Motivation in Computer Supported Adult Learning Environments: Designing Online Learning to Support a Psychology of Becoming

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Abstract

Modelling teaching, in particular the type of teaching that inspires students, will require a non-utilitarian view of the person. Abraham Maslow and other Third Force psychologists have described the parameters that orient our investigations into relational knowing. We are left with the responsibility to discover the elements involved in genuine interpersonal engagement. Whole systems theory and living systems theory provide a basis for conceptualizing embedded, inter-communicative systems. The World Wide Web provides a real world model of group learning that can be well utilized by educational systems designers.

First Words R…

…an attempt to define terms.
… a foundation for further communication.
… a way to become familiar.

I will define adult education as the mutual interaction of two or more adults for the purpose of enhancing knowledge and creating meaning.

Motivation I will define as an internal state of persons. Motivating factors can be both external and internal to the persons involved. This paper assumes that human motivation and human inspiration are internal properties of persons who are affected by and in turn are effective.

Computer supported means any among a range of electronic facilitation mechanisms, from minimal: computers as an element of a learning experience; to maximal: computers as delivery system and sole medium for an educative experience.

Intuitive Imagination

Useful answers generate questions. Attempting to move beyond rationality, rediscovering motivation in the digital age, we are becoming comfortable with change, transition and growth.

It is a well-documented cliché that every man [sic] has his price. But it is just as true that most people have something that they *won't do* for money.

People entertain values, scripts and schema, all of which influence what they will and won't accept as motivating. (Petri 1981) Similarly, people respond to counter-motivating factors that will deter or stop them from doing, thinking and becoming. (Bauman 1995)

In the U.S. today, it is common practice to allow money to be considered as a motivating factor for participation in activity. Yet there are culturally determined values influencing what is considered appropriate to do for money. (Tarrant 1989) Whether or not money should be used as a motivating factor for the education of persons is a hotly debated issue. (Apple 1979, 1982) Not only is there a great deal of research confirming the malefficacy of reward systems on long term learning goals (Dweck 2000; Reeve 1996; Ryan and Deci 2000) but the issue begs the question: What is the value, purpose and meaning of the education of persons?

Questions have unique purposes. Some questions are not meant to be answered. Some questions function as Zen koans: to stimulate the growth of conscious awareness through the exercise of mental acuity. The result of a koan mind exercise is often a realization of what Ricoeur (1992) refers to as non-vicious circles and what Maslow (1955,1968,1971) calls self-actualization.

Ricoeur's analyses illuminate a cyclical inclusionism in cherished theoretical dichotomies. For Ricoeur, vicious circles are those that simply define their elements in terms of one other. Non-vicious circles are those that define their elements in terms

of a continuing, progressive, mutual interaction. A vicious circle is an *argument* that results from dichotomous concepts explicated without an appreciation of the lived experience (the experienced cognition) through which their meanings take form.

Maslow explains (1968, p. 45) that there is a type of cognition which is the same as action; that there is a level of realization where beauty, truth and action merge. For the self-actualizing person, truth and beauty are synonymous with a call (a motivation) for action. For example, when your truth is that a child in your home is suffering, your moving into a state of action regarding her pain is predetermined by the understanding itself. In your thought-action you experience your self actualizing as childcarer. (Ricouer 1991;Velleman 1999)

We actualize our *selves* in relation to our understanding (knowledge, not simply information) of the outside world. (Arendt 1978a, 1978b; Bakhtin 1994) If we see ourselves as needing to *receive from* the world, we will behave accordingly to Maslow's D-needs (D-needs are deficiency needs, drives based on lack, as opposed to B-needs, being needs, "higher" needs like self-expression and love- Maslow 1955), Dweck's performance goals (Dweck 2000) and Dykman's validation needs (Dweck 2000). But what if we see ourselves as needing to *give to* the world? Beyond Maslow's concept of need disinterest, and closer to Fromm's conception of the being personality (Maslow 1968, p. 45; Fromm 1976, p. 34), we see an evolution in our awareness of our potential as creative contributors.

How can we account for generosity and generativity? By responding to our intuitive imagination we will *discover* (Maslow 1971) the processes necessary to describe these higher levels of educative experience (Dewey 1916). Then we will not only be able to describe compassionate intelligence, we may even be able to support and encourage its development.

The perspective I bring to this work is constructivist; both classic Vygotskian constructivist: what we can internalize must have first been experienced in the world, between and among others (Vygotsky 1962, 1993); and radical social constructivist: we have, as part of our social existence, the right, the responsibility and the fated inevitability of creating the world around us as we live in interaction with it. (Ruddick 1989; Weil 1992)

Education

Pedagogies value control in direct proportion to their culture's valuation of conformity. We are attempting to transcend dichotomies. (Maslow 1971, p. 158; Maslow 1968. p. 154) We are creating an experience of the space between being and becoming - that's where learning is. We are becoming aware of ourselves as lifelong learners.

Even though the essential *purpose* of any specific educative enterprise is not easy to categorize, delineate, explain or excuse, the essential *nature* of the educative enterprise divides neatly into two aspects: work and questioning. These aspects are not opposites, neither are they synonymous; and, most important for theory, they are meaningless in concrete terms without reference to one another.

Education is a natural act. (Leonard 1968) If, by some horrific accident, tomorrow we experience the immediate, complete dissolution of all school systems, learning would be very little affected. That very day people of all shapes, sizes, races, dispositions and ages would be explaining, guiding and teaching those in need of guidance. (Illich 1971) Learning is innate.

Mass education and state funded education are social and political commitments responding to a common value. (Apple 1979) Here, in the United States the purpose of our educational system is considered to be an integral link in the strategic preservation and maintenance of democracy and democratic principles. (Arendt 1963; Dewey 1916;Tarrant 1989)

As we analyze, systematize and advise on issues of education, we might attempt to stay in the light of these primary distinctions: 1) the natural occurrence of learning 2) the natural division of educational activities into categories of work and questioning and 3) the value of a democratic purpose for mass education initiatives.

Third Force Psychology

Trust builds on reciprocal understanding. Attempting to redefine the role of authority, discovering (Maslow) identity and response-ability (Perls), we are becoming comfortable with our selves.

As I research, I value any science filled with a love of life and persons, when the questions are filled with a respect for the perceived. Maslow and the league he calls Third Force psychology - Fromm, Rogers, Perls, Horney, Schweitzer (and many more!) - have argued eloquently for scientists to acknowledge, study and encourage the wholeness and dignity of persons. (Maslow, 1971; Rogers 1967, 1980)

These theorist-practitioners provide a useful, and poetic humanitarian response to the fascist project of creating "thea master race." (Bauman 1993) Third Force psychologists see each individual as containing the seed of their own becoming. Superiority is defined by Third Force psychologists as the result of the actualization of personal potential: If an individual is able to self-actualize, then they are, by this definition, their own superior, the best that they can be.

These thinkers have succeeded in what Maslow indicated they were attempting to do (Maslow 1968, p.13): They have bridged the chasm between the work of Behaviorist psychologists and the work of Freudian psychiatrists. Behaviorism is the study and manipulation of observable behavior. Freudianism is the study and manipulation of subconscious forces. Third

Force psychologists introduce a relational dimension: the relationship between the therapist (teacher, scientist, researcher) and the patient (student, subject, interviewee). (Ellinor 1998)

The study and manipulation of interpersonal present-tense relationships influenced, perhaps even initiated, the disciplines of qualitative research, post-modern ethical thought, relativism, social constructivism, and conversational reality theory. The awareness of the importance of interpersonal and interobject relationships was itself inspired by advances in theoretical physics and the lived experiences of World War II. (Arendt 1954; Bauman 1995)

The radicalism of Third Force psychology consists in its almost anarchic rejection of authority. Authority is acknowledged as a force to be reckoned with, but neither a passive nor a normative acceptance of authority is considered a necessary component of psychological health. (Maslow 1971)

Both Behaviorism and Freudianism assume that psychological health is proportional to social conformity. The Third Force psychologists argue that a response is *in relation to* a stimulus; that, if a stimulus, environment, social system is excessively authoritarian, a conformist response is psychologically a sick choice.

Maslow quotes Fromm as saying, “Sickness consists essentially in wanting what is not good for us.” (1971, p. 202) Behaviorist research makes it clear that we can force or trick people to behave in ways that are counter productive to their health and welfare. (Skinner 1971) Modern advertising has proven that it is possible to create appetites for toxic substances. Fascism shows us that people can be convinced to conform to values they would under less coercive circumstances consider heinous. CSLEs (computer supported learning environments) could train people to choose against their own best interests.

In his paper on Artificial Intelligence, *A Cognitive-Systemic reconstruction of Maslow's Theory of Self-Actualization*, Heylighen (1992, p. 18) implies that an individual's ability to make choices will affect the development of their attribution stance. "Fundamental dimensions of attribution include stability (is the cause likely to maintain?), control (is the subject capable to change the cause?), and locus (is the cause external or internal to the subject?)." Attribution stance is widely considered a critical factor in motivation.

Qualitative Research

Shapes reveal their maker. Healing paradigms, creating ecological awareness, we are becoming co-creators of knowledge, responsible and aware of our impact on one another.

Qualitative research is an emergent paradigm owing much of its rationale to the work of Third Force psychologists. In essence, what we are hoping to appreciatively analyze are ever-widening inter-affecting systems. For the purposes of research, limits are placed on the extensiveness of the systems being examined but, theoretically, systems reach infinity both on the microcosmic and the macrocosmic scale. (Davidson 1983)

Heylighen advises: "the general problem is that if holism as a reaction to reductionism is understood in a too simple-minded way, then any type of scientific analysis, of precise, formal modeling becomes meaningless. The main advantage of the systems approach as a scientific method is that it allows the integration [of] holistic and reductionist principles, leading to models where both "the whole is more than the sum of the parts" and "you must understand the behavior of the parts in order to understand the emergence of the whole" appl[y].… The conceptual framework of systems science appears particularly well suited for reformulating holistic theories, such as Maslow's, in a more precise, more explicit, more scientific way." (1992, p. 2)

Dweck's conception of the importance of an appreciation of incremental growth (2000) and Maslow's insistence on the existence in every individual of an intrinsic motivation to be themselves converge in qualitative research's emphasis on the validity of the individual case.

Participatory and collaborative design models are attempts to consciously formulate the co-creation of knowledge. (Papanek 1992) Theoretically, according to the position of Third Force psychologists, we have *always* been co-creating knowledge. But, because of our deeply held beliefs in hierarchically determined truth, social scientists were unable to *discover* the dynamics of healthy human systems. (Maslow 1968)

Heylighen states, that the "self actualizing person, … is basically confident about issues pertaining to the maintenance of his or her identity, and thus free to doubt about more abstract, more distant concepts and rules (and even to doubt about certain of the more basic aspects, if the rest of the system is stable enough to support this questioning)." (1992, p. 15) Questioning authority is a valid element of a democratic and humanist educational experience. (Swidler 1979) Questioning is both a skill that can be developed even unto an art form, as well as a legal right that must be supported in others as well as in ourselves if we are to maintain the mechanisms of political freedom. (Dewey 1916; Ratner, 1939; Tarrant 1989)

The cyber movements presently encouraging young students to participate in universal knowledge creation using traditional positivist research methods are a result of rejecting the mechanistic conception of the student as an empty, manipulable vessel. While an admirable attempt to encourage student autonomy (Boud 1988), the image of the researcher as a cog in a large machine grinding away at iterative knowledge creation (Maslow 1968) is reinforced by these exercises. We might, on the other hand, view facts as dynamic, and integrate progressively more complex participatory dynamics (otherwise known as conversations). (Freire 1973; Nussbaum 1997)

Maslow credits Perls with the notion of dynamic facts, facts that are malleable, that change according to perspective, perception and purpose (Maslow 1971, p. 114), facts that are interpretable, that are co-created. The interpretation of dynamic facts requires an answering, a co-responding (a cooperative response) dynamism and a careful examination of what Kurt Lewin called vectors. Learning to interpret the dynamics of relational interchange is a fundament of the discipline we call wisdom. (Ginzburg 1997; Riikonen and Smith 1997)

Perhaps the term *self-actualization* is misleading. Perhaps it is easier to understand self-actualization as one part of a unified field of motivational forces: at any moment, any choice has the potential to be self-actualizing depending upon the purpose (goal, motivation) operating at the time. (Maslow 1971, p. 44) Maslow says, "You can teach yourself to choose." (1971, p. 184) In that case, we can also teach others to choose. (Mezirow 1991)

A self-actualizing moment is one in which we are not motivated to impress others. (Maslow 1968, p. 200) This is confirmed by Carol Dweck's opinion that performance goals are essentially of a lower motivational order than learning goals. (Dweck 2000)

A self-actualizing moment is one in which the self transcends its immediate role and yet remains engaged in the world. (Maslow 1968, p. 90) The paradox is that the more self-centered a person's goals, the less self-actualizing they are; even though the D-needs are prepotent and necessary for survival, if they are not met satisfactorily, then self-actualization is an impossibility - the organism will remain stranded, obsessed with trying to attain subsistence. When we speak of learning and choices that support self-actualization, we are *not* talking about nurturing selfishness. We are talking about a state of mind wherein a realization of self interest is aligned with the realization of others' needs and interests. (Freire 1973; Parker 1985; Nussbaum 1990; Resnick, Levine et al. 1991; Shotter 1993; Ginzburg 1997)

Maslow (1968, pp. 238-9) explains how quantitative scientists' inability to admit that their feelings impact their experiments is an aspect of those same scientists' personal psychological distrust of human nature. (James 1977; Bateson 1972,1979) According to Maslow, our objectifying each other is a symptom of our personal inability to see ourselves as more than simply useful to one another. In *Toward a Psychology of Being* (1968), Maslow states that, "We must not fall into the trap of defining the good organism in terms of what [s]/he is "good for" as if [s]/he were an instrument rather than something in [her]/himself." (p. 199)

Qualitative research is an attempt to expand scientific discourse to include and respect a non-objectified notion of humanness. (Bauman 1993) Maslow suggests that by listening and observing while deeply committed and engaged, we may begin to *discover* not only our lowest D-need driven nature but our potential for self-actualization as individuals and as a species. (Maslow 1968, p. 10; Rogers 1967,1980)

Structural Ideology

All systems are embedded systems. Attempting sustainability, creating health, we are learning to support free and responsible behavior.

Maslow suggests in *The Farther Reaches of Human Nature* (1971, p. 51) that adult education might take as its goal becoming who we are. It is tempting to credit this point of view when discussing the new cyber buzz phrase, lifelong learning. If we consider learning to be a lifelong process one can only hope that we mean more than the occasional re-skilling necessary to meet changing market requirements. Lifelong learning connotes an activity sustaining the journey Maslow called self-actualization.

From a whole systems' perspective we know that there are no perfectly isolated systems. All systems include and subsume other systems. All systems are themselves contained. (Bateson 1972; Davidson 1983)

The significance of this principle of infinite encircling is in its action implications, necessitating close attention as factors are introduced into, or removed from, any existing system because all change initiates repercussions, not only in the immediate vicinity of the change but in all concentric and intersecting systems. Since everything that exists can be considered a currently functioning system, the problematic for system designers is not the fact of embeddedness but the degree and kind of interaction/communication between intersecting systems.

Human systems, for instance, an education system, are subsets of the category of living systems. (Miller 1995) Living systems can have one or more of the following purposes (i.e. relationships to intersecting systems):

- Symbiotic: Mutual interaction as a necessity for survival.
- Nurturing: Any degree of support from sustainable to self annihilating.
- Absorbing: Self aggrandizement regardless of the cost to the neighboring or host systems.
- Parasitic: Weakening or destroying its nurturant host system.
- Mutual exchange: Sharing - in the schoolyard sense.

Though the framework for computer supported learning environments (CSLES) vary from simple to complex, the relationships and interactions supported by the navigational structures and cognitive chunking must be varied, subtle, flexible

and alterable if the design intention is to accommodate a rich and humanist model of the person (audience, user, participant, student, learner). (Freire 1973; Ricoeur 1986; Damon 1991; Collins and Mangieri 1992)

One very successful example of whole systems design is the world wide web (WWW). Not only has Berners-Lee donated his creation (an act of generosity following an act of generativity, both self-actualizing acts) to humankind; but Berners-Lee also only very subtly manipulated an already existing system (the ecological/holistic principle of gradual, attentively monitored change. (Berners-Lee 1999)

In a neural network (Levine and Leven 1992), of which class the WWW is a unique and powerful example, the principle purpose is the movement of information. Within the system itself there is no permanent change of state as a result of the transfer of data. The WWW is a nurturing system providing a means for nodes to communicate using any sort of interaction from mutual exchange (perhaps, in this case, the ideal mode of exchange) to absorbing or parasitic.

The beauty of a neural network design lies precisely in this feature: that all nodes are free to enter into any mode of relationship, leaving participants free to analyze interactions for their own purposes.

But what if people are malmotivated? According to Maslow and Third Force psychologists, malmotivation in human beings is the result of the frustration and denial of basic needs. (Maslow 1971) The expectation that everyone entering into an educational dialogue will be ready to participate fully and freely is a naïve assumption that can backfire into an unattainable performance goal.

Traditionally we have divided knowledge areas into learning or discipline domains. (Rush 1957) In particular it has been found over the experience of centuries of practice to be helpful to tier learning experiences. (Gagne 1977) Early learning and advanced learning tend to be most successful when exploratory methods are used. However, there is a great deal of practice and significant safety precautions (mental, emotional and physical) required in order to master even the fundamentals of any of the knowledge domains. (Degenhart 1982)

CSLEs have proven themselves to be helpful for both repetitive skill (practice) exercises and for depth simulations. When behavior is to be trained along a particular pathway, practice is the best technique and computers are far more stable (and patient!), and resilient than human teachers for supervising these exercises. When guidance and attentive feedback can make a difference, designers can feel justified in insisting that the CSLE support face to face (f2f) interactions. (Bauman 1993; Choe 1989; Cissna and Anderson 1998; Freire 1973; Ginzburg 1997; Nussbaum 1997; Vygotsky 1962)

In *The Farther Reaches of Human Nature* (1971), Maslow says, "If an ultimate goal of education is self-actualization, then education ought to help people transcend the conditioning imposed upon them by their own culture and become world citizens." (p.177) The WWW gives us an opportunity to reorganize our thinking in a relational context. Certainly I am not suggesting that we renege on our obligation to teach and learn the traditions of individual cultures. I am suggesting that we are now technically able to teach culture in the context of relativity. (Berners-Lee 1999)

Structural Imagination

According to Von Bertalanffy, all systems show a "sensitive dependence on initial conditions." Imagining excellence often requires a reinterpretation of what we have already experienced. What we understand as possible, often the worst that has happened, can morph into an awareness of an ability to create new futures. (Arendt 1963, 1978a, 1978b)

The task of the designer is to imagine and template a future state of affairs. I would like to suggest that this task involves an awareness that everyone has an intrinsic need to imagine a future for themselves. I believe that the development and integration of these individual dreams is part of both cultural imperatives, and genuine survival imperatives.

Educational media can support an individual's need to self-actualize, by promoting choice at every level of design. We cannot simply expect that, when we are ready to "let" people make choices, they will have acquired the skills to do so. (Schwartz 2000) We need to teach choosing. Choosing according to basic/D-needs comes first. Then we can gradually model and scaffold more complex choice structures. An expert would be considered a person capable of exercising self-actualization within personal *and* political contexts of decision-making. CSLE is the perfect medium for developing/teaching/learning methods that will elicit an understanding of the meanings and values of choices.

The primary differential between an experience of autocracy and one of autonomy is choice: in an autocracy an individual is given very little choice whereas autonomy implies that an individual is capable of making choices and taking responsibility for the outcomes those choices manifest. (Arendt 1963, 1978a, 1978b) The educational systems' designer has opportunities for initiating and supporting choice. In synchronous, f2f (face to face) learning environments, i.e. the classroom, a teacher is constantly making choices, changing tack, working with, against or around student inertia. Designers can attempt to formalize critical choice points (Lewin's vectors) so that courses enable variable directionality. (Choe 1989)

When educational technology is designed in the abstract, when an infrastructure to support a variety of educational experiences is desired, decision trees are necessary. But each decision point ought not preclude a re-evaluation when the direction of progression is understood. (Levine and Leven 1992)

Conversational reality (Shotter 1993) describes the process through which we create our understanding of the truth, of what is real, through our conversational interactions. (Resnick, Levine et al. 1991) Too often CSLEs have created more rigid response mechanisms than those we experienced from our very worst classroom teachers. (Cissna and Anderson 1998)

To me, as a youngster, there was nothing more appalling than an obviously “canned” response from a teacher or an authority figure. A canned response, a rehearsed reaction, annihilates the possibility of mutuality, reciprocity or the co-creation of meaning. When my conversational partner is “phoning it in,” when s/he responds inappropriately, I withdraw my trust and my creativity from the interaction. I become unmotivated and often malmotivated. I may attempt to ridicule or reject the message being delivered to me in an alienating manner.

Roger Schank’s research (Schank 1986) began as a tongue in cheek commentary on the predictability of right wing moral bigotry. It is possible to make a conversation with a closed minded person sound real in a Turing (Turing 1968) machine experiment/experience. Schank showed that it is possible to mimic dichotomized "thinking" with machine coded messaging. Somehow the humor of these Schank experiments has been lost in an avalanche of similarly closed-minded educational designs and systems. Click here, answer there, receive a boxed response. Do this, answer that, receive another premeditated response. Just because we *can* mimic a bad conversation, should that be our goal? (Dewey 1938)

Why do we even consider replacing teachers with computers? In many countries, since the late sixties, it has been the policy to restrict the freedom of teachers. Freedom of discussion and freedom of lesson plan creation have been routinely sabotaged for the stated purpose/value of increasing test scores and for some sort of demented national agenda of international competitiveness that would wish each country to produce the most smart people. As if smart people can be produced and counted like any other production item: so many cars, so much wheat, so many smart people. (Rose, 2000) This sort of logical objectification of students and learning is anathema from a Third Force psychological perspective. We are not only falling into the utilitarian trap of treating people as if they were things, we are equating learning not with a quality of experience but with statistical representations of test results.

As Orwell (1949) predicted, CSLEs *have* been used to centralize control of education and dehumanize the process of learning. But there is no reason why they cannot also support responsive, self-actualizing, intrinsically motivational learning environments. Again, Berners-Lee’s experiment, the WWW, is a brilliant example of an open ended teaching tool. It has inspired millions of people to create a myriad of sites. Many people rely on the web for medical advice, commercial solace and even sexual and personal intimacy. Since the design of the web has caused a surge in global learning, why not take this as our model?

Heylighen takes into consideration that "no existing knowledge will be perfectly adapted to all the specific situations an autonomous system will encounter." He understands that a designer will have to acknowledge participants’ "need for external care or protection and the need for individual knowledge." (1992 p. 10)

Problem solving is a stable, structured form of questioning. According to Heylighen, "A problem is defined by a goal or an end, and by a possible means of reaching this end." (Ibid p. 13) Problem solving is an intermediate level of questioning. The articulation of undefined problems and temporary resolutions to complex ongoing challenge scenarios, are appropriate exercises for more advanced students,.

The enlightenment challenge included a commitment to universal emancipation and a concomitant commitment to universal education. We cannot know ourselves in a vacuum, we know ourselves by the choices we make and the results of those choices. What I would like to see in CSLE is an attempt to realize a diversity, an ecological metaphor wherein it is acknowledged that all students have both basic *and* higher needs. Dignity and choice-making styles originate from the interaction between environmental conditioning and internal personality and physiological needs. (Vygotsky 1993; Wertsch 1985) If we could accept the shared revelatory nature of experience, we might commit ourselves to participating in and thereby creating the environments necessary to support genuinely democratic systems.

Why are internet sex sites so popular? (Sex and commercialism presently dominate the internet, more people “visit” those types of sites than other more informational or educational or cultural sites) Because as a species we are still trying to satisfy D-needs. (Maslow 1968, p. 183) In one of the Winnie the Pooh stories (Milne 1926), Tigger has a significant adventure: Having noticed that everyone eats something particular, Tigger wants to know what Tiggers eat. It takes a long time for Tigger to learn how to satisfy this D-need. His search leads him to find out many things that will be the foundation for the next question we hope he comes to ask himself: What do Tiggers contribute?

I am motivated by having been born in an era of heroes. As a young person I heard John F. Kennedy, Martin Luther King, Angela Davis, Eldridge Cleaver, Abbie Hoffman and Mario Cuomo – and many others. I was a little girl when JFK said, “Ask not what your country can do for you. Ask what you can do for your country.” That statement has all the beauty and fire (motivating power) of the greatest speeches of Churchill and FDR.

For most of the twentieth century, people were called upon to search their minds and hearts, their psychology and their soul to find what they could contribute to a world often in crisis, a world torn between forces of toxic domination and hopes for a viable, healthy future. Though presently we are blessed to be living in a relatively peaceful world, I think we might realize that there is still a struggle between the forces of domination and those hopeful for a more egalitarian sustainable social ecology.

In *The Farther Reaches of Human Nature* (1971, p. 88), Maslow retells an O. Henry story: A young man, desirous of becoming intelligent, memorizes the encyclopedia. This young man is an object of ridicule for confusing intelligence with memorization. Yet our present educational system is producing just such objects of ridicule - by the millions. In the same book (Ibid, pp. 174-5) Maslow tells a story about Upton Sinclair, one of America’s great novelists: Sinclair, finding he had

no money to finish his studies, read in the college handbook, a school rule stating that a student who failed a class that had already been paid for, was entitled to take another, free of charge. Sinclair finished his education by failing all his courses. Our present system of education would see neither humor nor dignity in Sinclair's actions. Can we?

In *Toward a Psychology of Being* (1968, p.168), Maslow says, "People with intelligence must use their intelligence, people with eyes must use their eyes, people with the capacity to love have the *impulse* to love and the *need* to love in order to feel healthy." We all know that computers were invented to take the tedium *out* of human endeavor. I would like to see educational designers commit to that as a guiding purpose throughout.

Last Words R

… an attempt to create harmony and honor a temporary completion.

There is an old cliché that goes - beauty *is* as beauty *does*. If we acknowledge Maslow's contention that beauty, truth and goodness merge at the highest levels of personal actualization, then it might be just as true to say that truth *is* as truth *does* and goodness *is* as goodness *does*.

If we lead people by the nose to find truth, then the truth for them will be authoritarian. If instead we model our truth as active participants in the co-creation of meaning, not only will we benefit from the generosity of others, as we will be open to an *inter*-change, we will be answering the challenge to co-create a democratic environment. In *The Farther Reaches of Human Nature* (1971), Maslow calls this fabulous experience of creating each other, through our interactions with one another, "reciprocal isomorphism." (p. 161)

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