Seeing education as metaphorical relation

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How do we make sense of metaphor? I conclude that our ability to select salient features from personal experiences, logical structures of language and knowledge of the causal effectiveness of an apparently nonsensical phrase such as “Philosophy is an orange” is similar to the practical judgement required for ethical decisions, making art and good teaching. It is a dynamic complex and situated process of autopoiesis which depends on making logical, causal and interpersonal relationships which continually reconstruct self and meaning. Fresh metaphor allows a process of integration and differentiation to take place by disturbing our cognitive structures. Creativity involves seeing things other than they are, of seeing X as Y, and this requires, as does metaphor, education to make genuine engagement with children, especially those with cultural or social differences. An appropriate pedagogy of relation uses such tensions arising from differences to help children reflect and work together to resolve their cognitive, causal and interpersonal tensions

SEEING PHILOSOPHY AS AN ORANGE

I want to explore how a process I call metaphorical thinking is inherent in all learning but particularly in the arts and consequently how it ought to have a place in all teaching. The process of understanding or making a metaphor is little understood. I make an apparently nonsensical statement. “Philosophy is an orange”. Usually the first reaction is one of puzzlement, but depending on the context within which it is uttered, then most people manage to make sense of it. In a world where philosophy and oranges inhabit different discourses, we seek similarities, make connections.

How do we make a meaningful connection between the concept of philosophy and the concept of an orange? These are some responses from people hearing the statement out of context:

Philosophy is round, global.
You need to be cautious approaching it, take your time to get inside.
You need a sharp analytical knife if you’re not going to make a mess.
Sometimes the pips give you an unpleasant surprise.
Philosophy is pithy.
Doing philosophy is like eating an orange: bitter on the outside, sweet and nutritious once you’ve got inside it.

How do we evaluate these responses? They are all correct and they are all incorrect and some are better than others. Standardised norms and anticipated outcomes are not the way to evaluate them. The most useful answer will be that which responds best to the purposes for and context in which the question was asked. That is my first point, that metaphorical thinking is grounded in practical judgement and not in abstracted logical structures. But it is not therefore to be devalued. It requires a basic cognitive skill of selecting salient features, of recognizing relevant features and dismissing others. The metaphor above makes philosophy tasteful and is useful to make us aware of tacit rules of understanding and integration. Generally colour does not seem to be a relevant feature of philosophy, so possibly the most obvious feature of oranges, their colour, fades to the background and their nutritional value and taste comes to the foreground. Seeing what is relevant is a prerequisite skill which is rarely taught explicitly, and it requires knowledge of language and adaptive skills.

MAKING DIFFERENCES AND SIMILARITIES

In the juxtaposition of philosophy with an orange, two apparently unrelated concepts are thrown together. An intelligent person will make the effort to see in what ways they are alike, using another related intellectual skill of recognizing similarities and differences. Understanding metaphor requires us to make patterns of similarities, the opposite of the elementary teaching game of recognizing which of a group of objects or items doesn’t belong. In a world where things seem identical we seek differences in order to consolidate our schemata or cognitive structures. Piaget (1991) spoke of the decision we make to assimilate or accommodate difference and disequilibrium, but had no way of accounting for our decision to assimilate or accommodate. Csikszentmihalyi (1991) has promoted the action of integration and differentiation as the basic way we learn to make sense of the world. Metaphor makes sense because it unexpectedly relates two different concepts and relates the abstract term to a known experience. Ortony (1984) notes that it makes sense by also connecting to our emotions. It is a relational process crucial to all learning, making meaning by making personal connections out of a socially structured experience.

EXPERIENCING THE FLOW

For teachers who want to promote independent thinking and autonomy in their students metaphor is important for creativity because it is dependent on ‘rules’ and yet manages to stretch them for different purposes and contexts. The process of adapting one’s own schema requires some form of disturbance to the status quo in the theories of Piaget, Vygotsky and Csikszentmihalyi, but too much disturbance can be dysfunctional. Csikszentmihalyi’s (1991) state of flow or peak experience shows that people perform at
their best when they are engaged in a task where the challenge is slightly above their ability. Too much challenge will produce anxiety, overload the psyche, and sabotage any chance of having a peak experience. On the other hand, too little challenge will inevitably lead to boredom (Greenberg, 2004). Flow occurs in the narrow zone between these two, similar to the zone of proximal difference in Vygotsky (1978). Osborne and Brady (2000) see this moment of resolution of tension in terms of Joy, an ecstatic or holistic state:

Joy, the emotional, spiritual, transformative state, is found through experiences in which multiple ways of knowing/ways of experiencing (i.e. intellectual plus emotional, spiritual plus sensual) occur. This is sometimes an easy combination or sometimes a conflicted intersection but both create metaphorical places in which the uncontrolled, the unpredicted, the dreamed of are created. For us a component of joy is in this sense of the uncontrolled (loss of self), but we also assert, joy is achieved through control (self-control). .... It is achieved through both a consciously and unconsciously chosen limiting of our control of the environment. Joy is magical, strange, and subversive, but we strive to achieve it and we, as adults, do so by choosing to act without control. We choose to not be “smart” or competent in the domains that would allow us to have control. (Osborne + Brady, 2000)

To my way of thinking Osborne and Brady separate it too much from the domain of the controllable and rational. Ortony (1976) on the other hand presents a purely functional psychological view of metaphor, lacking any creative challenge. He considers that the metaphors children use are fairly pedestrian things, like “the foot of a bed”, or “the mouth of a river”. It is true that to many children these metaphors are still fresh, while to us they have become literal. However, their ability to learn social practices and language requires them to make adaptive connections between their own innate cognitive structures and the shared conventions presented to them in their lived experiences. Maybe we should see common metaphors we now take as literal, like cell regulation, or financial currency, through children’s eyes and marvel at language’s capacity to stretch our minds and finally settle into the truth.

THE RATIONALITY OF THE UNEXPECTED

It is just that tension between the everyday and the unexpected that makes metaphor so powerful. Osborne and Brady (2000) offer the story of four-year-old Darius, who has trouble concentrating, and has never spoken a full sentence in his life, but has made a truck in preschool. It is made of a Styrofoam egg carton, a moulded plastic tray, cardboard cylinders and glue. He has painted it teal with tinted glue. The whole thing took him three full days to make, and his focus was intense. The teacher has hung it on the wall, but before he would let her do that he wrote his name on it. Every day he asks if he can take it home to show his mother. It is an artistic achievement and an educational miracle. It is his unique connection with the concept of “train.” But it required him to see the egg carton and tray in terms of the truck he imagined and connect them in such a way as to make coherent sense to an onlooker.
Donald Schon (1984) describes this ability to problem-solve creatively in this way as generative metaphor. It requires seeing X as Y, for Darius to see the egg carton as a potential truck body, for us to see philosophy as an orange. Metaphor as a way of using existing language rules to solve problems enables new ways of seeing, of seeing philosophy as an orange. We have to make new connections, relate things to each other in different, sometimes startling, ways. The absurdity of some connections jolts us into awareness of our preconceptions of things, the cognitive structure we have often unconsciously built up both out of experiences and other people's discourse. When we reflect on how cell regulation became a truth in biology because of its similarities with enclosed prison rooms and the rulership of kings, we see something initially absurd, but in articulating the absurdity we are able to reflect on and perhaps change our understandings of the way we see biological cells. Jonathan Miller (1982) showed how most of our profound discoveries in medicine were based on metaphors of other technological inventions, so that the heart was seen as a pump, and the mind was seen as a computer, enabling a new focus in research. This poetry of ideas, applied to objects and actions, becomes the site of discovery of new meanings and functions as a heightened form of social and cultural critique.

AUTOTELIC EXPERIENCES

According to Csikszentmihalyi (1991) the creative flow that characterises connected learning is characterized by some common elements: a balance between the challenges of an activity and the skills required to meet those challenges; clear goals and feedback; concentration on the task at hand; a sense of control; a merging of action and awareness; a loss of self-consciousness; a distorted sense of time; and finally, the autotelic experience.

Contrary to what we usually believe ... the best moments in our lives are not the passive, receptive, relaxing times. The best moments usually occur when a person's body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile (Csikszentmihalyi, 1991).

It is not clear how self-conscious this effort has to be. All that is clear is that there is a notion of a purposive intentional organising self that is directing the flow. Csikszentmihalyi's use of the term "autotelic experience" indicates nothing more than that it is internally organised. The understanding of metaphor or the transformative seeing X as Y may be as automatic as our processing of new ideas or our learning of grammar. Importantly though, it is self-directed rather than governed by any external force such as positive or negative reinforcement from the teacher. Even if for Csikszentmihalyi it is a function of brain rather than mind, such an idea of proactive brain is consistent with Patricia Churchland's (2002) analysis of an emergent mind or self, in which the mind/brain distinction dissolves.

Brady and Osborne (2002) however want this transformational metaphor which sees old and everyday things in new ways to be a deliberate choice, enabling them to find a role for the purposive artist and the teacher. We can intentionally see things not seen
before, see things as something else from normal, see things that aren’t there at all. The pedagogical point here is that we can deliberately enter the world of Flow and see patterns of joy by:

- using things inappropriately
- looking at things too hard
- being in a different head space
- doing things the wrong way
- playing with not understanding (Brady & Osborne, 2000).

If these tasks are set externally by teachers they can often fail, but if students are allowed, or even encouraged, to think metaphorically themselves they will succeed at the optimal balance of challenge and skills.

In Flow or the joyful task there is total absorption in the activity, a feeling of being in control, a sense of forgetting one’s self, an absence of sense of time, a focus on the here and now and the activity becomes its own reward. It seems what is often described as a right-brain holistic experience in which feelings, thoughts, actions are all combined into a seamless whole is what Buber (1961) called an I-Thou relation. We could not stay within the Flow. It occurs and then we move out into a more aware I-It relation in which we evaluate, modify according to prior criteria, reflect upon the experience. The evaluation requires a reflective stance, requires a mind to be aware of the tacit moves the brain has made. The directing of attention from a distal focus to a proximal focus equally requires a self-conscious act of making meaning, of making a new connection, of adapting a cognitive schema. We could say with Polanyi (1966), clumsy though it sounds, that the mind is the integration of neural connections from within by the person who is attending to them using them as clues to meaning. The brain processes are facts on a lower level of cognitive organisation, while mind is their control by a higher level principle imposing boundary conditions on the workings of the brain, heart and body.

THE PATTERNS OF RELATION

When we articulate the similarities between philosophy and an orange or describe in what ways Darius’s artwork is like a truck, we are abstracting at a higher order of thought a generalizable ideal which we must fit to our cognitive schema to make meaning. Osborne and Brady (2000) describe this in terms of patterns.

Patterns are substanceless descriptions of relationships. Patterns, both seeing and making them, are compelling in science and in general because they cause us to see the totality of a phenomenon in new ways. The parts of the phenomenon that don’t fit the pattern become both invisible and are thrown into relief. Pattern is compelling because the act of bringing order to disorder is infused with romantic mystery and with power. But the parts that are left in disorder are even more mysterious and maintain the phenomenon’s own power (Osborne & Brady, 2000).
The holistic relational way of knowing I call metaphorical thinking has to involve at least three different ways of processing at the individual learning level:

- **logical relationships** or rule-following according to the cognitive schema/ta constructed by any individual.

- **causal relationships** – the trial and error learning process built up through positive and negative feedback with the real world or other people.

- **interpersonal relationships** - the holistic set of experiences, often tacit, including emotions, values, knowledge which constitute the self or basis from which one acts and responds to others.
At the individual learning level, I call these segments respectively thinking, re-acting and being aware. Piagetian constructivism focuses only on segments 1, 5 and 2 of Figure 1. At an abstract social level, these three segments are used in empirical testing of our scientific theories, in what Habermas (1990) called the technological way of living, and for many years dominated the school curriculum because they are language- and logic-dependent. Personal knowledge, whether kinaesthetic or intuitive or emotional, is deliberately omitted from consideration because it is not easily assessable by conventional standards. However in the arts, and in making meaning, important relationships between all three circles become necessary, relying on (1) the arts discipline as consolidated in the thinking sphere, (2) trial and error consequences with the material required to make the artwork, whether it is musical instrument, pigment, the body in dance and (3) the need to communicate the personal and authentic self to others. It is part of becoming human. Using the shifting and often competing relationships between the circles creates the tension necessary to generate new ideas and concepts, that is by standing in one circle and focusing on the tension between the other two and trying to resolve it can enable the making of meaning.

MAKING SENSE OF THE WORLD

In early childhood we construct our cognitive schema primarily by doing, by a trial and error process of testing our ideas in a physical world and we seem to be using our cognitive schema to direct our knowing. In problem-solving, the problem to be solved has to be seen as a problem, which usually is some disturbance to the consistency of the cognitive scheme, an inconsistency between segment 1 and 2. The best example I can think of to describe this is the discovery of an element in the material world which shared every feature of known hydrogen, except for its weight, being heavy rather than light. What to do? Either remove weight as a relevant criterion for hydrogen so that hydrogen can be heavy or light - or name a new element, reserving the criterion of lightness for hydrogen and creating a new element called deuterium. It was the latter which was chosen.

The shock of confrontation can occur even within the intellectual segment numbered 1. We all think we understand the concept of marriage. It sits firmly settled in a cognitive structure as a form of legal commitment for a man and a woman to form a family to cherish and care for children. In the current debate as to whether there could be same-sex marriages it becomes clearer that the criterion of commitment between couples is generally believed to be less important than the procreation of children. The confrontation of same-sex couples who meet all of the criteria except being male and female “disturbs” us sufficiently to make us aware that the procreative act is more basic to the concept of marriage than commitment to care for children, even though in the case of celibate or childless male and female couples, the same exclusion does not occur. In the section 2 above, our concept of marriage from section 1 is confronted by the existence of same-sex couples who conform in practice to all criteria except gender to the rules or patterns of marriage.
I have called segment 2 re-acting because it involves this same sort of constant refinement of awarenesses and cognitive structure against what ever is in the material world outside me. There are couples who are living as married couples regardless of the label "married" being applied to them, and more adaptive people can see them as married, even though they are legally not able to be. We can know brute facts only by bumping into them. Names and representations of things are social constructions even when they seem as real as bricks, chairs and doors. We often are unaware of the effect of disciplines on our way of seeing the world. But we do know how being able to name a colour like ultramarine can make it easier for us to become aware of it, allows us to focus our attention on it, even as a subset of blue. That connection between our being aware and naming something exists in segment 4 in Figure 1, and it can be conscious or unconscious. Where it leaps into consciousness is in the poetic act where our unconscious or unorthodox connections are made explicit in a creative fusion.

We need to make sense by making these connections because "world is suddener than we fancy it. World is crazier and more of it than we think./Incorrigibly plural." We, like the poet Louis MacNeice, can be confronted by a vase of roses against a snowy background and in order to make sense of the drunkenness of things being various we are forced to make meaningful connection, relate the absurd to our known concepts and awarenesses by changing the way we see the world, or by changing our conceptual schemas.

**ALERTNESS AND WONDER**

Segment 6 of our learning model is the section in which we make ourselves alert to the unknown by being open to the world. Heidegger (1994) called this a predisposition to wonder, to detect unusualness in the most usual, even though such openness can expose us to wounding. The artist and the metaphor-maker epitomize those with a disposition to wonder even though they risk damaging/transforming their cognitive structure. When an artist chooses to display an idea or theme, say, communicate something they have experienced, the complex relationships make each artwork absolutely unique because of the different weightings given to each aspect, whether through painting, drawing, dramatic performance, dance, musical composition, or scientific report. For each of these the connections made with the experience will be differently focused, requiring an active mind, ego, self, to make the connections. In his/her relation to the external world the artist makes choices about the media to be used, the relations of colours, the weight of the hand, the width of the brush, the size of the painting. In education, skills-based training conforms most easily to this method, promoting drill, practice, repetition so that the techniques become embodied. But without imagination the artworks remain wooden and mechanical.

Discipline-based art education emphasized conventional standards and rules of the canon of art, which as Bruner (1986) and Bailin (1988) remind us requires a mind which organizes according to constructed principles, expectations and standards so that it can
be considered publicly worthwhile, but there similarly has to be some agent which allows change and creativity to alter principles and standards, just as the literal meaning shifts in metaphor.

We often do not know how we make a metaphor. A form of holistic or tacit knowing makes a dynamic connection between two kinds of things. The connection remains tacit, with the individual unable to identify the particulars on which he or she is relying to focus on or attend to something else without altering the subject of focal awareness. Polanyi (1966) refers to the set of subsidiary particulars as the proximal term of tacit knowing (that from which we are attending) and refers to the other term as the distal term of tacit knowing (that to which we are attending). Connections we make between thinking, being aware and re-acting are necessarily dynamic and complex with salient features sliding in and out of distal and proximal focus.

PERSONAL KNOWING

Polanyi (1969) demonstrated how our tacit awarenesses, especially strong personal feelings and commitments, often drive creative acts (especially acts of discovery). The construction of metaphor requires us to focus on segment 4 of Figure 1. When we try to solve a problem by trial and error we are making connections between our theories and the material world that is exercising judgement about the relation between our theories (segment 1) and possible practices (segment 2). Knowing that such and such is the case so that we can make a statement about it which we believe to be true or false arises from an interaction between our experiences of things and our cognitive schema. Knowing how requires more of a connection to be made between our kinaesthetic awareness and the material world before us (segment 6). Knowing is more of a holistic state of awareness of common aesthetic and spiritual experiences.

Briefly, understanding metaphor, and indeed all understanding, arises from a dynamic interplay between segment 1, our cognitive structures which allow us to communicate our inmost feelings according to structured shared conventions, segment 2, our contact with a material world which exists independently of the way we think of it, and can include all “sensory irritations” including tone of voice, and segment 3, our being aware holistically, our personal knowing.

In the construction of metaphor, there is a quality of this “immediate union of the knowing subject and the object known” that Osborne and Brady (2000) refer to as joy.

We describe a form of experience involving more than the intellect, one which involves the whole person. In reflecting on our experiences with this we are tempted to argue that pursuing such a way of knowing drives us in our research and teaching and maybe in stating this we are arguing for the recognition that this drive articulates something basic about the human condition. In calling this union ‘joy’ we are describing the emotional state we feel when we achieve this union.
This reflects a tension, a paradox: there is a passive aspect in this as well as an active one for we need to create the conditions under which joy occurs but then relax our control so that it can happen.

**AESTHETIC DISCOURSE**

Tacit knowing seems directly related to the dynamic and holistic knowing appropriate for the aesthetic. In metaphor we unconsciously focus on what the salient features of any two disparate terms are appropriate to current purposes, and we usually focus on the tension between the conventional meaning of the terms and our personal use of them.

For Bakhtin (1984), the situated act of dialogic discourse, the utterance, is where the being of language resides. “The entire life of language, in any area of its use...is permeated with dialogic relationships” (Bakhtin, 1984, p. 183). Bakhtin’s dialogic discourse is often hypercritical, politically emancipatory, offered in the style of mocking and cynical questioning that he calls Menippean dialogue, the mode of the cynic (Bakhtin, 1984). But it is more open to the Other than the authoritarian voice usually heard in the classroom, where the teacher exercises asymmetric control over the authoritative discourse required in circle 1 of Figure 1 and resists transformation of the status quo. The type of dialogue envisaged in the classroom which allows this engagement of the whole student is that of Socratic dialogue which allows open questions, creative adaptation of language and is potentially always available for use to open to scrutiny accepted use and conventions. It allows engagement with existing epistemes, or respect for everyone’s voice to be heard, in an open community of inquiry which is less destructive and negative than Bakhtin’s agenda. The cognitive challenge which is most transformative both of self and society, is Csikszentmihalyi’s (1997) autotelic experience, the optimal experience occurring when challenges and skills are both at their highest, maximising interest, control and engagement.

Sidorkin (2002) talks about the inadequacies of any pedagogy which carries with it an attempt to control and manipulate, explaining it by its overemphasis on things such as rewards, and requiring us to see relations as constituting the underlying fabric of the world while things are but knots of relationality. He says:

When I see a goat and think “Who is doing the thinking?” the temptation is always to attribute thinking to myself. Yet in the relational universe it is the relation of the goat, the earth and I that does the thinking. The choice of the location of the thinking agent is quite arbitrary. It is also defined by the boundaries of my skin. Why do I draw the line at my skin or at my skull? Wouldn’t it be much more reasonable to believe that the whole system of things that constitute a relation thinks? The self has constancy or coherence to the extent that multiple relations have points of connection and intersection (Sidorkin, 2002, p.96).

While I would see myself as more of a realist, in that I believe that we have little control over things in the world that can kill or create us, Sidorkin is right in that our relation to
these things is more important than the things-in-themselves. That is my main point in arguing that metaphor is as important in education as the language of science, measurement and control which excludes personal knowing. Relational pedagogy is best fostered in the expressive arts because of the existential concern for the individual who is making meaning through discipline, knowledge, authenticity and making self at the same time as making meaning with others.

ALL LIVING IS MEETING

What has metaphor to do with teaching and social change? The teacher is one of those intersecting points of relations as is each member of the class. The teacher is constituting self through relations just as each child is and has to be open to each child’s growing. To conceive the arts in relation to curriculum is to think of a deepening and expanding mode of tuning in. Maxine Greene has been advocating the value of interpersonal relationships in teaching for many years.

There have to be disciplines, yes, and a growing acquaintance with the structures of knowledge, but at the same time, these have to be grounded interpretations possible only to those willing to abandon constituted reason, willing to feel and to imagine, to open the windows and go in search. The search - sometimes rigorous, sometimes gay - ought to be accompanied by the sound of a blue guitar (Greene, 2003, p.104).

What I have been trying to do here is add an epistemological dimension to the value of arts and the personal that takes teaching beyond a transmission of knowledge and makes it an essential ingredient in the making of social human beings through situated dialogue.

Habermas (1990) has also spoken of the epistemological need for an ongoing pragmatic dialectic, but he emphasises the rationality of human communication, bypassing the issue of epistemes and institutional power governing what can and cannot be said. Metaphor allows an a-political change in hegemonic discourse, passing into tradition, like art movements, as it evolves naturally and with mutual acceptance. As with metaphor, the most productive relationships arise from a dynamic tension requiring resolution. Difference is the yeast of learning communities of inquiry. This is not just about Being: it is, as education should be, about Becoming through dialogue and relations connecting difference.

EDUCATION AS METAPHORICAL RELATION

Literally making a metaphor means building bridges, making connections, transferring meaning. I am trying to present a way of looking at teaching which connects work with play, enjoyment with effort, control with participatory democracy, the personally experienced with public standards, student and teacher learning from the Other.

In the current demand for accountability, arts teachers are often forced to concentrate on lessons plans and assessable outcomes. By connecting feelings, mind and body, teachers can present their disciplinary knowledge as they experience it, and the work
becomes more spontaneous and, dare we say the word? 'enjoyable'. The professionality of the teacher requires them to adapt multiple methods for the kinaesthetic learner, the visual learner, the verbal learner but the good teacher does this without planning, being open to making new connections with the different, the unexpected, the resistances.

Students who can ask their own questions and relate the tasks to their own experiences are internally motivated and no longer need the teacher to control them by external rewards and punishments. That is not to say that the teacher can let them do what they like, but it is a matter of asserting limits firmly and giving reasons.

Teachers need to be curious and alert and able to make positive connections between the students' naïve views and their more informed experiences. They must be prepared to build on the experiences the students present to them, and share their own experiences and wisdom, not in a paternalistic or condescending way, but in open relation which respects and trusts others. The metaphorical engagement with difference celebrates cultural and social difference making the community of inquiry a richer and more inclusive place to be than schools controlled by a politically correct curriculum or mandated outcomes.

In arts education, and especially in drama, children are continuously learning from relations, making judgements about where to move and what to say in relation to others, how to represent tension and difference and how to represent coming together and resolution, interacting and adjusting their movements, speech, actions in relation not only to each other but to the teacher and the audience, real or imagined. They are learning to be their creations and themselves at the same time through their knowledge and their disciplines, their reasons for doing it, and their interaction with the material world.

More importantly by placing the emphasis on the connections that the children make rather than the one the teacher imposes upon them, they are by definition engaged in their own making of meaning by their own experiencing of causal relationships, logical relationships and interpersonal relationships. The enlivening challenge of seeing X as Y arises from their exercising their own control over the standards and rules of social conventions without denying the importance of such controls.

REFERENCES


