective, such as the spiritual.
3. The primary vehicle for growth is human relations. There is at least a tacit recognition that the construction of meaning is essentially social. The relationship of the teacher and the learner is viewed as one of subject to subject. There is deep engagement and empathy, just as, in humanistic therapy, it is significant that the therapist tells the client not only 'You are worthwhile', but, rather, 'You are worthwhile to me'.
4. The preferred learning mode is direct personal experience. This is in contrast to the reliance of the curriculum technologists on the transmission of symbolic, usually verbal, information.

Each of these principles deserves fuller explanation, but their essence can be captured in the generalization that humanistic education seeks to transcend the cognitive. Much of the discomfort of humanists regarding curriculum technology appears to spring from technology's almost exclusive attention to propositional knowledge and logical skills. In these areas, it has become highly effective, but at the cost of paying attention only to learning which can be communicated in words or numbers. To put it another way, curriculum technology focuses only on what might be termed public meaning. A humanistic curriculum focuses also on personal and interpersonal meaning.

Public meaning refers to knowledge and skill which can be accurately and impersonally communicated in words or symbols, like the proposition  $3 + 3 = 6$ . Science, history, economics and the other conventional disciplines lie mainly in the area of public meaning. So do such skills as swimming, typing, reading and calculating. The present-day school curriculum consists almost entirely of public meanings.

Personal meanings, on the other hand, are individual and idiosyncratic. Our self-concept is a private meaning. Our reaction to works of art is to a great extent personal and cannot be reduced to verbal formulas. As Kenneth Clark once said, 'It is extremely rare for anyone who is capable of the intense and dreamlike joy which we call aesthetic emotion to do more than utter cries of satisfaction.' Our physical identity is personal, and so is our gender identity. These meanings are subjective. Most subjective of all areas is the spiritual, the means by which we 'transcend the limitations and conflicts of lived experience'.<sup>25</sup> In a recent paper,<sup>26</sup> Foshay describes how he searched the literature in education and psychology for discussion of the human quest for deep meaning, and found it only when he came to the literature on theology. Polanyi calls such meanings 'tacit knowledge'.<sup>27</sup> They cannot be wholly captured by words: 'The Tao that can be expressed is not the eternal Tao'.<sup>28</sup>

Interpersonal meanings are also subjective, but they are shared by two or more participants. A friendship has meaning for two people—a family, a sports team, a task force, a theatre company, a gang, a military unit, a party: all of these are replete with a complex of interpersonal meanings. These meanings can be described to outsiders, but they cannot be fully understood except by participants. Public meanings can be learned via a television, a textbook, or a computer. Interpersonal meanings can be acquired only through the experience of the 'I-Thou'.

Experience is the primary vehicle for acquiring personal and interpersonal meanings. But, for the humanistic educator, experience is not only a means to an end: significant or consummative experiences are what life is about, they are ends in themselves, and therefore have an important place in the curriculum. Cognition may be the essence of instruction, but experiences are the essence of education.

Like curriculum technology, the humanistic orientation is not without defects. At its worst, it degenerates into a substitute religion, characterized by smugness, anti-intellectualism and a tendency to embrace superficially attractive theories with more enthusiasm than reflection. Carl Rogers recently criticized humanistic psychology for its negligible contribution to academic research.<sup>29</sup> Richard Farson, a former president of the Esalen Institute, in a penetrating critique of humanistic psychology, condemned its tendency towards Utopian zealotry, obsession with technique, and ideological narrowness.<sup>30</sup> Humanistic educators, in their opposition to abuses in such areas as educational measurement, sometimes put themselves in the untenable position of rejecting all educational technology without making the effort to understand it or to communicate with its advocates. They thus fall victim to a prejudice which is the antithesis of the open-mindedness they proclaim.

But there is much that the curriculum technologist can learn from the humanistic educator. A major contribution of the humanistic curriculum is a generous epistemology, a greatly widened view of what constitutes human awareness and hence the domain of education. Humanists also have much to teach curriculum technologists about instruction. In recent years, scholars who combine excellence in research with humanistic commitment, such as David and Roger Johnson, have shown that, even in conventional curriculum areas, social methods of learning are much more effective than conventional individualistic or competitive approaches.<sup>31</sup> Similarly, the role of play and other forms of direct experience in all learning, emphasized by many educational philosophers from Plato to Montessori, has been forgotten by many schools, whose main commodity is boredom, but is being rediscovered by humanistic educators. What prevents the sharing of resources, discoveries, methods and insights between the opposing schools appears to be not so much a difference of assumptions as the assumption of differences.

### Meeting points

*When we all think alike, no one **thinks very much.*** WALTER LIPPMAN

Technical and humanistic practitioners have many ideals in common. Both are concerned with the improvement of schooling and the welfare of learners. Both reject the traditionalism of academic rationalists and the pessimism of neo-marxists. They share an optimistic, innovative approach to education. Their interest is in the practical world of teachers and learners, and in this context they willingly engage in 'the celebration of the mundane'.<sup>32</sup>

The way in which they approach the planning of curriculum shows many shared assumptions. Some of the themes stressed in the curriculum writing of both humanists and technologists include the belief that almost everyone can learn whatever almost anyone can learn; the setting of high standards of achievement; the emphasis on high success in absolute rather than competitive terms; the use of prerequisite enrichment to provide all students with the necessary initial status for



success; variation in time and treatment to deal with variation in aptitude, rather than streaming or grade retention; and the design of attractive educational environments which are conducive to learning. These approaches, all well researched by curriculum technologists, reflect humanistic values in their emphasis on the success and well-being of all learners, rather than on an elitist attention to the most able minority or majority. Four additional areas may be outlined in somewhat greater detail.

### **1. Needs orientation**

Both humanistic educators and curriculum technologists pay considerable attention to the concept of needs. Humanists frequently cite as a framework for curriculum Maslow's hierarchy of needs: survival, security, belonging, self-esteem and self-actualization.<sup>33</sup> The primary focus is on the needs of the client, not those of society or of the school. The notion of basing curriculum on a hierarchy of needs predates Maslow: it was a perennial theme of the Progressive Education Association, and Herbert Spencer followed a similar line of reasoning in 1861.<sup>34</sup>

To the principle that curriculum should be based on client needs, educational technologists have added the empirical procedures of needs assessment.<sup>35</sup> Needs assessment consists primarily of gathering and interpreting two kinds of data on the needs of clients: people's opinions and social indicators. Opinion data are obtained from all those who have special expertise, the right to be consulted, or potential control over the curriculum. These groups almost always include experts in the subject matter, educators, parents and learners. They may also include such groups as employers, social scientists, taxpayers and politicians. Together with the harder data derived from social indicators, this evidence is used to assess the nature and extent of needs and provides information about the probable community acceptance of, or resistance to, the projected curriculum. The purpose is not to abdicate responsibility by planning curriculum by referendum (although this abuse of needs assessment is not unknown) but to ensure that decisions about learners' needs are informed rather than arbitrary.

Some of this common ground between humanists and technologists may consist of a shared fallacy. Neither orientation is particularly clear about the nature of needs or their distinction from values. There is more than a little truth to Paul Komisar's charge that 'needs' is a slogan, even if one cannot support his conclusion that a curriculum policy based on needs is 'sometimes trivial, sometimes indeterminate, and sometimes unsupported, but always unimportant'.<sup>36</sup> The use of needs assessment in no way alters the fact that curriculum design is, as Apple says, 'inherently a political and moral process'.<sup>37</sup> The main importance of needs assessment lies neither in its foredoomed attempt to determine 'real' needs in some objective way, nor in the increasingly elaborate procedures for collecting data on needs. Its critical significance lies rather in its unequivocal message of respect for the phenomenology of the client. Planning is a notoriously seductive enterprise, strewn with temptations of power and illusions of omniscience. In asking the clients to 'tell us your needs', humanists and technologists stand together in contradistinction to arbitrary or paternalistic models of curriculum which dictate needs to the clients.

## **2. Clarity of intentions**

Humanistic educators have been alienated in the past by narrow and behaviouristic approaches to goal-setting advocated by instructional technologists. Major confusion was introduced into curriculum in the 1960s by the technologists' insistence that the setting of goals and the measurement of their achievement could and should be collapsed into a single process of writing behavioural objectives.<sup>38</sup> The mass trivialization of curricula that ensued sowed widespread distrust of curriculum planning in general, not only among humanists, but among rank-and-file classroom teachers in general. In attempting to dissociate themselves from behavioural models, some humanists appeared to take a position opposed to any kind of statement of curriculum intentions. In fact, the writing of humanists on curriculum abounds with the language of intention. Intention is a concept central to the humanistic psychologies, which have always emphasized the importance of discovering what you want, and asking for it. Humanists differ from the technologists not in intentionality but in the kinds of intentions they favour, which are as likely to address the process as much as the product, and attitudes as much as skills. The antithesis of humanism in this respect is not technology. Rather, the antithesis of both humanistic and technological approaches to intentionality is the aimlessness of many conventional classrooms which has been reported by numerous observers, such as John Goodlad:

In general, our observers had grave difficulty gathering evidence regarding what teachers were endeavoring to accomplish in the classroom apart from coverage of topics selected largely from courses of study and textbooks. If there were central concepts or children's needs and interests guiding the selection of specific learning activities, they escaped our attention.<sup>39</sup>

The orientation of humanistic educators predisposes then in favour of goals which are meaningful and incentives which are intrinsic. They would probably view as congenial the findings of research into goal-setting by industrial psychologists. This research indicates that clear goals, when understood and accepted by participants, are more effective incentives for productivity than conventional extrinsic rewards.<sup>40</sup> The key to effectiveness appears to lie in the treatment of workers as subjects who need ownership of the goals towards which they direct their efforts, a principle whose application in curriculum both humanists and technologists can support.

## **3. Feedback**

Giving and receiving feedback are significant parts of many humanistic psychologies and of the therapeutic and training approaches they have generated. National Training Labs, the oldest and arguably the most distinguished of the humanistic training centres, based its programmes from the beginning on training individuals in group settings to give and to attend to feedback in interpersonal communication.<sup>41</sup> Instructional technology has an equivalent commitment to rapid, frequent and accurate feedback on learner achievement, serving the multiple goals of evaluation, diagnosis, guidance, quality control, instructional improvement, credentialling, and

information to such interested parties as students, administrators, parents and prospective employers. In effect, both humanists and technologists are intuitive cyberneticians. The multidisciplinary science of cybernetics has shown that feedback is essential to the health and growth of all open and dynamic systems, from organic life to organizations and interpersonal relations.<sup>42</sup> Humanistic educators have often charged educational evaluators with bias in their attention to assessing acquisition of information and in norm-referenced judgements that aim to separate students as much as possible. Contemporary approaches emphasize diagnostic evaluation, the assessment of learning in relation to goals rather than relative to other learners, and qualitative as well as quantitative judgements. The specialized language and the concentration on technique by measurement experts often blind humanists to the fact that the primary commitment of most educational evaluators is to issues of justice. And if the educational technologist needs to recognize that technical competence in educational measurement is necessary but not sufficient, the humanist needs to acknowledge that, because technical competence is not sufficient, this does not mean that it is not necessary.

#### ***4. The learning process***

The potential polarization of technical and humanistic orientations can be seen most clearly in their approach to the learning process. At one extreme, some technologists view instruction purely as a means to an end, governed only by criteria of effectiveness and efficiency, and bringing to mind W. H. Auden's remark, 'Of course behaviourism works. So does torture.' At the other extreme, some humanists see instruction as an end in itself, required only to provoke subjective feelings of well-being. It is not necessary to be a neo-Marxist to endorse Giroux's criticism of teachers who seek only to provide 'a potpourri of encounter group happenings and process-based interpersonal activities designed to enrich our existential selves with moments of collective warmth and cheery solidarity'.<sup>43</sup>

But, while extremes can be readily contrasted, the two orientations can also be seen as mutually supportive. The humanists' emphasis on the primary importance of meaning is vindicated by empirical evidence that achievement is greater under conditions of intrinsic rather than extrinsic reinforcement,<sup>44</sup> and by the mass of research on meaningful learning.<sup>45</sup> The humanistic tenet that human relationships are central in worthwhile learning is fully supported by a wealth of experimental research showing the great effectiveness of co-operative learning in enhancing both the academic and the social development of pupils.<sup>46</sup>

Both humanist and technical researchers have developed insights into the learning process from which the other orientation could benefit. Many humanists would find the field of behavioural technology at least initially unfriendly. Yet the work of this tradition, in enabling individuals to take greater charge of their lives by learning to control anxiety or shyness, or eating disorders or smoking, is nothing if not humane. A typical, if modest, example of a classroom application is the discovery that distracting noise in a classroom can be reduced by providing background music that is contingent (by means of a sound-activated switch) on classroom noise being maintained below a certain level.<sup>47</sup> Responsibility for noise level is thus placed where it belongs, with the pupils, who can decide either to be noisy or to have music in the background. I am suggesting that the dedicated humanistic educator needs to

subscribe to the *Journal of Applied Behavior Analysis* as well as to the *Journal of Humanistic Education*.

## Beyond synthesis

***Tie two birds together. They will not be able to fly, even though they now have four wings.***

JALALUDIN RUMI

Both the humanistic and the technical positions may be stereotyped into extremes that appear to have irreconcilable views of the world and of education. Such an approach, while useful for isolating the areas of difference, can overlook the common ground and the shared ideals of the two orientations. In practice, most schools and teachers combine elements of both orientations, exemplifying an eclecticism which Schwab would applaud.<sup>48</sup> It is well that they do, for schools which pursue technical effectiveness at the cost of their humanity begin to resemble prisons, while schools which are humane but ineffective provoke a public backlash which demands that they revert to prisons.

Consideration of the two orientations which have been the subject of this paper offers more than a crude mixture of ingredients, or an uneasy existence in the no man's land between antagonists. The ultimate reward may be neither reconciliation nor synthesis, but rather the richness of dialogue that is offered by interaction between the two positions. In this respect, the appropriate stance for the curriculum designer and the curriculum theorist is neither technical nor humanistic, but dialectic. The willingness of committed educators of both orientations to enter into informed and open-minded dialogue may hold out the best hope for the future of the curriculum field and for the evolution of schools marked by 'practical competence and professional artistry'.<sup>49</sup>

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