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Blooming Idiots: Educational Objectives, Learning Taxonomies and the Pedagogy of Benjamin Bloom

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"For the Greek, a man who did not take part in politics was an 'idiotes', an idiot" (James, 2005, p. 333).

Abstract

This article offers a skeletal critique of the pedagogical theory and the teaching practices arising from the work of educational innovator, Benjamin Bloom. Professor Bloom's theory and method have overtly and covertly insinuated themselves into North American educational practice over the past half-century. Their impact and influence have been felt in almost every aspect of teaching and learning, and at almost every level of education. This critique narrowly speaks to certain elements in Bloom's pedagogical paradigm. It specifically addresses the matter of learning objectives and, more particularly, the admonition to write learning objectives using "action" verbs in the construction of course outlines. This article demonstrates how even the selection of the words to be incorporated into college course outlines are connected to larger domains of ideology and the overall mode of production and distribution in contemporary society.

A Short Note about Idiots

If the title of this article caught your attention, it is important to enter a hasty caveat in the form of an explanation of the use of the word "idiots."

Colloquially, the word "idiot" refers to a person of limited intellectual abilities and often implies faulty character traits such as impetuosity, imprudence and possibly a tendency toward wilful ignorance as well. This is not my purpose. I do not think that Benjamin Bloom, the government bureaucrats and college administrators who recommend his approach, the teachers who implement his pedagogical strategies and the students who are taught according to their dictates are (necessarily) idiots in the everyday sense. Instead, I have looked to etymological roots and found that, as usual, "the Greeks had a word for it."

In ancient Greek, the word that has come down to us as "idiot" had more to do with other modern terms such as "idiosyncrasy" and similarly self-regarding nouns and adjectives than it did with cerebral dullness, foolishness and incompetence. The Athenians, in particular, distinguished sharply between public and private life, much as we do;

but, they considered the civic virtue of politics (which meant conscientious involvement in the affairs of their communities) to be more admirable than simply taking care of business and managing their private affairs. Unlike many citizens of contemporary representative democracies, they approved of “politicians.” As Pericles famously put it in his Funeral Oration, the Greeks regarded “him who takes no part in [civic] duties not as unambitious but as useless” (Thucydides, 2005). Athenian democracy acknowledged the importance of home and hearth, but they disdained an unhealthy preoccupation with the personal, an unwholesome excess of individualism, and a politically pathological privileging of private over public concerns. My criticism of Benjamin Bloom’s approach to education is similarly and equally explicitly political, again in the Hellenic sense of the concern for the “polis,” public affairs and the common weal. Adopting Bloom’s ideas leads, I shall argue, not so much to stupidity (though some say it helps), but to excessive isolation and, ultimately, alienation. Transforming education from dialogue into the personal acquisition of pre-digested, pre-packaged and pre-determined chunks of knowledge or individual competencies that can be externally observed, empirically measured and judged by exclusively external criteria of validity makes a mockery of the transformative and ultimately emancipatory purpose of liberal education.

Bloom’s Purpose

Benjamin Bloom’s initial forays into pedagogy were motivated by his study of student success and failure, especially in the years immediately following World War II. It was a time when enrolment at American universities swelled as a result of the “GI Bill” and its financial assistance to veterans who wished to pursue higher education. Bloom learned that the difference between those who did well and those who did poorly was less a matter of good work habits, innate intelligence or educational background than it was the result of unequal problem-solving skills. Bloom also discovered that such skills could be taught. So, in his view, modestly altering the curriculum and simultaneously teaching problem solving enabled previously elitist postsecondary education to be intellectually accessible to a large proportion of the population. This, considering the impending transformation of the economy and the rising need for highly educated workers, was a pragmatic, democratic and highly commendable idea. Undoubtedly well-meaning and progressive in intent, Bloom’s studies and the educational reforms they inspired have, however, become weapons in the arsenal of educational corporatism. Originally seeking an egalitarian means to elevate students’ skill levels and to open up higher learning to all with the wit and the will to pursue it, his proposed improvements have become means to achieve the opposite of what Bloom seems to have sought. Instead of a dynamic, healthy society of successful, independent, prosperous and cheerful individuals, his work has contributed to a society of exploited producers, compliant consumers and submissive citizens.

Bloom's Project

Standing poised on the verge of a post-War boom, Benjamin Bloom created a Levittown of the mind, a vision of achievement and advancement wherein the burgeoning bourgeoisie would receive into its embrace ambitious, eager and enthusiastic learners who would contribute to the idealized society of stable families headed by solid organization men. In return, the newly educated middle class would realize their own part of the American Dream, reaping in the process unprecedented material rewards and a real stake in their society (cf. Baxandall & Ewen, 2000; Kelly, 1993). Bloom provided a clear, positive educational route to the suburbs of the 1950s.

Whatever one's views on the merits of his analysis and recommendations, there can be little doubt that Benjamin Bloom had an important and perhaps a transformative effect upon education from elementary schools through postgraduate programs.

His influential reforms are rooted in his structural analysis of intellectual development and, in particular, in his theory of types of thinking. He produced a hierarchical taxonomy of thought that begins with the particular and the practical and rises to the abstract and universal. His internally coherent and superficially persuasive taxonomy of human thought processes led to recommendations for pedagogical practice.

In Bloom's model, curriculum would be divided into discrete and manageable modules that could be sequentially arranged for ingestion by students. At the end of each unit of knowledge, measurable learning outcomes were identified and tests administered to ensure that students were prepared for the next step. These outcomes and their measurement, moreover, were connected to the performance of observable activities that would demonstrate "in real time" that a student had "mastered" the previous piece of the curriculum. All four elements, the segmentation of curriculum, the specification of learning outcomes, the empirical measurement of student success in meeting those outcomes and the goal of mastery are problematic.

Taxonomies in General

The first difficulty in Bloom's pedagogy is his analysis of types of thought and of learning, which he distils into a pattern for educational practice. Taxonomy, from the Greek "taxis" meaning distribution, is the arrangement of objects in categories of like with like. It is a species of piety, a sense of what properly goes with what (cf. Burke, 1964, 48-55). Taxonomies are tricky. In our society, for example, we divide birds into groups such as parrots, finches and owls. Elsewhere (no doubt among certain tribal societies in New Guinea that can—perhaps apocryphally but nonetheless entertainingly—be guaranteed to provide examples of almost any counter-intuitive belief or behaviour imaginable), birds might be categorized by the colour of their feathers,

so that blue birds, green birds and red birds are all lumped together, no matter what their other physical characteristics. More seriously, we also classify people into different socio-economic groups, sometimes according to what liberal sociologists call strata and Marxists call class. Between and within such groups, however, vigorous debates about what precise criteria should be used to distinguish among the various stratification levels or the various class structures have been carried on for well over half a century in the professional journals. Such debates show no signs of passing.

Like all representations of human knowledge, taxonomies are socially constructed. They reflect human perceptions as well as external realities. The proportion in which subjective and objective factors contribute to the content of any particular taxonomy is telling. Also important are the reasons why we construct taxonomies as we do. What's in it for us?

The veracity of taxonomies fall along a continuum from abject falsehoods (e.g., various racist conjectures which, for example, identify certain groups as inherently more intelligent or innately less moral than others), through "useful fictions" (e.g., Max Weber's three-fold typology of political authority) to sets of scientific statements that reliably describe objective order in the real world (e.g., the grouping of metals or noble gases in the Periodic Table of Elements). In the first, data is found or invented to fulfil, for instance, an exclusionary social aim. In the middle, illustrations of heuristic value are found to generate or tentatively substantiate general hypotheses, though at a low level of precision and a high level of uncertainty. In the last, even though few would deny the objective reality that metals and noble gases have different physical properties, it remains of interest that devising such a table serves practical human interests apart from the academic exercise of describing chemicals, and therefore is both an objectively reliable account of external reality and a tool to be used in the fulfillment of projects aimed at the mastery of nature.

Taxonomies of physical (types of subatomic particles) and biological (speciation) phenomena are difficult enough; those that attempt to allocate cultural or mental phenomena into logically consistent and empirically verifiable categories pose much thornier problems. It is notoriously hard to separate types of art and literature into groups about which everyone can agree (what defines classical music?). It is a challenge to divide up social sciences into clearly marked disciplines (how, for example, is applied anthropology different from "urban sociology"?). In philosophy, it is all but impossible to tease out common threads from the apparently incompatible works of different people, writing in different ways, in different contexts, about different things. I "know," for example, that there is a connection between Anaximander and Martin Heidegger, between Plato and Leo Strauss, and between Aristotle and St. Thomas Aquinas, but it is a formidable task even to speculate about the nature and significance of these connections, to say nothing of "proving" their existence or saying anything meaningful about their

implications. People still squabble about the relationship between Hegel and Marx. People are still nattering about whether Albert Camus was an existentialist. Such talk will continue and it is sometimes tempting to walk away from it, declaring such discussion to be irrelevant to anything of real life importance such as the price of gas.

Bloom's Taxonomy of Learning

On the continuum of taxonomies from the metallurgical metaphor of Socrates' proto-fascist "noble lie" about innate human qualities near one end and the Periodic Table of Elements near the other, Benjamin Bloom's ideas about different learning types stand close to the middle, amid other potentially useful fictions. Bloom attempts to categorize things of the mind, and is thus engaged in a slippery enterprise; nonetheless, he does make claims to empirically verifiable knowledge, and so his concepts can presumably be operationally defined, tested and either falsified or verified through observation and, perhaps, experiment.

The original components of Bloom's taxonomy are easily presented and understood. He posits a ladder of learning that moves stepwise upwards in terms of levels of abstraction. Each step involves a specific kind of competence that allegedly can be tested with appropriate questions, each of which requires some "action" to demonstrate mastery of the material. The competencies, skills and test triggers follow in inverse (progressive) order of abstraction (cf. Bloom, 1984):

1. Knowledge – recall of information, tested by questions asking that a student list, define, tabulate, name or identify who, what, when, where, and so on;
2. Comprehension – understanding of information, tested by questions with verbs such as summarize, contrast, interpret, estimate, discuss, predict and the like;
3. Application – use of information to solve problems tested by requiring students to demonstrate, calculate, illustrate, examine, show, modify and classify;
4. Analysis – recognition of patterns, components, organization, both manifest and latent meanings and functions, with verbal cues such as explain, connect, compare, separate and classify;
5. Synthesis – generalization and integration of knowledge including generation of new ideas from old ones, relating knowledge across disciplines, drawing conclusions and predicting, according to instructions such as combine, integrate, modify, plan, create, design, generalize and rewrite;
6. Evaluation – assessment and decision making in response to demands to discriminate among ideas, test hypotheses, appraise theories, construct arguments in support of, or in opposition to, various propositions, verify evidence and recognize bias and subjectivity.

Setting aside obvious questions about exactly how stage 3 “modification” and “classification” differ from stage 4 “classification” and stage 5 “modification,” and how stage 2 “contrasting” varies from stage 4 “comparison,” there remain more important worries.

The first is that Bloom’s taxonomy is obsolete. This does not mean that reality has been so completely changed that a system that once accurately reflected the way people thought does not apply to the current population. It means, instead, that Bloom created his taxonomy in a particular cultural context and that the social circumstances and political imperatives that gave rise to his ideas no longer exist. Bloom’s staircase of competencies was born of American social science’s naïve desire to construct universal, hierarchical, evolutionary and progressive developmental models in the social sciences. The tumult of the 1960s, the despair of the 1970s, the disco-greed of the 1980s, the thinly veiled angst of the 1990s and the terror of the new millennium have pretty much exhausted the optimism of those who thought political ideas had been exhausted in the 1950s.

At the pertinent time, however, there was a marvellous sense of confidence (paranoia about communism and the threat of imminent nuclear war notwithstanding) in American society. Walt Disney was in his Fantasyland, Father knew best, Jimmy Stewart flew SAC bombers for General Curtis E. LeMay and, of the sixteen World Series between President Truman’s signing of the National Security Act and the execution of President Kennedy, the New York Yankees appeared in thirteen and won ten; all was right, or seemed right, or could be made right with the world. So, apart from any scholarly interest in learning the truth about topics as diverse as moral reasoning, cognitive development, technological change, political modernization and economic progress, in the 1950s and early 1960s, an important practical goal of the social sciences was to devise scientifically valid guides to the creation of successful public policy in domains as varied as psychotherapy, education and foreign policy. The ambition was to learn more about human nature in the hope that it might soon be mastered and that individuals and societies might advance unimpeded by ignorance—wilful or otherwise—toward the fulfillment of their optimal potential. Using the methods of science, the mediation of technology, and the principles of secularism, pluralism, democracy and the free market, the hope was to unleash the creative potential of modern humanity to promote the unfettered pursuit of individual and collective happiness, thus finally fulfilling the promise of the Enlightenment.

The criticism advanced here rests upon five assertions, none of which need be set out at length, but all of which are worthy of consideration:

1. Bloom’s taxonomy was originally put forward over fifty years ago, and has been revised so often that the current versions have lost much resemblance to the original, which is,

nevertheless, the one that is still being touted in many colleges;
2. Bloom's taxonomy is wedded to a hysterical, post-World War II, hypermodernist optimism that has been generally abandoned by serious scholars, but remains a minor article of faith among certain segments of the military, business and "training" communities;
3. Bloom's taxonomy implicitly endorses corporatist social values, encourages individual conformity to those values, and is ideologically compromised, epistemologically repudiated, logically monstrous and pedagogically "unfit for service";
4. Bloom's taxonomy violates the basic mandate of the liberal arts (sometimes called general education), for it is ineluctably linked to behavioural training rather than to liberal (much less emancipatory) education;
5. Bloom's taxonomy is being adopted as an exercise in false pragmatics, an indulgence in the politics of over-compromise, and a further deployment of the strategy of the pre-emptive cringe.

Political, economic and ideological interests are pressuring general education to conform to an educational template that is inconsistent with its mandate of developing students as communicatively competent, socially aware, culturally literate, scientifically and technologically knowledgeable and politically responsible citizens. The ideal of educating the whole person and not just the part of a person which performs well in the labour market is subverted in every way by the corporate model, of which Bloom's learning objectives and "action" orientation have become an integral part.

Official Standards

The ease with which Bloom's taxonomy has been adopted, and its "fit" within the educational priorities of government and business alike are related to the ideological purposes college education is increasingly designed to serve. To illustrate, I will discuss the development of education in the Canadian province of Ontario, the jurisdiction with which I am most familiar; but, long conversations with colleagues throughout the United States and in other parts of the world indicate that similar conditions apply elsewhere from Malaysia, Singapore and Thailand to the European Union.

In the beginning, Ontario's colleges were intended to provide a "separate but equal" system of postsecondary education for young people who, in the mid-1960s, were anticipating a rapidly expanding and technologically based economy. Full participation in the new economy was expected to require more than a high school education. So, in order to maximize opportunity and to meet the needs of a labour market that demanded high-level vocational competencies, the Colleges of Applied Arts and Technology were established. They were to provide practical rather than relentlessly theoretical education. They were to be concretely democratic, which is to say that their tuitions

would be lower than universities; but (and this is an enormous "but") their academic standards were to be roughly equivalent to those of university undergraduate schools, and they were to be dedicated to providing both vocational training and education in the liberal arts. This second component, commonly called "general education" (but originally tagged as "avocational education") was to comprise no less that one-third and as much as one-half of all college curricula (Ontario, 1966). From the outset, most colleges either ignored or gave only lip-service to their general education components. A major study, conducted by the Association for Canadian Community Colleges in 1984, for example, found that for Ontario and for Canada as a whole, "there should be more general education … than there is at present" and that there was a major discrepancy between the aims of general education and the quality and quantity of its programs (Sorenson, 1984, 115). Those colleges that did begin by meeting the provincial mandate quickly tired of the task, and have been engaged in internal, sporadic wars of attrition against the liberal arts ever since.

In the ongoing festival that is college education, the battle against general education has intermittently been fought in terms of efforts to impose a standardized curriculum in order to more effectively micromanage liberal arts teaching, and to ensure its "vocational relevance" as support for the primary job of job training. Across the Ontario college system, the first comprehensive attempt to compel conformity came in 1994, in the form of a set of "guidelines" from the College Standards and Accreditation Council. It set out eight general themes to be addressed by general education subjects. The themes were: aesthetic appreciation, civil life, cultural awareness, personal development, social understanding, understanding science, understanding technology, and work and the economy (College Standards and Accreditation Council, 1994).

Under these rubrics, it was possible to locate most academic disciplines from anthropology to zoology. Colleges, especially those that had cheerfully ignored the provincial government's original mandate continued to ignore the guidelines. In the alternative, for the next decade those colleges that had made some initial effort to take general education programs seriously, carried on pretty much as they had before. The potential threat that provincial standards posed to the few robust liberal arts programs was seriously underestimated.

Even when, in 2004, subsequent revisions telescoped a number of general themes and eliminated all reference to work and the economy (presumably because talk about such matters could bring the political economy and its masters into disrepute), most teachers were sanguine. Among government officials and senior administrators, it was commonly believed, educational fashions come and go and rhetorical flourishes from on high can be routinely disregarded; educational leaders, after all, have shown tremendous gusto for various initiatives, but their attention spans are short and the most successful among them are not inclined to follow up on innovations, for a new fad is always crossing the horizon.

Principled opposition to standardized curricula was not, moreover, universal. It was also agreed that standardization made some sense in the domain of “generic skills” such as literacy and numeracy that had largely been sloughed off onto general education teachers; thus it was generally accepted that remediation in fundamentals such as basic literacy and elementary mathematics admit of pedagogically valid objectives that can be reduced to specific learning outcomes (how to get a verb in a sentence, how to add two plus two and get four, at least in plane space).

In authentic general education, however, the generation of inventories of specific objectives and learning outcomes are anathema to, and subversive of, the project. They are normally demanded by people who: (a) do not understand how general education differs from vocational and generic skills training; (b) wish to undermine or abolish general education and replace it with generic skills instruction; (c) have no special interest in curriculum at all, but do wish to impose a business model upon education, with sound mechanisms for measurement, evaluation and “accountability” assessment.

So, a history of managerial hostility to the liberal arts and a blend of faculty indifference and impotence were combined with provincial general education guidelines and the growing emphasis on generic skills to produce a egregious cumulative effect. The colleges’ original “avocational” mandate is not merely in tatters, but has been written out of the history of Ontario colleges and erased from the consciousness of administrators and many teachers as well.

In place of the noble goal of graduating students who might possess advanced vocational skills and who have also been educated as citizens has been manifestly reduced where it has not been wholly eliminated. The postsecondary version of “back to basics” education which wreaked havoc in elementary and secondary schools in the 1990s is in full spate. Vocationalism, standardization and the fetishism of accountability are now all the rage. Moreover, in terms of the labour process that replicates the ideology inherent in the obliteration of general education, the store of full-time professors dwindles, cost-effective hiring of part-time and sessional instructors grows, and authoritarian managerial practices are accentuated.

A Mere Matter of Words

The adoption of Benjamin Bloom’s taxonomy of “types of thinking” and the insertion of its attendant language into the discourse of college education is but one small part of the general process of transforming colleges into corporate training centres. As inconsequential as it may appear in the overall structure of educational policy and practice, however, it is not unimportant. It is true that there presently seems to be nothing more at stake than a simple matter of the insertion or substitution of a few words in course outlines, an apparently trifling matter. We all know (or should know)

that such documents are seldom read and are rarely remembered. Course outlines, after all, largely function as what anthropologists describe as totems—physical objects that symbolize (sometimes with great artistry) important beliefs, events or procedures, but that are of little practical use themselves. West Coast Indians, for example, construct impressive “totem poles” that have enormous symbolic significance, but don’t actually “do” anything other than to stand tall and look impressive. Similarly, teachers devise course outlines, managers approve (or decline to approve) course outlines, and students carry course outlines with them to provide symbolic reassurance that we are collectively engaged in worthy educational activities.

In such circumstances, the specific content of course outlines is of comparatively little importance. The documents themselves are of immensely more import as objects than is anything written in them. That said, course outlines do carry with them potential consequences. Just as inattentive Indians might be crushed if a totem pole fell on them in a heavy storm, so in a temporarily literate and persistently litigious society like ours, words may come back to haunt us. We may one day regret what we said, especially when our words are written down, widely distributed and possibly taken seriously by someone unschooled in semiotics who might therefore overlook their latent social functions and focus on what they manifestly express and disclose. We are, in short, well advised to be cautious and to mean what we say even if past experience leads us to believe that no one much cares either what we say or what we mean.

The word substitution in question has to do with “action verbs” in the specification of student learning outcomes. We might be well advised to take the matter of “action verbs” as an opportunity to confront ourselves in our various acts of speaking. Since the purpose of learning outcomes and of the busy little words that are increasingly being used in their definition constitute a fairly discrete and a fully comprehensible “piece” of what is fashionably called the “puzzle,” it may turn out to be as good as any element in the overall corporate culture upon which to begin an interrogation of the ideology and organizational dynamics of the total educational institution.

Learning Objectives and Action Verbs

Two years ago, and for the first time that I can recall in forty years of teaching in one college and three universities, my colleagues and I were required to insert into our syllabi a “Statement of Learning Objectives” that contained only “action verbs.” Upon questioning the directive, I was advised that this requirement had been around for some time, but that it had never before been enforced.

The rationale for the edict apparently arose from the view that words such as “understand” are essentially useless because “passive” terms “do not convey what the student should be doing.” Instead, we were ordered to employ words that were included on a list of active

words that emanated from Bloom's own research (Bloom, 1956). Some people reacted to this new requirement with dismay. Responses ran from monosyllabic expressions of disgust to shrugs of resignation sometimes leavened with humour worthy of Moses Maimonides, the 12th-century sage to whom is attributed the saying: "The Messiah will come … but he may tarry"—a remark said to have set the stage for comic Jewish shrugs up to and including the work of Woody Allen and, I suppose, Jerry Seinfeld. Grumpy reactions and displays of reluctant submission aside, we all acquiesced.

Like others who have tried to save themselves unnecessary bother and pointless friction, I too complied with the edict, but I did so regretfully and under sullen protest. Also like others, I suppose that I was tired of confronting "silliness" with quixotic gestures that change nothing and are quickly allocated to the category of buffoonery. I did fire off a 43-page, single-spaced memo to my colleagues deriding the innovation, but I doubt that anyone read it. I certainly wouldn't have. In taking no further action at the time, however, I may have blundered.

Hierarchies, Development and a Side-trip to the Third World

As we all understand (or should understand, though the pressure to abandon the study of even recent history is huge), the comprehension of current affairs becomes possible only when we remove ourselves from the specious present and see our situational links to past events and enduring themes.

The 1950s and the 1960s were the salad days for a certain sort of intellectual system builder, of which Benjamin Bloom is representative. As triumphal Western civilization turned its attention to newly independent Third World nations, intellectuals had it in mind to lay out what would now be called a road map to a future of global democracy and prosperity. In economics, Harvard professor W. W. Rostow made his name with a superficially persuasive theory of stages of economic growth. His insights won him a respected place in the policy deliberations of the Kennedy administration. Political development was theorized by a host of decent and honourable men (and they were, of course, all men). The names of Gabriel Almond, David E. Apter, Joseph LaPalombara, Lucian W. Pye, Fred W. Riggs, Ed Shils and Sidney Verba come prominently to mind. Committed to Enlightenment ideals and sustained by advances in transportation, communications, agricultural and industrial technology, and all the bells, whistles and traffic noises of modern life, they clung to one quintessential theme: ineluctable progress.

Intellectuals of a certain age in my own minor field of "Developing Nations" imagined that the stages of social, economic and political development were structured much like the stages of biological evolution. Some worried at length that the threat of international or domestic subversion or the internal possibility of "back-sliding" could befoul the entire process, but such worries were kept at a safe distance by persuasion when possible, bribery when

appropriate, and the surgical use of force (assassinations or coups d'état) when necessary. Protecting developing nations from diversion into communism or regression into tribalism was what the Peace Corps, the Central Intelligence Agency, the Agency for International Development, military advisors, Green Berets, B-52s and so on, were intended to accomplish. Canada chipped in with slightly more benign contributions through the establishment of a reasonably credible peacekeeping force deployed by the United Nations, dutiful participation in the Colombo Plan, a bevy of volunteers from the Canadian University Students Overseas, founded in 1961, and the Canadian International Development Agency. In due course, much of the project was eclipsed by the Vietnam adventure, proxy wars and death squads in various parts of Latin America, occasional genocides and the recalcitrance on the part of any number of African, Asian and Central and South American dictators to adopt Western values. The collapse of the linear path to progress was not the result of a want of faith on the part of Western intellectuals that the end point of human happiness was preordained. In fact, the failure of liberal development policy may have been precisely the result of the arrogant optimism of the West. What this optimism produced, however, was not just applied externally; it was the emerging outline of social thought domestically as well.

Dynamic Hierarchy as a Template

With regard to the construction of the dynamic hierarchies themselves, little attention was paid to the actual design of the various ladders of success, achievement, progress and growth. No one much cared, for example, exactly how many stages were built into any particular evolutionary social or psychological structure as long as the fundamental elements were in place. It is true that "even" numbers were preferred to "odd" numbers, and a limit of a dozen steps on any specific ladder to romance or conflict resolution seemed in order—enough to make the climb challenging, but not so many as to make it confusing. (Alcoholics Anonymous seemed to have set the optimum standard with their much copied twelve-step program.)
All that was required was that:

- a complex human phenomenon be reduced to definable, measurable and discrete units;
- these distinct quantifiable units be linked sequentially and arranged in a hierarchical schema;
- the schema carry with it the possibility for unfettered upward mobility and possess inherent values that could, with little difficulty, be labelled progressive;
- the entire system plausibly appear to be both "natural" and "universal" making it practicable to express its advantages in quasi-teleological terms, retaining the sense of inevitability while eschewing explicitly eschatological rhetoric.

If such standards could be met (and, with only a little self-delusion, they were normally met), then any academic discipline and

any appropriate field of inquiry could be subjected to, objectified by, and reified in one or another theory of dynamic structuralism, which could then put in the service of the pursuit of happiness.

Dynamic Hierarchy in Psychology and Ethics

Investigators of the human mind, of course, had been speculating about dynamic hierarchies since Piaget was a pup. Freud's well-established notions of psycho-sexual development were iconic and served as the model of future developmental theories of learning in childhood, and just about anything else. It only remained to apply the formula to other areas of interest. What distinguished the post-War period was that development theory received the endorsement of the state and became a crucial element in both political and economic strategy and ideology, even as it penetrated other academic and practical disciplines.

Perhaps the most familiar writer in this tradition was the psychologist Abraham Maslow. He did for "self-actualization" what Rostow had tried to do economic "take-off" in developing nations, and he did it more effectively. Whereas Rostow's hopes for the natural emergence of market societies throughout the Third World got mired in the rice paddies of South-East Asia, his "hierarchy of human needs" lasted for years as the basis of much "humanistic" psychology. More than merely popular, however, his attention to human needs supplied the rhetoric for the organizational "good cop" who, working in tandem with "bad cop" Taylorism, rationalized and gave a positive humanistic spin to practices such as corporate downsizing and re-engineering (cf. Bennis and Mische, 1995).

Moving on to ethics, Lawrence Kohlberg sorted out the disturbing results of the Milgram experiments using similar tactics (cf. Kohlberg et al., 1983). He attempted to show, through the interpretation of a vast number of repetitive and seemingly reliable, cross-cultural experiments, that worry about human evil was justified, but that there was also hope. Our ethical reasoning was built on inevitable and discoverable inherent stages of moral development. Once we learned the nature of our innate moral calculus, calumnies could be overcome. We could accelerate up Jacob's ladder to the plateau of righteousness. The ancient Cynics would be vindicated; virtue could be taught!

The current enthusiasm for teaching "character" that has been infecting our elementary and secondary schools, which is now getting financial support from the Ontario government, and which will show up in colleges someday soon (you watch!) is merely an inept variation on the same theme. Thus, Kohlberg produced a theory of moral growth that purported to be ahistorical and acultural, yet almost dialectical in its mechanisms. He sought to demonstrate how we could, as individuals and as a species, move stepwise up from the infantile, self-referential and self-absorbed Stage One to the hypermature, autonomous and universal Stage Six, the level of rarefied ethical

ecumenicity, presumably the domain of the mythical Gandhi, Siddhartha Gautama and the Christ.

Returning briefly to theories of political and economic development, it should be noted that development theory failed, for it was patronizing Whiggery through and through; but, it should also be remembered that its sustaining intellectual pattern is directly analogous to, and is carried on by, much of the theory of education and training that talks in terms of “measurable objectives,” “subject mastery” and, ultimately, graduation when the pre-ordained curricular plan has been completed. In its hey-day, the idea of hierarchical, progressive evolutionary structures—no matter whether postulated in international political economy, social anthropology, child psychology or almost any other social scientific domain—at least provided a method for organizing and illustrating the practical benefits of social studies; moreover, the effort—whatever its scholarly shortcomings and the practical disasters to which it gave intellectual support—was very helpful in ensuring the continued flow of research grants. Today, there remain only a few true believers, and most of them are found in corporate boardrooms and educational institutions. In any case, we need mainly recall that all of these representations of inherent, progressive and understandable hierarchies of human attitudes and actions, beliefs and behaviours had a common form. It was Benjamin Bloom’s fate to apply the same logic to teaching.

The Educational Hierarchy of Benjamin Bloom

In education, Bloom trotted out his own six-stage theory. At the lower end were types of thinking (knowledge, comprehension and application) which would suffice for the training of suitably submissive citizens and fully-functioning consumer-workers (the stereotypical Dickensian “Gradgrinders” whose political docility and mindless materialism ensured social stability and corporate profits). At the higher end were analysis, synthesis and evaluation, the types of thinking that could be achieved with appropriate teaching techniques were applied to potential business and cultural leaders—people, we are given to assume, such as Conrad Black, William Bennett and Bill Gates.

Conceptualizing progress up this entertaining educational rock wall was also consistent with the cult of measurement then flourishing throughout the increasingly quantitative social sciences. It permitted a display of gleeful enthusiasm for esoteric data manipulation in the form of multiple regression analysis, factor analysis and so on. Benjamin Bloom fit right in. Not only could his concepts be (more or less) operationalized, but attaching their definition to apparently objective behavioural “learning outcomes” not only precisely identified where a student stood on the ladder, but could actually facilitate the climb.

None of this, it must be said, is meant to suggest that Bloom was a conscious corporate co-conspirator. Bloom’s taxonomy was

generated with the most generous of intentions as a means to increase people's opportunities to enjoy a higher quality of life through more effective schooling in a society that would increasingly demand no less. Alas, much as Fabian Socialists, liberals such as US Supreme Court Justice Oliver Wendell Holmes and various Nazis promoted eugenics in what they deemed to be the best interests of humanity, so Bloom has, with irrefutably good motives, added a cobblestone or two to the road to hell.

Bloom's taxonomy, however, was even more than this: his arrangement of educational objectives was not limited to the notional six-pack with which we are now being instructed to work. In its full expression, it showed that he was also one of the first to conceive of the three distinct "domains" of cognitive (knowledge), affective (values) and behavioural (psychomotor) skills that were to become all the rage in places such as the Ontario Department of Education in the 1970s and beyond. Like other systems of this sort, of course, its claims were overly ambitious. His theory is now deemed to be wildly comprehensive and has been said to include no less than all the goals the schools should try to achieve in their efforts to produce educated citizens. No small task!

Like all such inventions, Bloom's design is premised upon "a standard theory of human nature that its promoters consider applicable to all cultures and at all times" (Biehler, 1971, 213). We must treat such grandiose claims with appropriate caution.

In adopting Bloom's template, I think we are making a number of errors. We are accepting the veracity of an intellectual fashion of fifty years ago, which has not been well served by time. At the time that Bloom was fashioning his theory, Ronald Reagan was appearing every Sunday night as host and prime huckster for General Electric on its television program, "GE Theatre". At the close of every episode, I vividly recall, he would bid the audience farewell with the slogan: "At General Electric, progress is our most important product." In an issue of Popular Mechanics from the same era, suburbanites of the year 2000 were predicted to commute to work using helicopters and to power their light bulbs with domestic nuclear power plant in their basements. (No one as yet had envisaged home computers, which also have the potential to make "commuting" redundant for those blessed by a link to their office networks). Predictions and projections ought to have given fair and effective warning about the fads, foibles and follies of futurism; alas, we have remained gullible.

Bloom's taxonomy was born of the stuff of frenzied post-war techno-optimism, perhaps the pinnacle of "modernism," as it approached the edge of "postmodern" abyss. It reflects an intellectual preoccupation that has failed to maintain its credibility. One obvious point concerns the history of Bloom's taxonomy itself. It is, by all scientific standards, an antique. Over the years, various individuals and agencies tinkered with it and, by the 1990s it had been substantially revised to the point where resemblances of

contemporary versions to the original are of antiquarian interest only (cf. Anderson et al., 2001). There are those who might speak well of the revisions and claim that they are commendable refinements of a worthy project that improved it in light of experience; but, there are others who judge the changes more harshly as evidence that the taxonomy was, at its best, a useful heuristic device, and that claims made for its universal applicability amounted to entrepreneurial swagger, pompous hyperbole and nothing more. This, however, is not the main problem.

The version of Bloom's typology that is being imposed upon colleges is a thoroughly deceased old horse that needs no additional flogging. We need not overly concern ourselves with criticism of the detritus of Bloom's brainchild. We must remember that we are being told to build into our course outlines an obsolete relic, the creaky old bones of a fundamentally flawed instrument. Its fundamental flaws are more important than any forensic inquiry into its antiquated remains, and they are what need to be addressed.

Reification, Ontological Confusion and Russell's Rule

Generalized types of thinking, once they are translated into allegedly observable abilities (what students "do") do not exist as contextless capacities. As John E. McPeck has argued, "talk of generalized abilities such as … 'comprehension skills' and so on, has become ingrained in the ever-growing lexicon of educational jargon." He suggests that this amounts to an ontological error that has its source in "the temptation to reify the sort of items listed in Bloom's taxonomy." He goes on to say that "Bloom's whole edifice is constructed on the assumption that there are generalized abilities that transfer across logical boundaries. … This assumption," he forcefully concludes, "is implausible" (McPeck, 1981, 55-56; see also Barrow, 1976, 37).

McPeck's point is that Bloom's (or any other) definitions and arrangements of types of thinking that involve anything other than purely formalistic criteria are (and must be) "linked conceptually with particular activities and special fields of knowledge." Thus, to conduct an "analysis" in philosophy is not the same activity as to conduct an analysis of forensic evidence collected at a crime scene or to conduct an analysis of poetry in the hermeneutic domain of literary criticism. The subject matter is different, the conceptual instruments and methods needed to perform examinations are different, and the purposes of conducting an analysis in the first place differ as well. Identifying the epistemological characteristics of logical positivism, explaining blood spatters, and inquiring into the authorial sensibilities in "Ode to a Grecian Urn" are distinct. They may all, in some vague sense, be called "analysis"; but, it is wise to heed Gilbert Ryle's warning that semantic slippages can lead to hopeless ontological confusion (1949, 186-195; cf. Birdwhistell, 1995). Because we use the same name does not mean that the things named are the same. Generalized types of thinking cannot be isolated and applied across

disciplines; thus, the premise that there are such types of thinking to be abstracted and held apart from their special fields is descriptively false. It is analogous to the frequently heard statement that “a good teacher can teach anything.” This is nonsense. I have benefited from the teaching of some excellent professors but I would not generally want my physics teachers to attempt a lecture in sociology, or my biology teacher to address a topic in literary criticism. This is not merely because of lack of expertise, but because the enterprises are quite different, and—occasional polymaths aside—only a few are good at both.

Still, if McPeck does not convince you, I shall try another tack. I am inclined to agree with very few generalizations, but one I take rather seriously is contained in Bertrand Russell’s “theory of logical types.” It is this: a class cannot be a member of itself. Hence, it is absurd to say that rabbits, whales, zebras, lemurs and mammals are all mammals. Zoology establishes a hierarchical structure of identification with mammals being subdivided into classes such as orders, families, genera, species and subspecies, and it is a clear violation of Russell’s rule to cross these impermeable boundaries. For types of thinking to count as a set of classes, each type must subsume all the specifics within it, just as each order must contain all the appropriate families within it (e.g., the order insectivora contains within it all moles, hedgehogs, shrews and the like). The problem here is that Bloom’s categories are not well defined (partly for the reasons stated by McPeck, and partly because there are no unambiguous empirical criteria to distinguish among various “species” of thinking). Bloom is not to be unduly chastised, however, for almost no one gets it right, and even natural scientists from Linnaeus on down often find themselves in a bit of a quandary over precisely what is exactly what. Still, he cannot be left entirely off the philosophical hook.

To fashion a logical taxonomy of thinking requires the consideration of a level of abstraction that exists far above the wooly words that Bloom employs in what T. H. Huxley (quoted in Gould, 1995, 419) would surely have called “incomplete and unmethodized knowledge.” What I have in mind is the sort of typology recommended by my old mentor, Gregory Bateson (1972, especially 128-156, 279-308, and 448-466). His thinking yielded only four possible summative categories from elementary stimulus-response sequences to a level of thinking that he imagined might include some of the insights supposedly gained in psychotherapy, religious conversion and assorted mystical or meditative experiences. The elements of his taxonomy were certainly universal and hierarchical and possibly progressive and evolutionary as well. They differed from Bloom’s, however, in that their conceptual precision allowed them to meet the test of Russell’s rule. Of course, they were plainly not useful in discussions of what students in college courses “do”; they addressed the purely formal structure of the thought, not the scurrying of the thinker.

Bloom, in the alternative, fails to achieve descriptions of

concepts that are satisfactorily universal, hierarchical, progressive or evolutionary, or that can be readily scrutinized in the material world. The problem is that they are internally blurred and wholly non-exclusionary. They not only make a mess of what is within the taxonomy, but they also fail to provide coherent criteria for what is outside. Thus, although his supporters may make a case for their relevance to what students do, they fail to make the argument that words like “understand” and “appreciate” ought to be sidelined. At the most obvious level, I am certain that evolutionary psychologists such as Steve Pinker could be enlisted to make the case that “understanding” can be operationalized as a neurological activity; however, this leads to the notion that CT-scans might emerge as more appropriate evaluation instruments than either essays or multiple choice tests, and that is not a path that I am prepared to follow quite yet.

Applied to college courses, I would be thrilled (and have been thrilled) when a student at least superficially grasped one of the four lessons in Zen that I regularly present to my classes. In such auspicious moments, I do not much care what the student “did”; such understanding involves no outwardly visible change of character. The student has to “get it”; but, waiting for such a student to yell “Eureka” or to smack me with a staff could take some time. So, while it is true that learning remedial mathematics might best be judged by having students recite their “times tables” or the skills of an auto mechanic might best be tested by requiring a display of competence in changing an oil filter or replacing worn brake pads, teaching in the liberal arts is irredeemably sullied by the attempt to provoke comparable “actions.” This is not (believe me) a demonstration of snobbishness; my proletarian credentials are well in place and I esteem sewer workers, truck drivers, electricians, chemists, forensic accountants and neurosurgeons equally, and deem all to be easily on a par with college educators. The point is that each has different qualities and those who learn from them, whether as apprentices or as interns, must be judged upon standards and in ways that are appropriate for their occupations. So, students in general education courses must be evaluated in ways that are consistent with the aims and ideals of the liberal arts. Standardized tests, multiple choice questions and actionable exit standards are not thus consistent.

Corporatism, Conformity and the Bias against Creativity

The types of thinking Professor Bloom celebrates are well and good in moderation; however, just as I do not completely disapprove of testable learning outcomes, neither do I find them necessary, sufficient nor even appropriate for measuring a liberal education. There are, at least, a few other types of thinking to be tossed into the mix. How about quiet reflection? How about the ecstasy of aesthetic transformation? How about (dare I say it) small hints of “wisdom.” I am even prepared to give a quick nod to Howard Gardner’s notion of “multiple intelligences” (1993), which at least provides a little balance, flexibility and something about musical or kinesthetic learning—

anything to strip Bloom of his imperious certainty and his theoretical boxes, with their straight sides, study tops and even design, that are just right to be plopped atop one another as we ascend the ladder of learning.

Even if, however, we were to shrug in tentative agreement that Bloom's typology adequately described human thought in all its forms, I would still find the insistence on a strict behavioural assessment of whether a student has "mastered" a subject objectionable. Measurable mastery is available for only the simplest of tasks; college education should be more subtle, more nuanced and harder to spot. It should involve the internal growth and transformation of the student and not the acquisition of the capacity to respond on command with a regurgitation of curricular morsels previously ingested from a text or some "activity" put on by a teacher grown tired of lecturing, no longer having the stamina to be "a sage on the stage." Absent expensive brain activity monitors (which I probably wouldn't trust and certainly wouldn't know how to use anyway), I am stumped when it comes to describing what happens when students "do" wisdom.

And there is something even more sinister just around the corner. In hushed tones, just off stage, I suspect that there are "character" builders awaiting the opportune moment to sneak some of this stuff into our curricula. Again, context is important. Any teacher detected proselytizing on behalf of alien (politically incorrect) beliefs may come to the attention of the authorities and be disciplined and sent for therapy. Such offending practices are interpreted by educational managers as bringing "ideology" into the classroom and abandoning our formal commitment to the myth of objectivity and equilibrium. Although colleges have a history of indifference, if not outright hostility, to such principles as "academic freedom," they have seldom taken enormous pains to root out dissenters. So, if we are nimble, we do not have much (apart from constant stress, mental exhaustion and inordinate expense in the form of legal fees) to fear from blatant repression and censorship. What is far more distressing is the kind of thing that can happen when policy makers get it in their heads that "general education" courses about our culture and society should contain a good dose of predigested "values education." The eviscerated, conformist, disinterested and dispassionate code words in the Bloom taxonomy make me "feel uncomfortable." Thus, once we have adopted the objective and endeavour to maintain a high standard of blandness and banality, the stage will be set for explicit curricular content involving the dissemination of patently but never admittedly ideological corporate values.

Learning outcomes and action words go further. We are already being urged to take "academic honesty" and "plagiarism" seriously. Some colleges demand compulsory additions to our course outlines that tell students about such misdeeds and threaten appropriate penalties for cheating. Worse is apt to befall when cardboard bourgeois values are erected in lecture halls and teachers are expected to rehearse the role of the farcical (and crypto-fascistic)

"moral rearmament movement" of the late 1950s. The merry minions of mendacity, I fear, are gathering their troops. The "learning society"—a noble notion that could bring together Fraser Mustard's long-prepared program for the education of small children to David Livingstone's enduring commitment to the certification of informal education and the development of opportunities for lifelong learning—may well be the poles of the tent under the implications of Bob Rae's superficially vapid review of postsecondary education in Ontario are finally played out. It won't be pretty. One way or another, "turnitin" software or one of its competitors will shore up teacher-student relations when teacher-student ratios make it impossible for educators to get to know their "clients" and their "customers."

Learning by Objectives, Clarity and the Cult of Measurement

My crankiness at the imposition of Bloom's taxonomy and its attendant action words is assuredly not merely a product of old age. This, or something very like it, has bothered me through over four decades in the classroom. Moreover, even if Bloom's taxonomy was not an embarrassment, and even if it passed all requisite tests to emerge as a splendid template upon which to judge college education, I would still be distressed. This is why.

Preoccupation with "action verbs" is indicative of a commitment to what can usefully be called "behavioural education." It is rooted in an insidious combination of Frederick Taylor's theory of scientific management in industry and B. F. Skinner's psychological theory of operant conditioning. As my colleague Ralph Barrett and I wrote some time ago (1977, August, 7):

… underpaid workers, starving rats and students are expected to become … conspicuous consumers of observable rewards. Such mindless competition is reproduced throughout our society; its educational variant simply involves students pressing appropriate behaviour levers (learning modules) in order to achieve the academic food pellet (the diploma). It is no accident that a society obsessed with "efficiency, " with "getting results, " with "learning and earning" would emphasize externally observable and specifically measurable behaviours; in our system, behavioural education seems to work, but so [did] electric shock!

The kind of homogenized curriculum that is the stuff and substance of pre-packaged learning modules and that can be measured by quantitative assessments of student performance on evaluations of what students do destroys authentic educational opportunity by undermining curiosity, imagination, reflection and criticism. This is so obvious that it is barely worth breath or a line of type.

To say that it is decidedly more sinister requires some application. It requires that we understand that performance-based evaluation of students' "mastery" of pre-defined learning outcomes is what defines educational closed systems (cf. Beer, 1972; von

Bertalanffy, 1964; Kariel, 1968). It sets limits upon, rather than allows and encourages, the expansion of students' horizons. I have been through this before. Many of us have been through this before. I can, for example, truly say that I passed an introductory course in Psychology at York University in 1965; but, I know now, as I knew then, that ticking off the box next to "Freud" in reply to the question, "Who was the father of modern psychology?" had a lot to do with passing the final exam, but almost nothing to do with psychology, much less with anything loosely resembling the "truth."

Hyperbole? Perhaps, but it is important to stress that education is a kind of intellectual nourishment and that any knowledge passed through the strainer of learning outcomes statements is apt to be thin gruel indeed. No one can flourish on an intellectual diet as spare as that.

Adding Technology to the Mix

When action verbs reflecting behavioural learning are further complicated by technologically enhanced learning, matters get worse.

Clifford Stoll, also mindful of Russell's theory of logical types, put the case with elegant simplicity when he proposed a persuasive intellectual taxonomy based on the existence of both differences and relationships among data, information, knowledge and wisdom.

Writes Stoll (1995, 193): "[We] are awash in data. A little of it is information. A smidgen [defined as 7.5 trifles] of this shows up as knowledge. Combined with ideas, some of that is actually useful. Mix in experience, context, compassion, discipline, humour, tolerance, and humility, and perhaps knowledge becomes wisdom. Minds think with ideas," he went on, "not information. No amount of data, bandwidth, or processing power can substitute for inspired thought. Dazzled by computers and communications theory, we have been misled into thinking that experience can be broken down into bits and bytes. Those with the most information have the most power. This is patently false. The Internet, that great digital dumpster, confers not power, not prosperity, not perspicacity."

Constructing educational policies that are designed to encourage students to do something with data and, when the doing is done, declare the performances to amount to "mastery" is a cruel joke.

Discrete learning objectives (regardless of closed-system statements about synthesis) destroy not only the awareness of pattern but also the possibility of "appreciating it." Let me give the last word to Bateson. He was intensely interested in patterns that connect. He asked (1979, 8): "What pattern connects the crab to the lobster and the orchid to the primrose and all four of them to me? And me to you? And all six of us to the amoeba in one direction and the back-ward schizophrenic in another?"

Try designing a question that gets a student to “do” that! Impossible; it would turn a minor violation of Russell’s rule into an intellectual felony. Said Gregory: “Break the pattern that connects the items of learning and you necessarily destroy all quality.”

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This is the first of two articles. Relentlessly negative in tone and substance, it will be followed by an attempt to offer a constructive alternative to contemporary educational practice.

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